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Remarks

ON

A COMMUNICATION BETWEEN THE TWO VENTRICLES OF THE HEART OCCUPYING AN UNUSUAL SITUATION.

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The usual situation where one meets with a communication between the two ventricles of the heart is that occupied in the normal condition by the pars membranacea septi The specimen I desire to put on record is one of that small class in which the communication is between the conus arteriosus or infundibular part of the right ventricle on the one hand and the aortic vestibule on the other

The patient, a man aged 30 years, was under the care of Sir Clifford Allbutt in the General Infirmary at Leeds, and died there in April, 1879 The clinical notes of the case cannot be traced, but the post mortem examination was made by the late Dr Jacob, who was then the house physician, and his notes state that the heart was enlarged and weighed 19½ oz. He also mentioned the unusual position of the aperture When, some 12 years ago, I was making a systematic examination of the section in our museum dealing with diseases of the heart, I discovered that this specimen had not been put on record in any of the journals I therefore got permission from Dr Allbutt, as he then was, to show the specimen at the Anatomical Society of Great Britain and Ireland and to publish a description of it At the meeting of the society which was held in Edinburgh in 1907 I gave an account of the specimen and discussed its meaning, giving the explanation which I now put on record

Description of Specimen

In the preparation of the specimen for display in the museum the outer part of each ventricle and auricle has been removed One can see, however, that there must have been considerable hypertrophy of the walls of all the chambers The remains of the mitral and tricuspid valves are normal, there is a valvular patency of the foramen ovale

The long dimension of the abnormal aperture in the ventricular septum would, in the natural position of the heart be almost vertical As seen from the left side (Fig 1) it is situated immediately below and in front of the anterior segment of the aortic valve[1] with the middle three fifths of which its longer dimension is co extensive It measures three quarters of an inch in length by one fifth of an inch in width Its anterior and lower boundary is rounded and concave and is formed by the free margin of the thick fleshy infundibular part of the septum of the ventricles The endocardium lining this margin and for some distance below the aperture on each aspect of the septum is thickened and opaque On the left side especially the endocardium is particularly thick and fibrous and this thickening ends below by a singularly sharp and abrupt edge On the free margin of the septum there are also some vegetations indicative of recent endocarditis The aperture is bounded above and behind by the anterior aortic segment

As seen from the right ventricle (Fig 2) the aperture opens into the conus or infundibular part of that cavity Here it is bounded below and in front by the concave margin of the septum already mentioned, above and behind it is bounded by the anterior segment of the aortic valve, which, in consequence of the deficiency in the septum, is visible from the right ventricle Not only is this segment of the aortic valve visible from the right ventricle, but it projects into that chamber forming an aneurysmal dilatation of about the size of a small hazel nut, which separates the aperture from the antero right pulmonary segment The portion of the valve entering into this dilatation is thinned out and is much less substantial than the rest of the segment At the summit of the dilatation there are two apertures about a fifth and a sixth of an inch respectively in diameter These have projecting margins fringed with recent vegetations

There is some general thickening of the aortic valve segments, the convex aspect of the anterior segment is roughened by the presence of vegetations The portions of the convex aspects of the postero right and postero left segments which overhang the aperture are also slightly coated with vegetations The posterior segment of the pulmonary valve which bounds the aperture above and in front is much thickened and coated with vegetations on both its convex and concave aspects It is clear that during the diastole of the ventricles there must have been a stream of blood impinging on this part of the valve through the two apertures in the aneurysmal dilatation of the aortic segment The portion of the antero right pulmonary flap which is left is normal

The deficiency in the septum is separated from the pars membranacea by a distance of three quarters of an inch on the right side and by a distance of half an inch on the left side, the septum between being altogether fleshy The pars membranacea septi is of small extent, it does not reach so far forward as is usual, and, as is indicated in the sketch (Fig 1), it falls short of the junction of the anterior and postero right segments of the aortic valve

Nature of the Anomaly

At the time I was first seeking an explanation of this particular form of deficiency of the septum of the ventricles I entertained the commonly accepted view that the main stems of the aorta and pulmonary artery were formed from the bulbus arteriosus or bulbus cordis by the division of that tube into two, and that the septum formed in the process of this division extended down into the common ventricle where it was met by the upward growing septum which effects the division of that chamber I therefore saw in the anomaly a failure of fusion between the interventricular and interbulbar septa. I was soon led to modify this view by the study of a paper by Professor Arthur Keith on Malformations of the Bulbus Cordis which appeared in the Quatercentenary Publications of the University of Aberdeen Partly as the result of his own investigations in comparative anatomy and partly from a study of the embryological work of Greil, Keith was able to point out that the fate of the bulbus cordis is different from that mentioned above By far the greater part of the bulbus is developed into the conus

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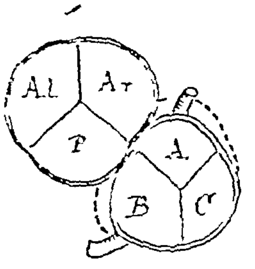
[1] [illegible] in the text to the different semilunar segments will [illegible] Fig 3

this I cannot go, for though the description is supplemented by plates, these do not supply all the data on which to base a certain opinion

Of the cases recorded by Rokitanski Keith accepted one (Case No 20—that of a boy three years of age), but he rejected the other (Case No 19), as there was clear evidence that the interbulbar septum was complete From his notes on the specimens in the various London museums he was able to give me the following references to cases which appeared to him to conform to the type of that at which I was working One of these, in the Museum of St George's Hospital, was "evidently described by Rolleston in the Transactions of the Pathological Society" The patient was a boy aged 11 years The opening into the right ventricle was three eighths of an inch below the pulmonary valve and "just above the origin of the posterior or fixed, and of the anterior cusps of the tricuspid valve" The second was in Guy's Hospital Museum (No 2309, the patient a female aged 19) The third was in the Museum of the Royal College of Surgeons of England (No 580)

FIG 3

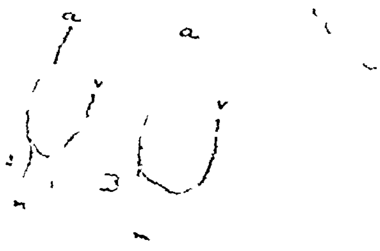


A Anterior aortic segment B Postero-left aortic segment C Postero-right or non-coronary segment. P Posterior pulmonary segment A r Antero-right pulmonary segment A l Antero-left pulmonary segment A, B, P and A r constitute the four *septal segments of Keith* The interrupted line shows the extent to which the aortic root is embraced by the *muscle of the ventricles*

THE CONDITION OF THE ANTERIOR AORTIC SEGMENT

The aneurysmal dilatation of the anterior segment of the aortic valve and its projection into the right ventricle, which I have mentioned, was a striking feature of the specimen This condition of the valve is mentioned by Coupland as having been present in his case also, but the projection was much less and the valve segment was entire To understand the condition one must study the relationship of the root of the aorta to the musculature of the heart and especially to that of the ventricles From a series of dissections I made to [illegible] as to this I found that the root of the aorta is embraced by ventricular muscle on its anterior and lateral aspects, and that this muscular investment extends backwards on the right side as far as the junction of the anterior one third with the posterior two thirds of the right or non coronary cusp, and on the left side as far as the middle of the postero left cusp (Fig 3) The whole of the aorta opposite the anterior cusp is closely embraced by ventricular muscle

FIG 4

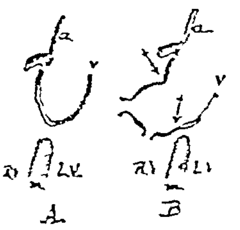


[illegible]

The exact relationship of the ventricular muscle to the aorta and to its valve segments varies in another respect The usual relationship opposite the anterior segment is that shown in the diagram (Fig 4, A) Some ten years ago I put in the anatomical museum a specimen in which the condition was as shown in Fig 4, B The valve segment and the coat of the aorta were apparently completely separated from one another, both could be seen to end rather abruptly except for a thin layer of endarterium which preserved their continuity and through which the muscle of the ventricle could be readily seen

Now in the specimen on which I am commenting there was a complete absence of any support to the aorta and valve corresponding to the greater part of the anterior segment If we conceive the condition resulting from the failure in the complete formation of the bulb septum to be represented by Fig 5, A we can readily understand that the condition shown in Fig 5 B might be brought about by the diastolic aortic pressure There is a slight bulging outwards of the part of the aorta entering into the formation of the *sinus of Valsalva*, but the main part of the projection is formed by the thinned out tissues of the valve segment itself, and this is precisely limited to where the ventricular muscle is wanting—namely, opposite its middle three fifths From an examination of the specimen I should think that during the early phase of diastole of the ventricle the aperture of communication would be closed by the apposition to its concave margin of the anterior aortic segment at the junction of the greatly thinned out portion with the rest of the flap, which in this way would be assisted in supporting the diastolic aortic pressure It will be seen that it is only that part of the segment which is directed to the cavity of the right ventricle which has become stretched and this raises some further considerations

FIG 5



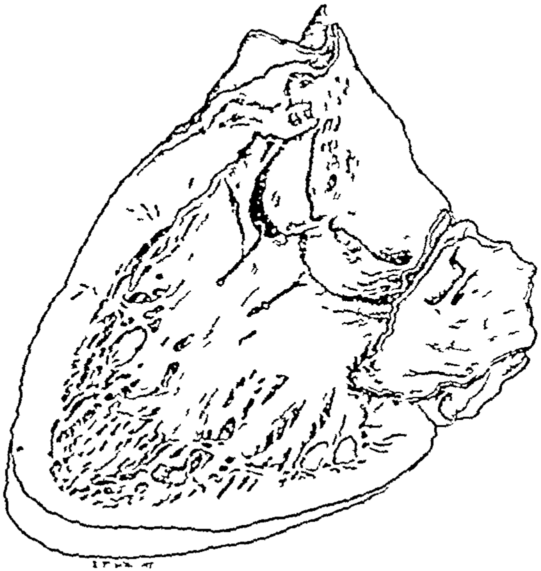
The lettering *a* *v* and *D* as in the *former figure* Shows that the infundibular part of the right ventricle is not cut off from the aortic vestibule of the left ventricle A shows the congenital defect B shows the bulging of the portion *of the segment which faces towards* the right ventricle. The beginning of the bulging is shown by the two arrows.

CONCLUSION

The amount of support which the ventricular muscle gives to the semilunar valves has been discussed by the late Dr G A Gibson and by others Dr Harry Campbell has speculated on the conditions whereby it appears to be the case that the delicate tissue of the aortic valves is able to arteriosus or infundibular part of the right ventricle, a very small portion of limited vertical extent being probably represented by the extreme *upper part of the left ventricle* just at its *opening* into the aorta The aorta and pulmonary artery are not therefore formed from the bulbus cordis at all, but result from division of the common aortic stem In bringing the specimen before the Anatomical Society in 1907 I interpreted the anomaly in the light of these newer views The *aperture became* in my opinion "interbulbar" and was due to an imperfect formation of the septum which divides that part of the heart

In some of his previous writings Keith had described two bands which *are* visible on the posterior wall of the conus of the right ventricle when that cavity is opened from the front These he calls respectively the reptilian and the mammalian band The former descends towards the apex along the ventricular septum and is called the left infundibular or apical band, the latter, which he terms the right infundibular or lateral band, passes outwards on the lateral wall of the right ventricle towards the margo acutus These two bands, as he points out, meet on a raphe which is sometimes quite distinct, and which extends from the commissure of the two septal pulmonary segments above to the pars membranacea septi below This raphe indicates the position of the two ingrowing processes which form the septum of the bulbus cordis It is in the line of this raphe that deficiencies in the bulbar septum are met with and in the specimen I describe it will be seen that the long axis of the aperture coincides with its upper half (Fig 2)

FIG 1



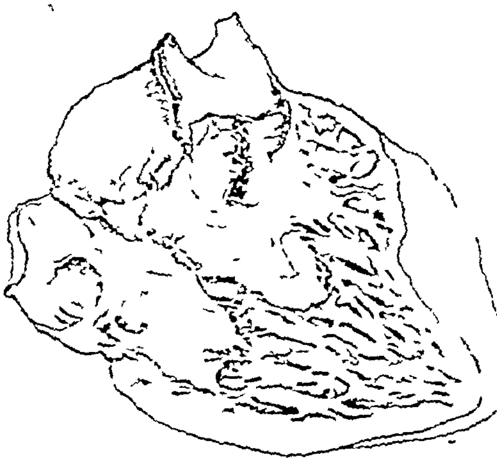
View from left side Aperture in septum shown by bent pointer passed through it Another pointer passes through the pars membranacea septi at the stippled area

REFERENCES TO SIMILAR CASES

In the article on Congenital Malformations of the Heart by Laurence Humphry in Allbutt's System of Medicine I found references to five cases which appeared to be of the same nature as the specimen I have described Two of these cases were mentioned in Peacock's work published in 1866 (second edition) Rokitansky was credited with two cases and a reference was made to the case recorded by Dr Sidney Coupland in 1879, an undoubted example of the unusual defect I have described The two cases mentioned by Peacock were said to be in the Museum of St Thomas's Hospital, but there was *some ambiguity* in the references he gave Coupland also in commenting on his own specimen mentioned these two cases recorded by Peacock, but I gathered from the context that he had not inspected them himself

As I knew that Professor Keith had about *that time* (1905) been making a very full examination of all the *malformed* hearts in the London museums I *wrote to him on the matter* calling attention *to the ambiguity of Peacock's references,* and asking if he knew the specimen In his reply Professor Keith was very careful to lay down the criteria which should guide us in determining the admission of specimens *to the* class of that described by Coupland which he regarded as essentially the same as that on which I *was working* It was not enough that the aperture as seen from the left side of the heart should be in the same situation, but when inspected from the right side it must open into the infundibular part of the right ventricle, and must not be separated from the pulmonary segments by an area of cardiac tissue which would indicate the completion *of* the septum of the bulb In regard to the reputed cases at the Museum of St Thomas's Hospital he wrote "There is no record of this type of specimen in my notes of the abnormal hearts at St Thomas's Hospital, either Peacock was mistaken, or they have *disappeared*, as they are not now placed with the *specimens on the shelves*" In Peacock's work it is stated that the specimens formed a part of Sir *Astley Cooper's museum*, and that they were described by Dr J R Farre In addition to other abnormalities they are described by Peacock as presenting "a deficiency in the septum interposed between the left and the infundibular portion of the right ventricle immediately *below the* origin of the pulmonary artery I have referred to the original description by Farre The specimens [illegible] described under the heading of [illegible] Pulmonalis Communicating with Both Ventricles [illegible] They are probably both examples of the deficiency further than described by *Coupland and myself*

FIG 2



View from right side [illegible] The [illegible] shown in Fig 1 [illegible] The [illegible] away do not believe, however, that this congenital fold, unless secondarily thickened and contracted by inflammation of the appendix, which is occasionally fused with it from before birth, ever gives rise to the symptoms that have been ascribed to it, or indeed to any symptoms at all. I have made it a rule for nearly two years to look for it where feasible in every exploratory laparotomy, and have found a well marked ileal band in some 10 per cent. of patients of all ages. In no case did I find any distension or hypertrophy of the gut above it as compared with the gut below, nor any definite narrowing of the lumen, nor were the clinical histories or the radiographic findings suggestive of chronic obstruction. Further, in the fibrous form of tuberculous peritonitis one is often struck by the fact that the small intestine can move its fluid contents along without apparent difficulty, in spite of kinks and adhesions that look as though they ought surely to have caused complete obstruction—kinks and adhesions compared with which this congenital anomaly of the lower ileum is insignificant. On all these grounds I feel bound to express my belief that Lane's ileal band, apart from inflammatory changes that may occur in it accidentally, is of little or no importance in the causation of disease, and that the many ingenious operations devised for dealing with it are the outcome of misdirected enthusiasm.

Jackson's pericolic membrane, on the other hand, is a structure which may undoubtedly give rise to symptoms simulating chronic appendicitis, though I hold that it does so less commonly than many writers on the subject would have us suppose. Let me first explain briefly what this interesting peritoneal membrane is. In its fullest development it is a delicate vascular sheet of peritoneum which is occasionally met with, stretching from the parietal peritoneum in the back of the right loin, across the groove or fossa on the outer side of the ascending colon, to fuse with the anterior longitudinal tænia on the cæcum and ascending colon. (See illustration.) It is not an acquired or inflammatory adhesion, as many have maintained, but is of congenital origin, and represents, as I have recently shown,[4] a delay in the process of development or reversion to a primitive type, comparable with such deformities as hare lip or imperforate anus. At an early stage of intra-uterine life, after rotation of the midgut loop, the great omentum extends over the cæcum and proximal colon to the right, and fusing with the anterior longitudinal band or tænia of the colon on the one hand, and the parietal peritoneum of the right flank on the other, becomes the earliest means by which the colon is fixed back into the right loin. Before birth, as a rule, this right process of the omentum almost completely disappears, though a trace of it can always be seen in the living body, but should the proximal colon be unduly mobile from failure of its primitive mesocolon to fuse, the original extent of the omentum may persist as Jackson's pericolic membrane.

In the greater number of these cases the symptoms are due, I believe, not to the pericolic membrane but to the abnormal mobility of the cæcum and ascending colon on which I have a word to say directly. But I have operated on two cases recently in which a much more limited parieto-colic peritoneal band, congenital in origin and a relic of this same structure, had bound down and constricted the ascending colon, giving rise to symptoms which precisely simulated chronic appendicitis.

I come now to the question of mobile cæcum, or, as I prefer to call it, mobile proximal colon, for it is a condition which does not involve the cæcum only. It has long been recognised that there is a not uncommon congenital abnormality of the peritoneum in which the cæcum and ascending colon, instead of being fixed down in the loin, are mounted on a loose mesocolon, continuous more or less with the mesentery of the small intestine; but we are only beginning to realise what grave symptoms may result from this error in development. The mobile proximal colon is the normal arrangement in pronograde mammals such as the cat and dog, but with the evolution of the upright posture fixation of the colon back into the loin by peritoneal fusion became necessary in order to enable the gut to push on its contents against gravity and to resist a tendency to enteroptosis. Our knowledge of the physiology of the colon, though advanced by recent discoveries, is still far from complete, but a study of its comparative anatomy and of the clinical evidence convinces one that these individuals with mobile proximal colons are from birth predisposed to constipation and the multifarious evils resulting from it. I have met with cases of this sort without any pericolic membrane, though the two abnormalities often coexist.

The symptoms of mobile proximal colon often closely resemble those of chronic appendicitis, and actual association of the two conditions is not uncommon, the intestinal stasis and appendicitis being secondary results of the mobility of the colon. Mere removal of the appendix in such cases is not enough, but in addition the proximal colon should be fixed back into the loin by a series of interrupted sutures, and Nature's usual method of fixation of the colon thus imitated. I have seen great relief from severe constipation and right iliac pain result from this operation of colopexy, and believe that it is a far more rational procedure than such mutilating operations as excision of the colon. The preoperative diagnosis of mobile proximal colon is difficult, but the greatest help is obtained by examination of the colon on the fluorescent screen after a bismuth or barium meal.

In addition to the congenital peritoneal adhesions that I have mentioned, inflammatory bands are not rarely met with in this region, both as a result of old standing appendicitis and as a sequel of former tuberculous inflammation. Great and I believe unnecessary confusion has arisen between the congenital and the inflammatory type of peritoneal adhesions, the reason being that until recently the occurrence and significance of the former were not widely recognised. I do not say that it is never difficult to differentiate between them, but broadly it holds true that inflammatory peritoneal bands are tough, fibrous, opaque, and not very vascular, while congenital adhesions are translucent, more yielding, filmy, and vascular. If these distinctions are borne in mind it is usually possible to differentiate between them, though not, of course, before operation.

For lack of time I must pass over the question of ileocæcal growths and massive ileocæcal tuberculosis, though they should properly be considered with this subject, but I must make very brief mention of what is perhaps the commonest cause of an erroneous diagnosis of chronic appendicitis—viz., right chronic tubo-ovarian disease. It is due as a rule to an insidious ascending infection from

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[4] The Lancet, [illegible]

support the diastolic pressure of the blood during the whole of a long and active life without giving way, and he concludes that the valves must get support from the part of the ventricular muscle which surrounds their bases remaining in contraction until the pressure in the ventricle has been raised by the entry of blood from the auricle on the relaxation of the general mass of the ventricular musculature The work of Stewart would appear to support this view, and in the Schorstein lecture, which I had the honour to deliver at the London Hospital in 1912, I mentioned a clinical observation which seemed to point in the same direction Those portions of the segment, therefore, which were directed respectively to the right and to the left ventricle would be assisted by the conditions, whatever they may be, which enable the delicate tissues of the pulmonary and aortic semilunar valves to perform a task which, without such help, would be clearly impossible The resources of the left ventricle in this respect are presumably much greater than those of the right, and so it is natural that the portion of the valve which presented to the right ventricle should have been the part to suffer

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SOME CONDITIONS THAT SIMULATE CHRONIC APPENDICITIS[1]

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I HAVE chosen as my subject some of the conditions that may simulate chronic appendicitis, because in the latter part of last year a distinguished London physician brought a charge of uncritical and unscientific diagnosis against surgeons in connexion with appendicitis, and crystallised it into the taunt, "the craze for appendicectomy" I realise the very grave measure of justice in that charge Since appendicitis became not only common but fashionable very many appendices have been unnecessarily removed in the absence of any real evidence that they were the cause of symptoms and without any relief to the patients sufferings, and this is a state of affairs that challenges us to approach the diagnosis of appendicitis in a critical attitude of mind

It is in the diagnosis of *chronic* appendicitis that mistakes are most often made, and I propose to limit my remarks to some of the conditions simulating that variety of chronic appendicitis in which there have never been any severe acute attacks—a form of the disease that is characterised by chronic pain and some tenderness in the *right* iliac fossa accompanied as a rule by constipation I do not propose to consider those more distant imitators and associates of chronic appendicitis gastric or duodenal ulcer and gall stones, nor must I stay to discuss lesions of the right kidney and ureter, with which at times chronic appendicitis may be confused I propose only to deal with certain structures in the more immediate neighbourhood of the appendix, and first I have to mention Lane's ileal band and Jackson's pericolic membrane

Lane and his followers hold that the symptoms we are considering, as well as an enormous number of other symptoms, are often due to an intestinal stasis or chronic obstruction, which is caused by an abnormal band of adhesions that we sometimes find attached to the ileum some three inches above the ileocæcal valve Normally the lower ileum rides freely on its mesentery right down to its junction with the cæcum Lane's ileal band, when *present*, is a fold of peritoneum on the left or inferior side of the ileum (see illustration), which tethers the gut down to the parietal peritoneum over the psoas muscle near the pelvic brim It is said by Lane to be acquired as the result of a tendency to enteroptosis and to cause a kink of the ileum and chronic *obstruction* to its contents Others have considered that it is an inflammatory band Both these views of its causation however, have been severely criticised, notably by Gray and Anderson in this country[2] and Flint in America,[3] who drew attention to the frequent occurrence of the ileal band in the full time fœtus and demonstrated its congenital origin I am able from my own embryological and clinical observations to confirm the congenital origin of the band It is the same structure as the genito mesenteric fold of Douglas Reid and is a peritoneal fold drawn down from the left side of the lower part of the mesentery by the testis or ovary in its descent Some trace of it can be made out in almost any fœtus beyond the fifth month though it is only fully developed in a small percentage of cases. I

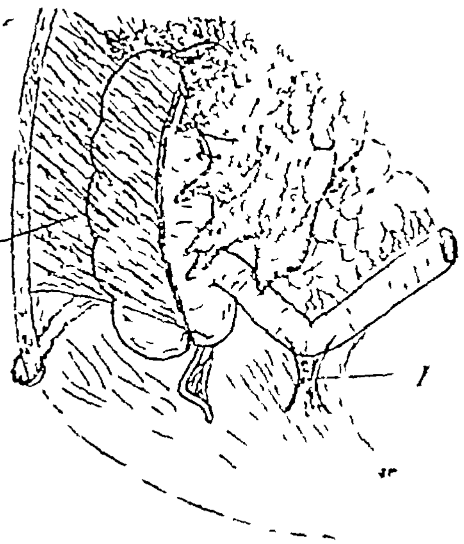

Diagram showing Jackson's pericolic membrane (J) and Lane's ileal band (I) healthy intestine, and it would seem therefore that the gas developed in the peritoneal cavity, which could occur only from the action of some aerogenic organism Many descriptions of such organisms have been published, but only two are generally recognised as producing gases in the tissues apart from putrefactive changes These are the bacillus aerogenes capsulatus of Welch and the bacillus œdematis aerobius of Sanfelice

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[1] An address delivered before the Lancashire and Cheshire Branch of the British Medical Association

[2] THE LANCET May [illegible] p 130 [illegible]

[3] Johns Hopkins Hospital Bulletin [illegible]

The bacillus aerogenes capsulatus was isolated by Welch in 1891, and described by Welch and Nuttall in 1892[3] A patient from the service of Sir William Osler died from repeated hæmorrhages from an aneurysm which ruptured through the chest wall No gas was observed in the tissues before death, but eight hours later in cool weather there was a general emphysema most marked near the region of the rupture The gas in the veins and tissues ignited with a slight detonation and burned with a pale blue flame An analysis published in 1897 by E K Dunham[4] shows that the gas developed in such a case is composed of hydrogen 64 3 per cent, carbon dioxide 27 8 per cent, and nitrogen, &c, 8 1 per cent In Welch and Nuttall's case it had no distinctive odour and there was no putrefactive odour or green discolouration of the body The bacillus aerogenes capsulatus was found in association with the bubbles of gas and was the only organism that developed under anaerobic conditions When 2½ c c of a pure culture were introduced into the vein of a rabbit no symptom of any kind followed in 5 out of 6 experiments In the sixth the rabbit was seen quite lively 20½ hours after the injection, but half an hour later it was found dead, and after death it became emphysematous This rabbit was pregnant, and two of her fœtuses were macerated and much smaller than the others, having evidently been dead some time When a rabbit was inoculated and killed within two days emphysema always developed after death, and the gas accumulated "with almost startling rapidity" when the rabbit was killed a few minutes after the injection and kept at a temperature between 30° and 35° C Introduced into the vein of a dead rabbit the bacillus caused bubble formation spreading to a limited extent along the vessel

F Fraenkel injected the bacillus into the subcutaneous tissues of mice without effect In rabbits thus treated œdema with necrosis was occasionally produced, followed by recovery In guinea pigs a spreading gangrene with gas formation developed and was followed by death There was no suppuration unless pyogenic organisms were also introduced and in these experiments the production of gas was usually localised in the necrotic area, even after death In 1896 Welch and Flexner recorded 23 cases in which with one exception the bacillus aerogenes capsulatus was identified In no case was gas found in the peritoneal or pleural cavity without hæmorrhagic infarction of the bowel or lung In one case the invasion of the bacillus was limited to two circumscribed areas of intestine The bubbles, from the size of a pea downwards, involved the whole intestinal wall and the bacillus was found in the adjacent tissue, but in no other organ nor in the blood. It was present in the intestine A case related by Graham Steward and Baldwin[5] was quoted in which a woman after a miscarriage became emphysematous all over her body four hours before death

The bacillus œdematis aerobius was first described by Sanfelice In 1901 Corner and Singer[6] recorded a case in which a bacillus was found "identical with that of Sanfelice" In 1904 Dudgeon and Sargent[7] described a case and discussed very fully the bacteriology of the organisms concerned They showed that the bacillus isolated did not cause gas formation when a culture was introduced into the veins of a rabbit which was almost immediately killed. The bacillus was therefore not the bacillus aerogenes capsulatus of Welch. They concluded that their case and that of Corner and Singer were "examples of that small group of cases of emphysematous gangrene which was caused by the bacillus coli" They pointed out, as did Welch, that no one had ever produced gas formation in any animal by injecting this bacillus But when it was introduced into the tissues with the staphylococcus pyogenes aureus (Chauvenez) or with the proteus vulgaris (Muscatello and Gangitano) gas formation had been obtained

The details of the characters of the gas producing bacilli are highly technical, and those interested should study the papers of Dudgeon and Sargent, Welch, and others It seems to me that those of M H Gordon[8] and Theobald Smith[9] are also important These writers have shown that streptococci and staphylococci and the bacillus coli are capable of differentiation into subspecies which breed true It seems to me that these observations offer a satisfactory explanation of the many manifestations which are attributed, for example, to the action of the bacillus coli

The bacilli under consideration are widely distributed in nature They may be found in the intestines of animals, in milk, in surface water, in soil, in cesspools, and in many other surroundings The bacillus aerogenes capsulatus was detected in 69 out of 250 wads of blank cartridges This bacillus seems to develop gas more freely and more rapidly than the bacillus œdematis aerobius, and I think it was the active agent in the case now recorded, but without bacteriological evidence no definite statement can be made The case is, I believe, unique Dr James F W Ross described exactly the same conditions of pneumoperitoneum with contracted intestines, but in his case the condition arose in a woman suffering from puerperal septicæmia with high temperatures The gas was let out 34 days after delivery, but it reaccumulated, and death followed in three days Mr (now Sir Rickman) Godlee published in 1877 three cases of gas and fluid in the unwounded peritoneal cavity, and in one the patient was alive five weeks after the gas and fluid were released This is the only case I the uterus, either gonorrhœal or septic The pain is usually, though not invariably, worse at the menstrual periods, and in some of these cases on palpation in the right iliac fossa there occurs a reflex tonic spasm of the psoas muscle which I have seen mistaken both for an appendicular abscess and for a neoplasm The subject of these ovarian conditions, simple and tuberculous, is far too large, however, to be dealt with adequately now I feel that a too rigid demarcation between surgery and gynæcology has done harm to both, and that surgeons who are constantly operating in the abdomen might well take a far more intelligent interest in the tubes and ovaries than has been customary of recent years

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[3] A gas-producing bacillus (bacillus aerogenes capsulatus nov spec) capable of rapid development in the blood vessels after death Bulletin Johns Hopkins Hospital July August 1892 p 81 This bacillus was described again in 1893 by F Fraenkel (Centralblatt für Bacteriologie und Parasitenkunde Band xiii pp 13-16) who called it the bacillus phlegmones emphysematosæ but subsequently agreed that it was the bacillus aerogenes capsulatus Eugene [illegible] (The Toxic and Antigenic [illegible] of Bacterium Welchii Journal of Infectious Diseases [illegible]) asserted that the bacillus enteritidis sporogenes [illegible] (Veillon and Zuber) the [illegible] (Schattenfroh and Grassberger) the [illegible] (Achalme) the [illegible] and [illegible] are all undoubtedly the [illegible] capsulatus Welch

[4] [illegible] the bacillus aerogenes capsulatus [illegible]

[5] Columbus Medical Journal 1893

[6] Emphysematous Gangrene by Edred M Corner and W Douglas Singer Transactions of the Pathological Society of London 1901 pp [illegible]

[7] Case of Emphysematous Gangrene caused by the Colon Bacillus by Leonard S Dudgeon and Percy W Sargent Transactions of the Pathological Society of London [illegible] pp [illegible]

[8] [illegible] on Some Characters by which Various Streptococci and Staphylococci may be Differentiated and Identified

[9] Note on Bacillus Coli Communis and Allied Forms American Journal of the Medical Sciences [illegible] p [illegible]

In cases of chronic pain in the right iliac fossa a careful and thorough physical examination, with an equally careful history, will often enable us to make a fairly confident diagnosis of the underlying condition, but in a large proportion of these cases we must frankly admit that with our present clinical methods a precise preoperative diagnosis is not possible What we can say is that exploration is advisable, since where the pain in this region is persistent and severe there is nearly always an organic cause, capable of relief by well considered surgical means

It is not pleasant to operate without a precise preoperative diagnosis Patients do not like it always, since they are apt to demand omniscience But it is a far more scientific and indeed a more honourable thing to admit our limitations and to explore with an open mind than it is to operate with one's eyes blinded by a positive diagnosis, given where certainty is not truly possible

The lesions which may simulate chronic appendicitis are so many that an adequate incision is imperative There should be no more blind removals of the appendix in these dubious cases through a two inch gridiron incision, but through a sufficiently large incision, usually a vertical one through the right rectus, and preferably under spinal anæsthesia, we should inspect not only the appendix but all the other structures that may possibly have been the cause of the trouble, and we should deal with them according to the actual conditions found, and not according to any preconceived opinion of the thing we ought to find

Manchester

UNIVERSITY OF EDINBURGH ANNUAL REPORT — The annual report for 1914 bears in many places the imprint of the war During the year there were 732 fewer matriculated students than in 1913 The numbers matriculating in the Faculty of Medicine were 1025 or 290 less than in the previous year The marked decrease in the numbers of male undergraduates in the various faculties is of course principally due to the fact that prior to the opening of the autumn session a large body of students actual and prospec

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PNEUMOPERITONEUM OF THREE DAYS' DURATION FOLLOWING RESECTION OF A CARCINOMATOUS RECTUM,

EVACUATION OF THE GAS AND OF A PELVIC ABSCESS, RECOVERY, NO RECURRENCE AFTER FIVE YEARS [1]

By JOHN D MALCOLM, F R C S EDIN
SENIOR SURGEON TO THE SAMARITAN FREE HOSPITAL

THE absence of recurrence after five years is satisfactory, but the pneumoperitoneum constitutes the chief interest of the following case

The patient, a stout woman, aged 60, complained of pain and hæmorrhage from the bowel After six months an ulcerated tumour was found in the posterior wall of the rectum but there was no fixation of the part and on Dec 31st, 1909, the rectum was removed in the Samaritan Free Hospital by a combined abdominal and perineal method described by C H Mayo [2] The abdomen was opened the bowel was divided above the new growth and both ends were closed The rectum with as much pelvic fat as possible, was separated and everted through the anus The projected mass was then cut off between the growth and the internal sphincter The remaining part of the rectum was held in its everted position by forceps, and through it the lower end of the mobilised sigmoid flexure was brought down This was opened, and the bowel ends were united by interrupted sutures and replaced in the pelvis The union was considered so accurate that Mayo's recommendation to drain the pelvis through an incision behind the anus was not followed

After the operation the highest temperature was 100° F the bowels acted, and no unfavourable sign was noticed until the sixth morning, when the abdomen was distended The bowels never failed to move when laxative medicine was given and there was no vomiting but the distension rapidly increased and on the ninth day it was very great the abdomen being tense and tympanitic all over and the pelvic floor being pushed down The temperature was 99 2° the pulse rate was increasing but only 118 and of fair volume Respiration was not greatly distressed and the general condition was alarming only because of the increasing distension

The abdomen was reopened and its anterior wall immediately fell with a flop upon the intestines which occupied a very small space A large quantity of gas necessarily escaped and an absence of odour was observed The exposed part of the peritoneal sac contained no fluid and its serous surface was very pale and showed no sign of inflammation The intestines were not adherent except in the pelvis, where all the parts were matted together On separating these many ounces of offensive pus were released The abscess cavity which contained no free gas was drained through the lower end of the incision the remaining part of which healed by first intention and no further accumulation of gas took place After drainage of a secondary collection of pus through an incision in the right groin the abscess healed slowly and otherwise recovery was uninterrupted When the patient left my care the line of anastomosis was fixed by cicatricial tissue, but there was abundant room for the passage of fæces On Dec 22nd 1914 the patient's general health was good and her only [illegible] which necessitated the [illegible] ill effects of any compressing agent effused beneath the window of bone On the other hand, nibbling operations are more difficult and more prolonged, yet there is complete freedom from any fear of inefficient relief of pressure What I suggest, then, is preliminary resection of a flap of soft tissue and bone in the usual way, following this up by "pepper pot" trephining of the flap raised This can be done effectively and quickly with a burr, perforations ⅜ to ½ inch in diameter being drilled at close intervals from the interior of the reflected plaque, right through the osseous tissue, but not including the soft parts The bone flap will then be a sort of retaining cage of a basket-like, fenestrated, or pepper pot texture This should efficiently retain the brain without risk of hernia and yet with satisfactory relief from pressure A diagram of the idea of the operation is given

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A THIRD OUTBREAK OF EPIDEMIC POLIOMYELITIS AT WEST KIRBY

By GEORGE JUBB M D GLASG, D P H OXON,

MEDICAL OFFICER OF HEALTH, HARTLEPOOL LATE ACTING MEDICAL OFFICER OF HEALTH, NORTH WEST CHESHIRE COMBINED DISTRICTS.

THE occurrence of cases of poliomyelitis at West Kirby for the third year in succession appears to me to present so many interesting features that I have ventured to put these few notes together, as so far I am not aware that there have been similar occurrences in any other district

The first case in 1914 occurred on August 10th in a house within a quarter of a mile of the solitary case of 1912, and within the same distance of the first case of 1913 and equidistant from many of the other cases of 1913 The father of the first patient is a medical practitioner who attended two of the cases of 1913, and although this may only be a coincidence, yet it opens up a field of speculation and emphasises the importance and necessity of precautionary methods being adopted by all who come in contact with, or have to deal with, acute poliomyelitis The following are the numbers of children attacked in each outbreak 1912, 1 case, 1913, 7 cases[1] and 1914, 4 cases Some brief clinical notes of the cases may be of interest

CASE 1.—A male aged 3 years, West Kirby The illness began on August 10th with violent headache but no sickness He complained also of dryness of the mouth, and his breathing was very laboured and difficult On the 13th twitching of his right arm and leg was noticed, and on the 15th paralysis was definitely established The paralysis of his right arm and leg gradually disappeared and three weeks later the boy was going about practically well The affected muscles however remained flaccid and the right knee jerk absent There were no other children in the house

CASE 2.—A female aged 6 years, Hoylake The illness began on Sept 22nd with headache and sickness On the next day there was complete paralysis of the child's arms and legs and she was unable to lift her head Death occurred two days later (on the 25th). There were two other children in the house, one younger than this case

CASE 3.—A male aged 3 years Hoylake The illness began on Oct 1st with feverishness and vomiting but without headache On the 4th paralysis of the left arm was noticed There were two other children in the house both older than this case

CASE 4.—A male aged 6 years Hoylake The illness began on Oct 2nd with feverishness headache and vomiting On the 6th there was paralysis of both arms and legs, but left arm paralysis was pronounced There was one younger child in the house

Distribution of Cases

Case 1 occurred in West Kirby in the circumstances already mentioned Case 2 occurred in Hoylake, about a mile away from Case 1 It may be mentioned here that Hoylake and West Kirby are practically one town and are model seaside resorts, clean, well drained, and well paved Cases 3 and 4 were also in Hoylake, one on either side of Case 2 and about half a mile away from it No other cases occurred in West Kirby and, as far as is known, no cases developed among visitors after leaving the district No cases were reported from any of the adjoining districts

Possible Sources of Infection

Milk—All the Hoylake cases had a common milk-supply In outbreaks of poliomyelitis it is most unusual to find the milk supply concerned The apparent implication of the milk supply here might, of course, be only another coincidence, but Case 3 was fully a mile away from Case 4, in a well populated district, or rather town, and therefore the milk, with those engaged in its distribution, is bound to fall under suspicion

Dust—The two towns are very clean and free from ordinary dust Sand from the shore is often blown about the towns by the wind, but this is more usual in winter than in summer

Flies—No excessive prevalence of flies was noticed Against the theory of infection by means of flies it may be pointed out that poliomyelitis is increasing, while owing to the diminishing use of horses the chances of infection by biting flies are steadily decreasing

Other insects—In the facts elicited regarding the cases of 1912 and 1913 there appeared to me to be some foundation for suggesting that possibly the infective agent was at times conveyed by means of lice In this outbreak it has not been possible to collect any evidence which would substantiate this theory On the other hand I may say that on several occasions I have been asked if it was possible for sand fleas to convey the infection of poliomyelitis, as most of the children affected had paid recent visits to the shore

Carriers—It is held by many that the disease is spread by carriers, and that the cases are only "unfortunate incidents in a widespread benign infection" (R McLaren) It is quite possible that this is so either directly or indirectly The occurrence of these four cases would appear to support the theory of carriers, and additional support is probably given by the implication of the milk supply

It is worthy of note also that these four cases occurred within a very limited area, and amongst a population of 14,000 and that the disease has taken two years to spread from West Kirby to Hoylake, a distance of only a mile in as already mentioned, a well populated area

In conclusion I may remark that though it was not possible to trace any connexion between Case 1 in West Kirby and Case 2 in Hoylake yet in the recurring outbreaks of three successive years it seems as if one could almost trace a case to case infection I have little doubt that the many puzzles the epidemiology of poliomyelitis apparently presents will much as in the case of malaria be finally solved when the means of distribution of the infective agent is or are clearly established

Hartlepool

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[1] THE LANCET, Nov 1, 1913, p 1250

know of except that now related in which an accumulation of gas in the peritoneal cavity has been survived without the closure of a wound through which the gas had passed into that cavity

Wounds associated with emphysema of the surrounding tissues are almost always fatal unless the affected part is promptly amputated Occasionally a cure may be effected by making very free incisions On the other hand, the bacillus aerogenes capsulatus may circulate in the healthy tissues without harm, and the case now related shows that in exceptional circumstances recovery may follow distension of the peritoneum by gas It seems to me that the organism gained access to the tissues during or soon after the operation, but was harmless until the pressure of the abscess diminished the vitality of the adventitious tissue between the pus and the peritoneal cavity sufficiently to allow the organism to develop in that membrane and cause gas formation, whilst some unfavourable condition in the abscess cavity prevented gas production there Conversely the increased vitality of the tissues, brought about by the relief of tension in the abscess and in the abdominal cavity, was sufficient to arrest the aerogenic action of the bacilli

The facts that the bacillus aerogenes capsulatus usually develops only in dead or dying tissue and the invariable association of the bacillus œdematis aerobius with septic organisms have developed a new interest since these notes were written The men of our Expeditionary Force in France are constantly in recently made trenches, where the opportunities are numerous for infection of wounds by anaerobic organisms found in the soil Already a number of cases of emphysema complicating injuries have been recorded, and the bacilli under consideration have been separated from these wounds It is obvious that to prevent the occurrence of this complication, which is almost always an indication of extreme danger, it is necessary to preserve the vitality of the parts in every possible way, and this necessity adds force to the plea made by Sir Watson Cheyne at the Medical Society and by others for an intelligent application of the teachings of Lister to the conditions of the present war Aseptic surgery is impossible when the wounds are made septic as they are inflicted An attempt should therefore be made to sterilise these infected wounds at the earliest possible moment by a vigorous use of antiseptics

Wimpole street W

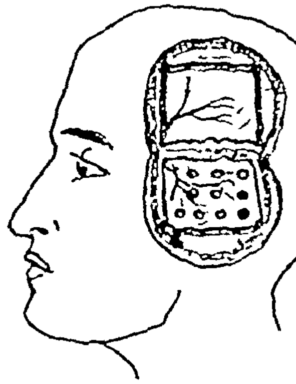
OSTEOPLASTIC RESECTION OF THE SKULL IN DECOMPRESSION OPERATIONS ON THE BRAIN

BY SPENCER MORT M D GLASG, F R C S EDIN
F R S E
MEDICAL SUPERINTENDENT EDMONTON INFIRMARY
UPPER EDMONTON N

Two cases of brain disease with pressure on the cortex which I have at present under treatment have suggested a method in modification of the current procedure in decompression operations and it may be opportune at this time One case shows the disadvantage of removal of a large portion of bone the other case shows the converse difficulty which may arise from replacing a temporarily resected flap of bone

The first patient a male, aged [illegible] years was operated on some months ago by a well known brain surgeon for intracranial pressure, probably due to tumour The bone in the left temporal region has been removed over the silent area, apparently by Cushing's method, and at this date there is a large protrusion of the brain forming a hernia cerebri The other patient a female, aged 60 years was operated on by me 14 days ago There was a fracture of the base of the skull with intradural hæmorrhage, and pressure signs on the left side of the motor area of the cortex

A large flap was made in the soft tissues and four holes were drilled with a Doyen's burr at the angles of a rectangle of bone, measuring 3 inches by 2½ inches With a Gigli's saw the resection was completed and the brain exposed in 15 minutes from the first incision On incising the dura an amount of blood issued and drained away, leaving a pulseless, flat-looking area of cortex The lower anterior drill hole was enlarged with nibbling forceps and utilised as a drain, and the bone with its cover of soft tissue was replaced Relief from pressure was observed for a week, then evidence of irritation recommenced In the next four days there were no less than 450 fits of Jacksonian nature counted, affecting mostly the right side of the face, with conjugate deviation of the eyes to the right and aphasia followed by unconsciousness with Cheyne Stokes respiration due to pressure on the face centres and Broca's lobe Four days after the onset of these seizures—that is, 11 days after operation—the wound was reopened and a quantity of blood clot turned out from the brain surface where it had collected under the bone and caused pressure The whole portion of resected bone was removed from the tissue flap and the skin and muscle and aponeurosis only replaced Immediately and obviously the pressure signs ceased and in the next three days there were but two slight fits observed the breathing and pulse improved and the general condition got better



Diagrammatic sketch to illustrate "pepper pot" trephining for the relief of intracranial pressure

Now this case stands much the same as the first example quoted there is a large bony gap which must either remain to the inconvenience or danger of the patient afterwards, with also the risk of hernia cerebri or else the hiatus must be filled in by bone mosaic, osseous graft or mechanical obturator In similar cases therefore I propose to try the effect of a procedure which I have not seen described before the object of which is to amalgamate the advantages of temporary resection with those of permanent removal of bone

Osteoplastic resection is easy speedy and gives good access, without good drainage to prevent the

King Edward VII Sanatorium show also that it is an unusual occurrence for such patients to relapse after receiving a course of sanatorium treatment and education The treatment, therefore, of cases diagnosed as pulmonary tuberculosis in the absence of tubercle bacilli, though doubtless of value to the individual patients and of interest in other respects, furnishes us with no useful information as to the value of tuberculin All that can be said is that such cases do equally well on sanatorium treatment with tuberculin and on sanatorium treatment alone

The Result of Treatment of 130 Cases in the Sputum of which Tubercle Bacilli were Found

The results were as follows Much improved, 64 6 per cent , improved 17 7 per cent , stationary or worse, 17 7 per cent , lost bacilli, 32 3 per cent These records of general results and for the loss of bacilli are better than any previous records published by the Sanatorium It is essential, however, that it be borne in mind that these figures refer to the treatment of selected cases, for the actual proportion of tuberculin treated cases amounted to but 62 per cent of all the cases treated in the Sanatorium during the period now under review The degree of selection exercised introduces a difficulty in estimating the success of our work, since we have no records of the results in similarly selected cases treated by sanatorium methods alone There is, however, no doubt at all that if the 30 to 40 per cent of less favourable cases were eliminated from our records of results of sanatorium treatment alone the figures would be most materially improved The selection of cases for tuberculin treatment to the exclusion of the less favourable therefore introduces a serious element of fallacy

A Comparison of the Results of Tuberculin treated Patients and Patients treated in the Sanatorium without Tuberculin

The only possible method we have for making a comparison between the results of the tuberculin treated and the non tuberculin treated is to set out the general results obtained for the whole Sanatorium in the pre tuberculin days side by side with similar results obtained since the introduction of tuberculin This gives us a view of the effect upon the general results of the introduction of some 60 per cent of selected cases treated with tuberculin

In the following tables I have set out for purposes of comparison the general results and the effect upon the sputum under the two conditions stated 1 In 764 cases treated in the Sanatorium without tuberculin 2 In the treatment of 172 unselected cases treated in the Sanatorium during 14 months of which cases 64 5 per cent received tuberculin 3 In the treatment of 130 selected cases treated with tuberculin These records refer exclusively to patients with tubercle bacilli in their sputum

TABLE I —COMPARISON OF GENERAL RESULTS

1 *Results of Treatment of 764 Consecutive Unselected Patients (T B + cases) on Sanatorium Methods Alone*

	Arrested or much improved		Improved		Stationary or worse	
Group 1 (1[illegible] cases)	87 9	(161)	6 5 %	(12)	5 [illegible]	(10)
Group 2 (357 cases)	57 4	(2[illegible]5)	20 1	(72)	22 4	(80)
Group 3 ([illegible] cases)	[illegible]	([illegible])	[illegible] 6	(82)	[illegible]2 6	(95)
Total (764 cases)	53 [illegible]	([illegible])	21 7	(16[illegible])	2[illegible] 0	(1[illegible])

2. *Results of Treatment of 172 Consecutive Unselected Patients (T B + cases) during 14 months—March, 1912–May, 1913—of whom 111 or 64 5 per cent , received Tuberculin*

	Arrested or much improved.		Improved		Stationary or worse	
Group 1 (25 cases)	84 0 %	(21)	Nil		16 0 %	(4)
Group 2 (110 cases)	55 4 %	(61)	21 8 %	(24)	22 7 %	(25)
Group 3 (37 cases)	18 9 %	(7)	27 0 %	(10)	54 0 %	(20)
Total (172 cases)	51 7 %	(89)	19 7 %	(34)	28 4 %	(49)

3 *Results of Treatment of 130 (for the most part) Selected (T B + cases) Patients from November, 1911, to May, 1913, treated with Tuberculin*

	Arrested or much improved		Improved.		Stationary or worse	
Group 1 (22 cases)	95 4 %	(21)	Nil.		4 6 %	(1)
Group 2 (81 cases)	70 3 %	(57)	13 5 %	(11)	16 2 %	(13)
Group 3 (27 cases)	22 2 %	(6)	44 4 %	(12)	33 3 %	(9)
Total (130 cases)	64 6 %	(84)	17 7 %	(23)	17 7 %	(23)

TABLE II —COMPARISON OF SPUTUM RESULTS

1. *Results of Treatment of 764 Consecutive Unselected (T B +) Cases on Sanatorium Methods alone*

Lost T B whilst in the Sanatorium —

Group 1	43 1 per cent
Group 2	17 8 ,,
Group 3	6 6 ,,
All cases together	20 5 ,,

2 *Results of Treatment of 172 Consecutive Unselected (T B +) Cases of which 64 5 per cent (111) received Tuberculin*

Lost T B whilst in the Sanatorium —

Group 1	49 6 per cent
Group 2	25 6 ,,
Group 3	8 3
All cases together	25 5 ,,

3 *Results of Treatment of 130 Selected (T B +) Cases Treated with Tuberculin*

Lost T B whilst in the Sanatorium —

Group 1	59 0 per cent
Group 2	33 3
Group 3	7 4 ,
All cases together	32 3 ,,

Admitting the difference in the total number of cases dealt with the records for all cases during the pre tuberculin years, and for a period of 14 months, during which tuberculin was largely used, are strikingly similar They indicate that whilst the use of tuberculin has had no appreciable effect upon the general results as regards the loss of bacilli there has been an appreciable difference 5 per cent more patients having been discharged free from bacilli than in former years It is noticeable too, that the greatest improvement is seen in the group of moderately advanced cases, the figures for loss of bacilli having risen from 17 8 per cent to 25 6 per cent , a significant increase since this group includes the majority of the patients

An Interim Opinion as to the Value of Tuberculin

It is impossible to give anything like a final opinion as to the value of tuberculin on the strength of our present experience Moreover an interim opinion is necessarily limited to the value

ARTERIO VENOUS ANEURYSM OF THE FEMORAL VESSELS, FOLLOWING BULLET WOUND THROUGH THE LEFT THIGH

By W MORLEY WILLIS, F R C S Eng,
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THIS case is of current interest as it occurred in the present war, and of surgical interest on account of the comparative rarity of the condition

The patient was a private in the Black Watch, and he was wounded at Ypres on Oct 29th, 1914, by a rifle bullet which passed through the upper third of his left thigh, from before backward He was treated for two days at a clearing station, and was then sent into hospital at Boulogne, where he remained for three weeks He says that on the third day after his admission to hospital at Boulogne his wounds were practically healed and he was allowed to get up When he did so he found that on walking about he had a tingling pain in his left foot, and on the second day on which he was up he complained of this to the surgeon who examined him, and found that there was a thrill to be felt in the region of the anterior wound He was put to bed and he remained there until he was sent to England He came straight through to us from Southampton and reached the Nottingham General Hospital on Nov 22nd, 1914

On admission the patient had a pulsating swelling, of about the size of a pigeon's egg, about 4 inches below Poupart s ligament, in the line of the femoral vessels On the upper and inner portion of the swelling was the wound of entrance—healed The swelling was expansile, and there was a well marked bruit to be heard on auscultation A very marked thrill was to be felt, especially in the line of the vessels proximal to the swelling Pressure on the femoral artery caused the pulsation in the swelling to cease These foregoing physical signs left no doubt that a wound of both the artery and the vein had been inflicted, and from the situation it was reasonably probable that the wound in the artery was below the origin of the profunda femoris The patient was kept in bed, and it was observed that the swelling was increasing in size

Operation was performed on Dec 1st The steps of the operation were as follows A long incision in the line of the femoral vessels was made from Poupart s ligament for about 8 inches downwards, and the femoral artery and vein were exposed and demonstrated above the aneurysm, similarly, the artery and vein were exposed below the aneurysm Then around each vessel separately, both above and below the aneurysm, was placed a temporary ligature consisting of small sized rubber tubing In other words, a tourniquet was applied directly to the vessels in the four situations This secured that the further steps of the operation on the injured vessels were quite bloodless The femoral vessels where the bullet had traversed them were firmly adherent to each other and there was scar tissue in the neighbourhood They were carefully dissected from each other and it was found that the artery had a wound in front and behind and that the vein had a wound on its outer side only The situation and relations of the vessels explain this as at the position where the wound occurred the vein is beginning to pass behind the artery Consequently a wound through the artery just caught the outer border of the vein The profunda femoris artery was demonstrated, arising about 1½ inches above the wound in the femoral artery The femoral artery was then ligatured above and below the wound in it, and the wounded portion was cut out The wound in the vein was a longitudinal slit about ¼ inch in length This was repaired by suture with fine silk and intestinal needle, and the continuity of the blood stream restored The temporary ligatures of rubber tubing were then removed from the four points where they had been applied, and the wound was found to be dry, no hæmorrhage taking place from either vein or artery The deep fascia was sutured with catgut and the skin with silkworm gut

The operation was performed under spinal anæsthesia, which was quite perfect The patient made an entirely uneventful recovery, getting up at the expiration of three weeks

Nottingham

THE VALUE OF TUBERCULIN AS AN ADDITION TO SANATORIUM TREATMENT

By NOEL D BARDSWELL, M D Edin,
MEDICAL SUPERINTENDENT KING EDWARD VII SANATORIUM, MIDHURST

I LIMIT myself to the consideration of experience with tuberculin at King Edward VII Sanatorium We have used tuberculin extensively, and as a result of this work we are now enabled to give a partial answer to the question, to what extent, if any, was the benefit to be derived from an average stay of some six months in the Sanatorium increased by the use of tuberculin, as compared with a similar length of treatment in the Sanatorium when no tuberculin was given

Results of Tuberculin Treatment

During the 19 months from October, 1911 to May, 1913, tuberculin was given to 154 patients this number representing 62 per cent of all the patients treated in the Sanatorium during this period Of these 154 patients, 130 (or 84 4 per cent) had tubercle bacilli in their sputum the remaining 24 patients had not They may then be classified as follows 1 Cases in which pulmonary tuberculosis was believed to exist though the presence of tubercle bacilli could not be demonstrated in the sputum, 24 2 Definite cases of pulmonary tuberculosis, tubercle bacilli being present in the sputum (a) Cases of early disease, (Group I) 22, (b) cases of moderately advanced disease, (Group II) 81, and (c) cases of advanced disease (Group III) 27

Results of Treatment in 24 Cases in which Tubercle Bacilli were not Found

These 24 patients all did very well indeed but it is difficult to decide how best to classify them on their discharge To record them as on admission presenting early disease, and on discharge arrested disease would give the encouraging result of something like 100 per cent of complete recoveries Such a record however would be of no value These so called early cases do very well under ordinary sanatorium treatment, it being very unusual for such cases to fail to reach an apparently complete recovery The after history records of successfully treated on ordinary sanatorium lines, plus tuberculin had reactionless courses, and that no one case which was troublesome to immunise on account of reactions was successful, as judged by the loss of bacilli One factor, then, which these successful cases all had in common was a capacity to take increasing doses of tuberculin without reactions, their treatment in consequence presented no difficulty, and in respect of exercise they were able to follow the same treatment as has always been prescribed to favourable cases at the Sanatorium These 40 patients, in short, were all of a very favourable clinical type, they represented 30 per cent of the cases selected as being suitable for tuberculin treatment Although complete recovery, with loss of bacilli, is compatible with a reactionless course of tuberculin when given at the same time as ordinary sanatorium treatment, it is by no means certain that a prolonged reactionless course of treatment will result in any obvious success On the contrary, many of our cases took tuberculin just as well as the 40 cases just considered, over periods, for example, of 30, 40, and 50 weeks and more, but with no apparent benefit That is to say, their progress was identical with the progress made by non tuberculin treated cases which do not lose their bacilli. There is one difference only, in that the tuberculin treated were rendered tolerant to considerable doses of tuberculin

Tuberculin Courses Marked by Reactions

I have been able to extract from our records sufficient evidence to prove conclusively that reactions are a source of danger, fortunately it is not considerable, for our practice has been to discontinue tuberculin so soon as it is evident that it cannot be given without risk In brief, I have observed the occurrence of increased activity of the disease definite extension of the area of disease, the development of acute pleurisy with effusion, and in one case of pneumothorax following upon slight reactions Apart from these more serious effects, I have seen many cases in which favourable progress was retarded by occasional slight reactions or by a slight degree of malaise, unaccompanied by definite febrile disturbance, consequent upon tuberculin inoculations What has impressed me even more forcibly of the grave dangers of reactions are the results of treatment marked by repeated febrile disturbances which continually come under my notice when examining candidates for admission to the Sanatorium During the past 12 months I have seen 14 patients who, beyond all doubt had been seriously injured by inoculations of tuberculin and in many of these, unfortunately, the damage was of an irremediable nature

I would urge most strongly that safety in tuberculin treatment lies in the strict avoidance of reactions, and in my opinion unless this is realised the general use of tuberculin throughout the country will prejudice the prospects of the average consumptive patient

Bandelier and Roepke are of the opinion that if the reacting temperature is not greater than 100·4° F it is unnecessary to decrease the dose Many observers in their practice are bolder than this I entirely disagree with this attitude towards reactions Sahli[1] has much more nearly expressed my views in the following words "One is not justified in provoking febrile reactions and all other manifest toxic actions must be avoided A rise of 4 to 5 tenths of a degree F must be considered as a febrile reaction, if the time of its occurrence clearly shows that it is the result of an injection"

Our own records show that very often reactions to 100° F do no obvious harm, but it is not to the point So long as there is no evidence to prove that they are of any benefit, and considerable evidence to show that the intensity of reactions cannot be controlled, and at any time they may do great harm, there can be no room even for discussion as to what is the correct practice

Tuberculin as an Aid in Diagnosis of Pulmonary Tuberculosis

It is now generally recognised that the production of a local reaction at the seat of inoculation and the raising of the temperature as the result of a tuberculin injection afford no useful information These results merely indicate that infection by tuberculosis has occurred at some time, but do not help us to determine whether or not tuberculous disease exists, and should it exist, whether it is active, quiescent, arrested, or obsolete These facts are not sufficiently recognised On the other hand, the absence of any reaction following a series of diagnostic inoculations excludes the existence of tuberculous disease, and the occurrence of a focal reaction in a suspected organ—for instance, in the case of the lung the development or increase of adventitious sounds—warrants a positive diagnosis Tuberculin for diagnostic purposes, therefore, has a definite though somewhat restricted value

In conclusion, I would express the opinion that it is impossible not to look upon tuberculin sympathetically, for as a means of treatment it at least rests upon a scientific basis Wholesale condemnation and extravagant praise of tuberculin as a means of treatment of pulmonary tuberculosis are alike unwarranted What we now require is more work, accurately observed and carefully recorded, and more of the scientific and critical spirit in our judgments

Midhurst

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[1] [illegible]

HUNTERIAN SOCIETY —At the next meeting of this society on Wednesday, Jan 13th at 9 P M, in the Barbers Hall, Monkwell street E C, Mr Donald Armour will deliver the second Hunterian Society's lecture on Surgical Experiences during the Present War All members of the medical profession are invited

LITERARY INTELLIGENCE —As usual, the new issue of the British Pharmacopœia will be accompanied by the publication of several books which are based upon and supplement the information contained in the official work. In this connexion we draw attention to Messrs J and A Churchill's announcements "Materia Medica" fourteenth edition by Dr W Hale White physician to Guy's Hospital "The Book of Prescriptions" tenth edition by Mr E W Lucas a member of the British Pharmacopœia Reference Committee "The Book of Pharmacopœias" by Mr E W Lucas and Mr H B Stevens This is a new book containing about 5000 formulas British and foreign arranged on a comparative system —Mr H K Lewis in announcing for early publication the new (sixteenth) edition of the Extra Pharmacopœia has issued a pamphlet describing the special features of the two volumes into which this work is now divided The new edition has been revised in conformity with the British Pharmacopœia 1914 and a synopsis of the more important changes has been provided —Messrs Smith Elder and Co announce for publication "The Early Diagnosis of Heart Failure and other Papers on the Heart and Circulation" by Dr T Stacey Wilson physician to the General Hospital Birmingham The volume is illustrated by over 100 original diagrams of tuberculin when administered by the method popularised largely by the work of Bandelier and Roepke, which, as the one in most general use, was selected for the first trial We are now using the method recommended by Trudeau and Sahli, amongst others, by which considerably smaller doses are given, thereby securing much greater immunity from the risk of provoking reactions

Our experience as yet has shown that in tuberculin we have not a remedial agent which is to revolutionise either our sanatorium results or our conception of the outlook for the average consumptive Tuberculin is not a cure in the ordinary sense of the term, and no immediate or striking results are to be expected from it, even with the most favourable cases The good effect of tuberculin is at the best exerted almost imperceptibly and over a long period, the slowness of its action being such that it is often difficult to determine as regards patients treated under the most favourable and hygienic conditions how much, if any, of the improvement that takes place is due to its use

As employed at the Sanatorium during the first 18 months of the observations on tuberculin, it appeared to exercise a favourable influence in the treatment of a certain proportion—some 25 to 30 per cent—of the cases admitted to the Sanatorium For a fair number of those patients who can take steadily increasing doses of tuberculin without reactions it is a useful addition to the other means employed in sanatorium practice This favourable influence is to be recognised chiefly in the more rapid disappearance of bacilli As to the kind of case in which we may expect to find tuberculin of assistance, our experience is that it is a patient with a good outlook, who has rapidly responded to general hygienic measures, and who has shown evidence of constitutional vigour and recuperative power Already improving, the addition of tuberculin in the treatment of a good many of such cases seems to expedite the full establishment of convalescence

In a considerable number of cases tuberculin, so far as we can judge from immediate clinical results, has no obvious effect The patient is gradually made tolerant to tuberculin, but this is the only objective indication of its action Further, in a certain proportion of cases tuberculin is more than a negative agent it is positively prejudicial We have received no encouragement in the treatment of febrile cases with tuberculin, and have quite failed to obtain confirmatory evidence of the antipyretic value which some observers have claimed for it Tuberculin cannot be looked upon as a means whereby an unfavourable case can be converted into a favourable one, or as likely to turn the scale in the patient's favour when his progress is hesitating or definitely retrogressive More often than not it will do harm

It follows, then that the administration of tuberculin is quite unsuitable as a routine method of treatment for all cases of pulmonary tuberculosis and that its indiscriminate and careless use on a large scale can only end in disasters

Commentary

It is a matter of opinion how far our experience at the Sanatorium helps us in the solution of the larger issue—namely the therapeutic value of tuberculin It is generally stated that in order to obtain the full advantage the process of immunisation by tuberculin inoculations should extend over a very long period at least a year or more It is for this reason that dispensaries, and sanatoria working in connexion with such institutions, may be expected to attain a greater measure of success than sanatoria working single handed So far as our work at King Edward VII Sanatorium is concerned, there has been no such coöperation, and with but few exceptions the patient's course of tuberculin has terminated with his discharge from the Sanatorium

The question of the continuance of tuberculin treatment by patients after their discharge from the Sanatorium is one of considerable difficulty It is at least very probable that in many cases it would be to the advantage of the patient if his course of tuberculin, already of some four months' duration, could be continued for a very considerable period on his return home At the present time it is impossible in most cases satisfactorily to arrange for this, for, to judge by our experience, the medical profession generally in this country is not yet sufficiently versed in tuberculin administration to warrant their undertaking this treatment with any confidence Further, in my capacity of examiner of candidates for admission to the Sanatorium I continually see most unfortunate results of tuberculin treatment It is true that these bad results are for the most part the outcome, seemingly, of what I should consider to be a faulty method of tuberculin administration At the same time, there is reason to believe that the methods adopted represent a conception of tuberculin treatment which is widely held by the profession at the present time Personally I should like to see the trial of tuberculin upon a large scale, and in respect to the patients at King Edward VII Sanatorium should like to arrange for their tuberculin treatment after their discharge, since the results of such observations could not fail to provide most valuable information I do not think, however, that this extended experiment is justified unless a method of treatment is adopted which is absolutely free of risk to the patient The first essential is to be sure that the treatment will do no harm Herein to my mind lies the crux of the tuberculin problem at the moment

With respect to the Administration of Tuberculin

The administration of tuberculin centres round the question of reactions Is it a serious responsibility to provoke a reaction, or is a reaction nothing worse than a hindrance in the course of immunisation, a transient and harmless episode? Again is it a simple matter to give a full course of inoculations without producing febrile disturbances, or is it a task of considerable difficulty, amounting in many cases to an impossibility? It would seem remarkable that upon such an essential point as the safety of producing a reaction there should be such a divergence of opinion

Our Experience at the Sanatorium

Reactionless course —The evidence is afforded by the records of 40 patients who lost their tubercle bacilli, and who whilst undergoing tuberculin treatment followed the ordinary routine of sanatorium treatment and were fully restored to general health and capacity for work

We naturally turn to the records of our most successfully treated cases to note to what extent their tuberculin courses were reactionless or otherwise, and it is very significant that without exception these cases 0 in number which were thus correct, as syncope rather than asphyxia causes death in cases of large thymus On the other hand, I found nothing that could safely be called status lymphaticus, nor met evidence of that fine capillary bronchitis which Paltauf says is often the cause of death in such cases This case seemed to show a connexion between an enlarged thymus and an undeveloped shrunken condition of both lungs—almost atelectasis

Dublin

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION FOR THE STUDY OF DISEASE IN CHILDREN

Exhibition of Cases and Specimens

A MEETING of this section was held on Dec 11th, 1914, Mr T H **KELLOCK**, the President, being in the chair

Dr F J **POYNTON** showed a case of ? Aortic Disease, the interest of which lay in the entire absence of any history of heart disease or cause for heart disease except tonsillitis, and in the exact interpretation of the physical signs The patient, a boy aged 5 years, had been sent up to hospital by a school medical officer for heart disease For two years the mother had noticed that the child soon got tired and breathless on exertion There was no history of rheumatism in the child or the parents, also no fever The tonsils were very large and almost meeting The pulse was somewhat irregular, 84, and strikingly small in volume The heart showed no apparent enlargement, and the impulse was not forcible Apex First sound short, and systolic murmur Aortic cartilage Rasping systolic murmur conducted upward and outward There was no thrill over its maximum. This murmur, traced towards the apex got fainter, and then the apical murmur was heard increasing in intensity to the apex It would seem that these were two different systolic murmurs The basal murmur could be heard at the pulmonary base, but was fainter there than in the aortic region

Dr J L **BUNCH** showed a child with Nine Patches of Morphœa The patient, a girl aged 11 years, had developed the first lesion a few weeks previously just below the left iliac crest It had appeared as a dense yellowish white small patch with no suspicion of redness or coloured border The outline was sharp, and the skin over it was distinctly harder than the surrounding healthy skin Eight other similar but smaller patches had since appeared on the chest, back, and shoulders The face was free There was no evidence of peripheral neuritis or ganglionic lesion

Dr **BUNCH** also showed a case of Ichthyosis in a child. The disease had been present since birth and the child was now 8 years old The extensor surfaces were most affected, but the flexor aspects and the face were also involved The epidermis was thickened and pigmented, the surface was covered with a coarse scaliness, and there was pronounced follicular keratosis Subjective symptoms were practically absent

Dr G A **SUTHERLAND** showed a case of Myatonia Congenita with Dilatation of the Colon The patient was a male aged 2 years who had been admitted for an abdominal swelling the abdomen had been noticed to be very large The bowels were usually constipated, recently the motions had been loose scanty, and offensive A large swelling occupied the right side of the abdomen and extended into the iliac region on the left side apparently fæcal The anal orifice was very small and tight X rays showed great dilatation of the colon The abdominal mass was removed by enemata etc and the sphincter ani was forcibly dilated Great improvement as regards the action of the bowels and size of the abdomen resulted The child could sit up but could not stand or pull himself into the erect posture The muscles were small and markedly hypotonic, the joints were very flexible The knee jerks were absent There was no marked rickets There seemed to be some mental backwardness,

Dr **ROBERT HUTCHISON** showed a case of Hypertrophy of the Gums The patient a boy aged 5 years, had had enlarged gums all his life, which now made it impossible for him to shut his mouth properly The gums were greatly hypertrophied, the teeth being almost buried in them. Pus could be squeezed out from around some of the teeth. The boy seemed otherwise in good health

Mr **PHILIP TURNER** showed a case of Pulsating Tumour of the Scalp The patient, a girl aged 18 years, had had for the past nine years a pulsating swelling of the scalp This appeared shortly after a fall in which she struck her head against a concrete floor She was not unconscious after the fall, and there were no symptoms of concussion and no open wound of the scalp The tumour had caused no symptoms, but had increased slightly in size Three or four months ago the skin over the swelling ulcerated and became very septic, but there was no hæmorrhage, as the result of treatment the ulceration soon began to heal There was now a soft pulsating swelling occupying the occipital region and extending nearly to the vertex An X ray examination showed no opening in the bone, though the surface appeared irregular and grooved

Dr J D **ROLLESTON** showed a specimen of Cerebral Embolism in Diphtheria from a girl, aged 8 years, admitted to hospital on Oct 24th with severe faucial and nasal diphtheria on the third day of the disease Large doses of antitoxin were given, and the throat became clean on the 28th, but the same day the heart, hitherto normal, showed some dilatation and weakness of the first sound The voice became nasal on the 30th At 11 15 A M on Nov 7th she retched, the respirations became rapid, the colour cyanosed, and a convulsive movement of the right arm and loss of consciousness ensued Double ankle clonus and double extensor response were obtained Both abdominal reflexes were lost, but the corneal reflex, though absent on the right, was active on the left side A cardiogram showed premature ventricular contractions The pulse was 115 On Nov 8th the pulse was 160, and during short paroxysms rose to 220 The specimen showed embolism of the basilar artery, of the superior cerebellar arteries, and to a greater or less extent of all the arteries entering into the formation of the circle of Willis—viz, the posterior cerebral, posterior communicating, internal carotid, anterior cerebral, and middle cerebral arteries The lesions were much more marked on the right than on the left side An ante-mortem clot was found in the left ventricle and a small infarct in the left kidney

Dr E B **GUNSON** showed a specimen of Pericarditis in Scarlet Fever The patient, a girl aged 15 years, was admitted to hospital suffering from scarlet fever on the thirtieth day of disease She had never had rheumatic fever, but had had occasional "growing pains" On admission the temperature was subnormal The patient was pale The pulse was regular, with a rate of about 100 per minute The heart was not enlarged In the mitral area there was a short, sharp first sound, followed by a loud rough systolic murmur, conducted to the axilla Endocarditis was diagnosed, and the patient was kept in bed The temperature remained subnormal until the thirty fifth day, when it rose to 101° F. Slight pyrexia persisted On the thirty-eighth day the pulse became irregular owing to each alternate beat being due to a premature contraction The arrhythmia persisted for two days only On the fortieth day pericarditis developed accompanied by arthritis Death occurred on the forty fourth day Post mortem the parietal and visceral layers of the pericardium were completely but loosely adherent by recent fibrinous exudate When the layers were separated and the exudate was detached numerous small subepicardial hæmorrhages were disclosed The heart muscle was pale The cusps of the mitral and tricuspid valves were thickened, and there were some recent vegetations on the mitral valve The left auricle presented a patch of mural endocarditis There were a few small patches of atheroma at the commencement of the aorta Microscopically the left auricle showed thickening of the endocardium, with areas of commencing necrosis, myocarditis, organising pericardial exudate containing a number of irregularly dilated capillaries The right auricular muscle presented a similar appearance, the endocardium was healthy The left ventricle showed acute myocarditis of mild degree

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

NOTE ON A CASE OF SUPERNUMERARY TOES

BY WALTER FALLA, M R C S ENG, L R C P LOND

A FEMALE patient, aged 22, recently consulted me for an interesting and unusual deformity of her right foot, which caused her considerable inconvenience in walking owing to the overlapping of some of the toes The left foot was normal, but the right one was considerably broader and was provided with eight fully developed toes, three of which were on one side of the big toe and four on the other, and each one articulated with a separate metatarsal bone Owing to the rarity of this malformation I had the foot photographed Fig 1 shows the foot in its natural position, with the toes overlapping each other, and Fig 2 shows the toes spread out I amputated at the metatarsal joints the two outer toes and the one next to the big toe on the left, the result being that the patient can now walk without the slightest discomfort There is no family history of any such deformity, although the patient has several brothers and sisters

FIG 1

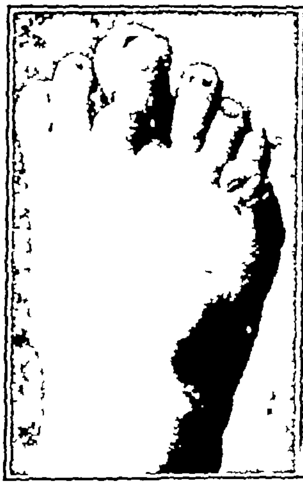
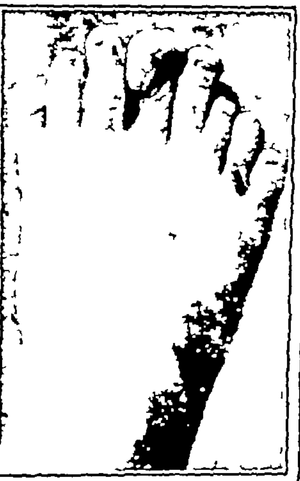


FIG 2



Jersey

NOTE ON A CASE OF GOUNDOU

BY R SEHEULT, M D EDIN,

RESIDENT SURGEON COLONIAL HOSPITAL, TRINIDAD B W I

THIS singular and obscure condition, which is characterised by the formation of hard, smooth, symmetrical tumours at the side of the nose similar to exostoses occurred in a little negro girl who came under my notice in February, 1913 She was born in Tobago in 1902, and arrived in Trinidad about eight years ago with her mother who gave the following history In 1910 she noticed a small swelling on each side of the child's nose, the swellings were hard and painless and increased slowly in size until about two years ago when they appeared to become stationary the child complained occasionally of slight headache and of a feeling of obstruction in the nostrils, there was no nasal discharge No history of yaws or syphilis could be elicited The mother had had nine children, all healthy When the child came under my observation the swellings were fairly well marked, they were hard, smooth, and dome shaped, standing off the surface about ½ inch the skin overlying the growths was natural and freely movable Examination of the nares and mouth revealed nothing abnormal, and the presence of these swellings did not appear to cause any discomfort to the child It may be of interest to note here that both tibiæ were distinctly thickened and that the mother stated there was a case of yaws in her house when the child was two years of age

This is the only case of goundou, or what appears to me to be goundou, I have met with during the 20 years I have been connected with the hospitals of the colony, and I can find no previous record of the occurrence of this affection in the island The condition is reported to be fairly common in West Africa, but its etiology remains in obscurity Some affirm that the morbid process begins during or soon after an attack of yaws, whilst others maintain that it is started by the larvæ of some insect which find their way into the nostrils, others, again, are of opinion that the condition is *sui generis* Dr Albert J Chalmers has published in THE LANCET a report of six cases of this disease under the name of "Henpuye"[1] Dr Henry Strachan[2] has reported an instance of this strange disease in a Jamaica negro child, and suggests that it may be an example of atavism referable to some tribal peculiarity of the original West African stock In my case I was unable to elicit any history of the larval invasion of the nostrils, nor was there any clear evidence or manifestation of yaws—a disease however, which was extremely common a few years ago and is still prevalent in Tobago, where the child was born and lived during three years

A CASE OF ENLARGED THYMUS AND ATELECTASIS

BY J C MCWALTER, M D DUBL, LL D N U I,

EXAMINER IN MEDICAL JURISPRUDENCE AND DEPUTY GOVERNOR OF THE APOTHECARIES' HALL, IRELAND

THE charge of "overlying" made against mothers whose infants are found dead in bed and the sudden deaths which unexpectedly occur during operative procedure have given rise to a comfortable theory of the status lymphaticus which supersedes or supplements the older theory of "thymic asthma" as a cause of otherwise inexplicable death

In the present state of our knowledge it seems a duty to record the particulars of any case where an affection of the thymus gland may have been the cause of death A short time since the infant of a woman whom I had been attending was found dead in the bed The police suspected overlying or negligence and an inquest was held At the post mortem examination the body was found to be well nourished weighing 12½ lb, the age being 3 months There was uncurdled milk still present in the stomach and all the organs appeared to be healthy but the thymus gland seemed enlarged—being bigger than the heart, whilst both lungs were of a somewhat purplish and collapsed atelectasoid condition

I attributed the death to asphyxia probably aggravated by the enlarged state of the thymus gland It is doubtful if this conclusion was really necessarily depressing statement every zoologist will subscribe.

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[1] THE LANCET, Jan [illegible]

[2] Ed Med Jour, Jan [illegible]

It is most interesting, when revising our knowledge of the general aspect of Lamarck's great contribution to biological theory, to find, as Mr. Elliot points out, that nowhere in the treatise is there a hint that its author had got even the slightest inkling of "Natural Selection." It is occasionally, and even with a desire to depreciate, suggested that Darwin obtained much light from reading the "Philosophie Zoologique." As to theory, that is quite plain; as to fact, it must be borne in mind that Lamarck, writing at that epoch when palæontology was in its infancy, embryology hardly known, and the whole of histology a secret for the future, could hardly be regarded as having accumulated a store of facts for the future delver. Apart from the general purpose of his book, Lamarck dealt necessarily or parenthetically with a vast number of interesting minor points. It was he who first divided the animal world into vertebrates and invertebrates, a division which has lasted for long. It has not, of course, escaped Mr. Elliot that this classificatory generalisation, though "for long time regarded as final," is not now any longer possible, nor has he failed to note that Aristotle's division into "blood-forming" and "bloodless" animals is virtually the division of Lamarck, though based upon a different and incorrect structural feature. One of the most singular doctrines incidentally held by Lamarck was that there are virtually no extinct forms; that all creatures evolved continue to live and progress. It is the more singular since it seems to contradict the great writer's fundamental doctrines. For if the environment can profoundly change, it would seem a corollary that it could produce the final change of all and extinguish. But it must be again recalled that palæontology had advanced but a little way in Lamarck's time, while the exploration of the land, and especially of the sea, was only just beginning. Hence the strong possibility, again and again proved to be partially true, that forms hitherto supposed to be missing would eventually be discovered.

We commend the reading of Lamarck's "Zoological Philosophy" to all biologists, for the author's name is in many mouths while his actual teaching appears to be forgotten. And the wise reader will season his reading with the valuable hints given by Mr. Elliot in his admirable and comprehensive introductory remarks.

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of assimilable or non-assimilable sugar in the normal organism does not produce diabetes or any of the symptoms or complications of diabetes which have been attributed to hyperglycæmia. His experiments with injections of dextrose produced chiefly negative results that tended to show that the obesity sometimes associated with diabetes was not due to hyperglycæmia. He has not noted anything like a specific toxic effect of sugar, and has found that the only field of usefulness for dextrose injections was to exert a valuable nutritive and strengthening effect in states of weakness.

The author then deals with the diuretic action of sugar and discusses fully the amboceptor hypothesis. A chapter is devoted to the oat cure, including von Noorden's original views on the matter, and the author touches upon the widely different tendencies of different foods to produce glycosuria without regard to the carbohydrate content of these foods. As a result of the experimental production of operative diabetes on various animals he has reached the conclusion that the normal pancreas is necessary for normal carbohydrate metabolism, in view of one of its internal functions, and he holds that the complications of diabetes, at any rate, such as defective wound healing and diminished resistance to infection, albuminuria, &c., as far as he observed in diabetic dogs, are not due to the sugar content of the blood or urine. Diabetes insipidus, he suggests, ought to be classed with the disorders of internal secretion.

A most important chapter is on the nervous system in glycosuria, in which the author puts forth the hypothesis that human diabetes is in most cases a functional disease of the nervous system, and holds that the average diabetic patient may have a pancreas which does its normal work if relieved of abnormal influences which interfere with it, though he holds that diabetes is solely and invariably a disease of the pancreas. Such a hypothesis, he thinks, introduces the hope of therapeutic mastery over the disease. Under the heading of "Miscellaneous Therapy" he deals with many lines of treatment.

In Chapter XIV. Dr. Allen discusses the polyglandular doctrine, and though recognising a certain degree of interaction and interdependence between the different organs of the body, he nevertheless disagrees with the hypothesis that diabetes consists in a loss of balance between antagonistic glands of internal secretion. In a chapter on anatomy he discusses fully the

Dr E G L GOFFE showed a specimen of Pericarditis in Scarlet Fever from a girl aged 9 years She had been admitted to hospital on Oct 9th with scarlet fever There was a previous history of rheumatism On admission the symptoms of scarlet fever were well marked and there were choreiform movements of the face, right arm, and right leg On Oct 26th she developed a pericardial rub at the base and a presystolic and systolic apical bruit Death took place on Nov 2nd The specimen showed the parietal and visceral layers of the pericardium completely covered with recent lymph, small vegetations in the mitral and aortic valves, and some hypertrophy of the myocardium

Dr GOFFE also showed a specimen of Perforation of the Arch of the Aorta by a Safety Pin Impacted in the Œsophagus from an infant, aged 10 months who had been admitted to the North Eastern Hospital on Feb 18th, 1912 certified to be suffering from scarlet fever As the diagnosis of scarlet fever was not confirmed on admission the child was sent to an isolation ward It was seen again late the same evening when the nurse reported that it was fretful and had vomited a little milk after each feed At 12 30 P M next day, Feb 19th, the child vomited after a feed of milk and brought up a quantity of blood and died The œsophagus larynx, and trachea with the arch of the aorta and the large vessels arising from it were shown with a brass safety pin *in situ* as found post mortem The œsophagus had been opened at the back The pin was open with the open end downwards Viewing the œsophagus from behind, the catch half of the pin was seen in the œsophagus, the other half, having passed through the œsophagus point downwards and forwards was not seen The pin portion passed to the left of the trachea on a level with its bifurcation The œsophagus was perforated on its anterior surface about 2 inches from its upper extremity, the pin half having passed completely through the wall of the œsophagus was in a cavity about ¼ inch in diameter between the gullet and the aorta The walls of the cavity were thickened Viewing the specimen from the front there was seen a perforation in the wall of the aorta with the point of the pin just appearing through the hole in the interior of the artery The aorta was perforated about ¼ inch below the origin of the left subclavian Death was due to hæmorrhage from the aorta owing to ulceration set up in its walls by the presence of the pin in the tissues between the aorta and gullet The bleeding was into the œsophagus The stomach was full of blood There was little blood in the upper part of the small intestines No blood was found in the large intestines The heart and blood vessels were practically empty, and all the tissues were pale and bloodless

Dr ERIC PRITCHARD and Dr C VIOLET TURNER showed a specimen of Liver Abscess from an infant aged 5 weeks It had been healthy at birth and jaundiced at 4 days for nearly a fortnight Its abdomen had always been prominent but became much more distended five days before admission to hospital On admission the liver was enlarged down to the umbilicus and there was œdema of the abdominal walls back legs scrotum and penis Death occurred 24 hours after admission The necropsy showed an abscess of the size of an orange in the right lobe of the liver No other suppurative focus was found The pus from the abscess grew bacillus coli and a Gram negative diplococcus A culture from the heart's blood grew bacillus coli

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WEST LONDON MEDICO CHIRURGICAL SOCIETY — A clinical meeting of this society will be held at the West London Hospital on Friday next Jan 15th at 8 P M when cases of wounds caused in the war will be shown and discussed by the President Mr Aslett Baldwin Colonel A [illegible] (Deputy principal medical officer London district) [illegible] Colonel Oliver [illegible] Mr C C Choyce Mr W McAdam Eccles and Mr H Tyrrell Gray

DEATH OF A PROMINENT BATH SURGEON —Mr Thomas [illegible] Lansdown, a prominent Bath surgeon died at his [illegible] in Wiltshire [illegible] [illegible] the [illegible] Surgeon Mr John Lansdown [illegible] [illegible] [illegible] in Bath [illegible]

Reviews and Notices of Books.

Zoological Philosophy An Exposition with re[illegible] to the Natural History of Animals

By J B LAMARCK Translated with an Introduct[illegible] HUGH ELLIOT London Macmillan and Co, [illegible] 1914 Pp 410 Price 15s net

THE "Philosophie Zoologique" of Jean Baptiste Pierre Antoine de Monet de Lamarck (to give the author's full name, which will not be at all familiar to most of us) is one of the great classics of zoology largely quoted, but mainly quoted at second hand and seldom read There is such an immense gulf between the zoology of to day and that of the beginning of the last century that even the most learned and encyclopædic author, if writing on the results of investigations, hardly finds it necessary to deal with views framed in compulsory ignorance of the quite fundamental data of modern biology It is however, by no means uninstructive to realise what a great deal of truth was arrived at by the acute French philosopher which has been perhaps rediscovered in modern times For example in comparing living and lifeless bodies, Lamarck writes that no inorganic body possesses individuality —a view which reminds us of the more accurate dictum of the physiologist Verworn, who dwells upon a similarly expressed and important character of living beings, these are, he says, characterised by indivisibility, or rather undividedness an expression which embodies the same idea in perhaps clearer terms

In the main, therefore the republication in an English dress of the famous philosophical work of Lamarck is a matter of historical interest To those readers who are not fully informed of the chief theories and data of biology Mr Hugh Elliot's introduction will be of very great service This editor has not only fully grasped the general purport of Lamarck's thoughts, but is able to elucidate from the modern point of view his statements of fact Without this introduction the text of Lamarck would be in many places obscure save to the very well instructed reader Mr Elliot places his pen at once upon a common misinterpretation of the "Philosophie Zoologique" by pointing out that that philosophy had two leading contentions To most persons Lamarck's insistence upon the inheritance of acquired characters and the gradual heaping up through this of at first infinitesimal variations which lead under the influence of the environment to the production of new species, represents his philosophical position in the matter of evolution But this would be an incomplete and thus misleading idea For Lamarck prefaced this axiom of his belief by the assertion that an innate power of development tending to proceed in a straight line is conferred upon all animals It is the divergencies from this straight line that are due to the environment as [illegible] already stated To pursue any criticism of Lamarck's position is obviously impossible in [illegible] review nor would it be of great [illegible] [illegible] rather [illegible] with Foster that the [illegible] life of any theory is no more than [illegible] In the last published reflection upon the [illegible] problems of evolution Professor [illegible] [illegible] addressing the British Association [illegible] years of patient work [illegible] still [illegible] we can hope [illegible] problem [illegible] always agreeable, sometimes pathetic Of the 71 boys, 6, after drifting about for three years, found their way into occupations where they learned skilled work or its equivalent, 44 boys were found to be doing unskilled work, and likely to continue in the ranks of unskilled labour, 21 boys were also doing unskilled work, and were so markedly deficient in mental, moral, or physical capacity—sometimes in all three—as to make it exceedingly probable that they would be rejected for regular employment

The stories of the boys' lives are given in many cases, it is often pitiful reading, the *lacrimæ rerum* are there. Sometimes there are redeeming features, as in the boy whose father had committed suicide through drink, and whose mother earns a pittance by mounting brass knobs at a factory The boy does odd jobs and is apparently destined to sink into the ranks of unskilled employment, but during the coal strike, "in order to get some coal for his mother, he went down to the canal, dived into the icy water, and fetched up lumps of coal from the bottom piece by piece" The influence of the picture palace in the lives of town children is very great, all boys go to the cinema, generally twice a week Mr Freeman considers it as unquestionably "the greatest formative influence at the present time in the life of the average working boy' There is not much of a directly vicious nature in this influence, he thinks—and this accords with all we have heard—the boy is on the whole innocently amused, but it initiates him "prematurely into the adult point of view It merely multiplies and intensifies the boy's stock of common place ideas without enlarging or ennobling them" On the whole this is a more favourable opinion in regard to these shows than we should have expected The music hall performance is condemned for boys

The remedies proposed for the existing evils in boy life and labour are absolute prohibition of wage earning, accompanied by whole time education, up to 15, reduction of hours of juvenile labour between 15 and 18 to a maximum of (say) 30 per week, compulsory continued education, to be insisted on by the State the details being settled by the local authority The reduction in hours would 'fall most severely on those firms and occupations that make an illegitimate and parasitic use of boy labour , but everyone will agree with Mr Freeman in his opinion that "no firm has a right to use a boy for one season only of the year, or for a few years of his life, and then cast him adrift at the expense of the community"

Bedside Hæmatology an Introduction to the Clinical Study of the So called Blood Diseases and of Allied Disorders

By GORDON R WARD M D Lond. London and Philadelphia W B Saunders Company 1914 Pp 394 Price 15s net

From the title of this book we should rather have expected a short manual dealing with the methods of examination of the blood which can be used at the bedside, without the provision of an organised laboratory It is actually designed on different lines

After an introductory chapter on classification and one on the general physiology of the blood forming organs about nine pages are devoted to methods of examination of the blood The succeeding chapters deal in turn with the affections of blood forming tissue, such as chloroma and lymphadenoma, with the various anæmias, with disturbances of the blood pigments, such as hæmochromatosis, hæmoglobinæmia, and so forth, with the varieties of leucocytosis, with chlorosis, hæmorrhagic disorders, and leukanæmia. Three pages are devoted to the study of the blood in surgical diagnosis, and 11 to methods of treatment, including transfusion, X rays, arsenic, and iron. The last chapter contains an alphabetical list of diseases with a brief statement of the conditions of the blood respectively found in them Parasitic diseases of the blood are specially omitted. There are a good many illustrations, showing both clinical appearances and microscopical specimens Two coloured plates of cyanotic patients are of very indifferent merit

The volume does not seem to make any very novel contribution to the subject with which it deals

Surgery, its Principles and Practice For Students and Practitioners

By ASTLEY PASTON COOPER ASHURST, A B, M D F A.C S, Instructor in Surgery in the University of Pennsylvania, &c With 7 coloured plates and 1032 illustrations in the text, mostly original. London Henry Kimpton 1914 Pp 1141. Price 28s net

THIS is a very successful attempt to provide for the student and practitioner a useful and trustworthy treatise on surgery It is not too lengthy, and yet it contains practically all that the student should know for most examinations within limitations which are admitted by the author The author has purposely omitted all reference to the surgery of the eye, the ear, the nose, and the throat In the preface it is stated that they are "naturally" omitted, though we must confess that we cannot see why these omissions should be "natural," even if convenient On the whole, we cannot help thinking that it would have been better from the point of view of the student to have included these sections of surgery, for the special text books on these subjects are generally too lengthy to be easily digested by the student

We have above used the word successful in speaking of this work, and we are justified in doing so, for the book is clearly written and the author speaks with that amount of dogmatism which is best suited for the instruction of students It is evidently the product of a capable teacher The illustrations form a very noteworthy feature of the work, and they are nearly all absolutely original and have been carefully chosen The coloured plates are especially worthy of mention

A Text book of Medical Diagnosis

By J M ANDERS and L. N BOSTON Second edition, revised With 500 illustrations London and Philadelphia: W B Saunders Company 1914 Pp 1248 Price 25s net

THE first edition of Anders's and Boston's massive text book of medical diagnosis was designed to "present, consistently with a single volume textbook, the full modern resources of the art and science of medicine as related to medical diagnostics The second edition, now before us, has taken two years to prepare, and every effort has been made to bring it fully up to date

The general arrangement is excellent A brief introductory section is followed by some 135 pages on diseases of the respiratory system Next the diseases of the circulatory, digestive, and nervous disorder, with impaired function of the islands of Langerhans which leads to a deficiency of pancreatic amboceptor, and this results in glycosuria and other symptoms" He accentuates the fact that a functional disorder must be curable, and if such be established by other observers the existing hopelessness regarding this disease should be removed

We have been able only briefly to touch upon the scope of this work, and the numerous experiments carried out for so many years well deserve most careful study But we are convinced that many good and original ideas are here incorporated, and the entire work will serve to advance the study of this disease There is an appendix of methods, together with protocols of the many experiments, and an extensive bibliography containing nearly 2000 references

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Essentials of Physiology

By F A BAINBRIDGE, M D Cantab , D Sc , Professor of Physiology, University of Durham , and J ACWORTH MENZIES, M D Edin , Lecturer on Physiology, University of Durham College of Medicine With 134 illustrations, some coloured London Longmans, Green, and Co 1914 Pp 434 Price 10s 6d net

THIS publication makes the fourth of the series of "Essentials" issued by the same publishers In the text there is no indication as to the respective parts contributed by the two authors As far as possible histological details and descriptions of chemical and experimental methods are excluded Only the facts and principles of physiology are considered, and in the main great accuracy is shown, as well as judgment in selecting what to notice But in a future edition we look to see improvements

After three pages of introductory matter and about ten on the chemistry of the body, the reader passes on to muscle, nerve fibres, the central nervous system, and the organs of sense In the tracing showing a "simple muscle twitch' the latent period is obviously much too long It is hardly correct to say that when a muscle passes into rigor mortis it loses its extensibility nor is it quite accurate to state that "the nerve fibres form the medium by which the various structures of the body are brought into communication with the central nervous system' What about chemical means? In the short statement as to the chief chemical constituents of nerve fibres, water seems to find no place In describing the conduction of a "disturbance' in a nerve fibre propagated in both directions it might be well to state what kind of a nerve should be used when the galvanometric method is employed About 70 pages are given to the nervous system, 50 to the organs of sense, and about 20 to blood, and nearly 70 to the vascular mechanism We are glad to see an account of the arrangement and uses of the 'heart lung preparation of Knowlton and Starling Just over 40 pages suffice for the respiratory system The account of the gases of the blood is concise as is that of the regulation of the respiratory movements There are several useful illustrations Some of Barcroft's recent work on the respiratory function of the blood is incorporated

The digestive system is dealt with in 50 pages the subject being introduced by a short account of enzymes The treatment follows the usual lines Metabolism comes next and is set forth in 26 pages while about five pages are given to animal heat About nine pages are given to food and diet We are glad to see that Chittenden's estimate of the protein daily intake is regarded as much too low, so that the actual amount of protein required—about 110 to 120 grammes—is much higher than that taken in his experiments Vitamines are referred to, and the disease produced in fowls by feeding them with polished rice is also noted, but "polyneuritis' as such is not mentioned at least we failed to find it The introduction of an illustration of this condition in the fowl or pigeon and its cure by yeast would have been useful It is stated that "gelatine cannot replace other proteins in a dietary" About 20 pages suffice for the urinary system, and of these seven are given to the urine The authors conclude that the glomeruli simply filter off from the blood a fluid identical in composition with blood plasma, excluding protein, while the tubules, besides secreting certain urinary constituents, exert a selective power of absorption whereby certain substances, such as sodium chloride, can be retained when required A short account is given of the ductless glands Seven pages suffice for reproduction A considerable number of the illustrations are taken from Starling's "Principles of Physiology" and other text books In all cases the sources are duly acknowledged

To us it seems that these "Essentials" are good so far as they go, but being "essentials" the reader must not look for many details They are intended to meet the requirements of the medical student preparing for a "pass examination" There are very varying standards for a "pass,' and for some boards at least it would be well for the candidate to supplement the "essentials" with additional matter from larger text books

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Boy Life and Labour the Manufacture of Inefficiency

By ARNOLD FREEMAN M A With Preface by M E SADLER, LL D C B London P S King and Co 1914 Pp 252. Price 3s 6d net

AN extremely interesting inquiry has been made into the conditions of juvenile employment in Birmingham by Mr Arnold Freeman, who has recently published his results Mr Freeman conducted his investigations at the request of the Birmingham city education committee of the Birmingham city council His special purpose was to ascertain the causes of deterioration in character and in earning capacity in many boys who fail to pass at once into the higher grades of labour but escape the special temptations of street trading and casual employment He selected from the files of the Labour Exchange every boy of 16 to 17 years of age who had been in four or more situations since leaving school This selection excluded boys of special merit or with favourable opportunities on the one hand and on the other, the nomad or casual, or street arab Of 134 boys so traced, it was possible to follow up in detail the careers of 71 An outline of these boys lives is given and of the influences that are shaping their future

As Dr Sadler the Vice Chancellor of the University of Leeds says in his introduction Mr Freeman following Mr Charles Booth and Mr Seebohm Rowntree has gone straight to life He discloses the actual experiences of a number of boys during their critical years of development The result is a volume of very great interest It is not an impression, but a series of photographs not and details a number of cases We do not, however, think that the authors have sufficiently impressed upon their readers the vital importance of extreme care in the administration of the drug if mishaps are to be avoided Some very striking illustrations are given of syphilitic lesions before and after the injection of salvarsan Curiously we have not been able to find in the book any reference to neosalvarsan

First Stage Hygiene By ROBERT A LYSTER, M D, Ch B Birm, B Sc Lond, D.P H Twelfth impression (sixth edition), revised and enlarged London W B Clive, University Tutorial Press, Limited 1914 Pp 288 Price 2s 6d net —Judging from the issue of a sixth edition the author s plan of taking into consideration the various parts of physiology as essential introductions to certain sections of hygiene has succeeded In addition, he has preserved a logical sequence of both physiological and hygienic facts, which develops the subject in the most intelligible way As an example we may mention that after describing the phenomenon of respiration he proceeds with a chapter on ventilation Similarly the chapter on foods precedes that on the digestive system, and so on through the book This seems to us to be an eminently sound way of teaching hygienic principles, and particularly in the "first stage"

Prothèse Restauratrice Bucco faciale et Traitement des Fractures des Maxillaires By Dr P MARTINIER and Dr G LEMERLE With 172 illustrations Paris Baillière et Fils 1915 Pp 360 Price 3 francs—This handy volume contains a clear account of the various appliances which the dental practitioner is at times called upon to make or have made and to adopt Not only is there an account of the mechanical appliances for treating cleft palate and restoring lost portions of the maxillæ, but details are given of the manufacture of an artificial larynx and the more common methods of replacing a lost nose There is a full account of the different splints for treating fractures of the jaws some of the methods suggested for dealing with extensive injuries of the maxilla being extremely ingenious The illustrations are clear We can cordially recommend the book to the notice of those interested in the subject

MISCELLANEOUS VOLUMES

As might have been expected the war has had its effect in delaying the appearance of some of the books of reference which usually are published at the close of the year The following reached us too late to include in our last issue for

issue contains many articles dealing with topics of timely and paramount interest Some 30 pages are devoted to the war, aviation receives a large amount of attention, the Home Rule question is dealt with, and, indeed, on whatever subject information is desired the searcher is sure to find valuable assistance —— *Whitaker's Almanack, 1915*, by John Whitaker, F S A (London Whitaker Pp 690 Price 2s 6d) is such an old friend that praise of its utility would be almost an impertinence All the well-known features of this publication are maintained in the new edition and among fresh matter there are articles on topics connected with or having a bearing upon, the war —— *Whitaker's Peerage, Baronetage, Knightage, and Companionage, 1915* (same publishers Pp 867 Price 5s net), fulfils all the requirements of an indispensable work for the reference shelf All the promotions and appointments due immediately to the war have been recorded up to as late a date as the exigencies of "going to press" would allow —— *Howe's Classified Directory to the Metropolitan Charities for 1915* (London Longmans Green, and Co Pp 173 Price 1s) gives full information of more than 1000 metropolitan charitable institutions grouped according to classes An appendix contains a list of provincial charities It is a useful guide for the benevolent and we ourselves are grateful for the information which it conveys

JOURNALS AND MAGAZINES

The Philippine Journal of Tropical Medicine, Vol IX, Section B, No 3—No fewer than ten original articles appear in this number of the journal, the first being by Dr Fernando Calderon who gives some data concerning the Medical Geography of the Philippine Islands This observer finds that the three preponderating diseases in this region are pulmonary tuberculosis, malaria and dysentery, after these come beri beri intestinal parasites gastro enteritis, bronchitis, and broncho-pneumonia. Dr Otto Schöbl supplies a paper, with illustrations, on the Etiology of Trichomycosis palmellina a pathological condition of the hair associated with a bacterial infection, found in the Philippines A contribution to the Bacteriology of Leprosy with illustrative microphotographs is made by Dr John A Johnston in the form of a preliminary note, in which the author says that at the present stage of his investigation he is quite convinced that the bacillus lepræ is but the acid fast stage of a markedly pleomorphic streptothrix Dr David G Willets writes on Intestinal Helminthiasis in the Philippine Islands as indicated by examinations of prisoners on admission to the Bilibid prison at Manila, the same author contributes also another short article on Widal reactions among healthy adult Filipinos Dr W A Musgrave and Dr A G Sison supply a joint paper on Bacillary Dysentery and its Treatment this being the most prevalent form of the disease in Manila Experiments on the Cultivation of Rinderpest Virus in the manner described by Baldrey are related by Dr William H Boynton, of the Veterinary Division of the Manila Bureau of Agriculture and the same writer also contributes an article with illustrative plates on Kidney Worm Infestation of Swine in the Philippines with special reference to the pathological changes caused by the parasite Stephanurus dentatus which urinary systems, acute infectious diseases, animal parasitic diseases, and constitutional diseases are discussed, Dr T H Weisenburg at the end of the book contributes 180 pages dealing with diseases of the nervous system Under the heading of each disorder *considered in these groups of* diseases, the arrangement of the information given and the deductions to be drawn from it are equally skilful Admirable use is made of large type headings and subheadings, in such a way that the reader's attention is directed to the salient points without delay The text itself is trustworthy, speaking generally Full weight is given to the laboratory diagnosis of disease as distinguished from its diagnosis by clinical *methods* and observations, and illustrative cases are quoted where this has been thought advisable An interesting example of a mode of infection in pulmonary tuberculosis, oddly enough set down under the heading "Heredity," may be quoted "Seven resident physicians in a hospital in Philadelphia developed pulmonary tuberculosis within the course of two years, and investigations made to ascertain the *source of such infection* disclosed the fact that the coloured cook who prepared the food for the resident staff was suffering from a chronic form of pulmonary tuberculosis, both his saliva and his nasal secretion showing the presence of tubercle bacilli"

The book is well printed, but the authors are often unfortunate in their spelling of classical words —e g, "bacillus smegmae" (p 975) for "smegmatis", "Parongonimus Westermanni" (p 79) for "Paragonimus westermani", "streptothoracosis (p 79) probably for streptotrichosis, "streptothricosis" (p 923) for "streptotrichosis On p 3 they introduce a new "*portmanteau* word, to adopt Lewis Carroll's term—namely, "corollating" apparently a combination of "correlating and "corollary The index is excellent, and so are many of the illustrations *it is questionable*, however, whether any good purpose is served by the many photographs of nude *women* employed to illuminate points of pathological and surface anatomy and scattered throughout the text The book may be recommended to students and practitioners of medicine

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Indispensable Orthopædics

By F CALOT Translated from the sixth French edition by A H ROBINSON, M D Durh, M R C S Eng, and LOUIS NICOLL With 1259 illustrations and 8 plates London Baillière, Tindall and Cox 1914 Pp 1175 Price 21s net

IT is not quite clear to whom this volume is "indispensable" It consists simply of an account of the methods of the author and is *in no sense* a text book of orthopædics either for the student or for the practitioner It is translated without any attempt to employ English idiom is diffuse and by no means easy to read As a scientific treatise its value is impaired by absence of any consideration of the detailed pathology of the conditions treated and of any recognition of varieties of disease For example there seems to be no differentiation in the author's mind between cases of tuberculous [illegible] of the knee in which there are localised foci [illegible] in the bone [illegible] cases in which the disease is purely [illegible] Dr Calot the descriptions of the technique of work with plaster of [illegible] celluloid are full and good and much attention is paid to methods of aspiration of abscesses It is for these details that the work is useful in England But the view of treatment taken by the author is very circumscribed, personal methods being repeated again and again, and other methods *being mentioned mainly to be criticised There is a good deal of praise of the results of treatment at* Berck in general

The book is well printed and illustrated its chief merit, as already stated, lies in the descriptions of *the author's methods*

LIBRARY TABLE

First Book of Physiology and Hygiene By GERTRUDE D CATHCART, M B, B Sc Glasg, D P H Camb With 65 *illustrations* London Macmillan and Co, Limited 1914 Pp 158 Price 1s 6d net —This is an admirable little text book for the non professional student, written with great clarity and *freedom from unnecessary technicalities*, and yet with noteworthy accuracy The principles of hygiene and their special application to the *common matters of everyday life* are dealt with *in the physiology* of the part to which they pertain, there are, however, special chapters on the hygiene of the skin, hair, and teeth, body heat and clothing, muscular exercise, gymnastic rest and sleep, and micro organisms The author has well succeeded in her attempt to give to the manifold facts of physiology and hygiene a more coherent form by grouping them round certain central ideas which make an appeal to the imagination *Each chapter is followed by a selection* of questions set at the Oxford and Cambridge Local Examinations We can heartily commend this book

Quantitative Analysis by Electrolysis By ALEXANDER CLASSEN, with the coöperation of H CLOEREN Translated *from* the thoroughly revised fifth German edition by WILLIAM T HALL New York John Wiley and Sons London Chapman and Hall Pp 303 Price 10s 6d net —*The introduction of electrolytic* methods of analysis was due to the authors of this volume and they have proved to be very valuable to a large body of analytical chemists but chiefly to those engaged in *metallurgical* work or in the analysis of metallic salts The method is not confined, however, to such well known and easily deposited metals as copper, lead silver bismuth *mercury* and zinc for the list now includes the metals of the alkaline earths the alkalies and even the determination of nitric acid in nitrates Of the greatest assistance in analysis is the electrolytic method applied to the separation of the metals when more than one is present in the solution The description of this application of the electrolytic method forms a most interesting portion of the work and more space is devoted to it than any other The book is a valuable addition to the library of the analyst in general practice

The Salvarsan Treatment of Syphilis in Private Practice with an account of the Modern Methods of Diagnosis By GEORGE S STOPFORD-TAYLOR, M D Durh, M R C S Eng, and ROBERT W MACKENNA, M A, M D [illegible] Physicians to the Liverpool Skin Hospital London William Heinemann 191[illegible] Pp [illegible] Price 5s net —The value of salvarsan is almost universally acknowledged [illegible] This little work gives an account of the method of [illegible] pharmacist will be expected to dispense the new tincture, and it would remove any doubt the dispenser might have if the prescriber were to write "tinct strophanth. 1914"

Tincture of opium —This has been increased in strength by about 33 per cent. The tincture of the 1898 Pharmacopœia was standardised to contain 0 75 per cent of morphine, but the new tincture contains 1 per cent and is approximately the same strength as the tincture of the International Agreement In prescribing it would be advisable to indicate that the 1914 tincture is intended Incidentally it may be noted that as the new tincture contains 1 per cent of morphine it is within Part I of the Schedule of Poisons, and may only be sold by retail to persons known or introduced to the seller and on condition that an entry of the transaction is made in the poison book. The old laudanum was in Part II of the Schedule of Poisons Compound tincture of camphor (paregoric) contains one-tenth more morphine than was contained in the corresponding preparation of the British Pharmacopœia, 1898 Liniment of opium has been increased in the strength of its morphine content

Tincture of aconite —This is about twice as strong as the corresponding preparation of the 1898 Pharmacopœia, and approximately the same strength as the tincture of aconite of the International Agreement Prescribers should indicate the date of the Pharmacopœia.

Vinegar of squill and vinegar of urginea —Both these are approximately twice as strong as the old preparations

Spirit of juniper —This is twice as strong as the old preparation

Syrup of chloral —This is nearly 10 per cent stronger than the old preparation, 1 fluid drachm contains 10 9 grains of chloral hydrate

Syrup of codeine phosphate —This has been increased in strength by 9 per cent, 1 fluid drachm contains 0 27 grain of codeine phosphate.

Calomel ointment —This is twice the strength of the corresponding preparation of 1898

Tincture of nux vomica —This is about half as strong as the old tincture, 1 fluid drachm contains about one sixteenth of a grain of strychnine

Tincture of colchicum —This is one half the strength of the old tincture

Tincture of digitalis —This is four fifths the strength of the old tincture

Ammoniated tincture of opium —This contains approximately one-tenth less morphine than that contained in the corresponding preparation of the 1898 Pharmacopœia

Tincture of belladonna —This contains seven tenths of the proportion of alkaloids contained in the 1898 tincture it is standardised to contain 0 035 per cent of total alkaloid

Tincture of picrorhiza —This is twice the strength of the corresponding preparation of the Indian and Colonial Addendum 1900

Belladonna plaster —This is one half the strength of the old preparation

Hypodermic injection of cocaine —This is one-half the strength of the old preparation, 110 minims contain 5 grains of cocaine hydrochloride

Hypodermic injection of morphine —This is one half the strength of the old preparation, 110 minims contain 2 5 grains of morphine tartrate

Phosphorus pill —This contains 1 per cent of phosphorus and is one half the strength of the old preparation

Phenol lozenges —These are one half the strength of the old, each lozenge contains approximately half a grain of carbolic acid

Phenol ointment —This has been reduced in strength by 25 per cent it contains 3 per cent of carbolic acid

Ammoniated mercury ointment —This is approximately one-half the strength of the old preparation

Compound mercury ointment —This is approximately three fifths the strength of the old preparation

Mercury ointment —This is approximately three fifths the strength of the corresponding preparation of the 1898 Pharmacopœia

Liniment of mercury —This contains approximately three fifths of the proportion of mercury contained in the old preparation

Solution of mercuric chloride —This has been reduced in strength from 1 in 875 to 1 in 1000

Solution of potash —This is nearly 20 per cent weaker

Syrup of ferrous iodide —This is approximately two-thirds the strength of the corresponding preparation of 1898, one fluid drachm contains 3 75 grains of ferrous iodide

Tablets of nitroglycerine —These have been reduced in strength, each tablet contains approximately 1/130th grain of the trinitroglycerine of commerce.

Dilute nitric, phosphoric, and sulphuric acids have all been decreased in strength.

OTHER POINTS

The above represent most of the noteworthy changes in the strengths of preparations Many of them have been made in order that the compounds may comply with the recommendations of the International Conference respecting the unification of the formulæ for potent drugs and preparations in the several national pharmacopœias Alterations, for the most part slight, have been made in the composition of various articles For instance, the saffron has been omitted from compound decoction of aloes; salicylic acid has been omitted from solution of atropine sulphate, the syrup in compound mixture of iron has been replaced by glucose and a small quantity of powdered acacia added, in compound tincture of cardamoms the raisins have been replaced by glycerine, from compound tincture of cinchona the saffron has been omitted, in compound tincture of senna the raisins have been replaced by glycerine

For the most part the changes in nomenclature are not likely to give rise to many difficulties It is interesting to note, however, that liquor iodi fortis (strong solution of iodine) has been replaced by tinctura iodi fortis (strong tincture of iodine) Tinctura iodi is replaced by tinctura iodi mitis (weak tincture of iodine) The strong tincture of iodine of the new Pharmacopœia contains approximately the same proportion of iodine as the strong solution of the old, and the weak tincture of iodine contains the same proportion of iodine as the tincture of iodine of the 1898 Pharmacopœia. It is important that prescribers should note this change in nomenclature, and indicate definitely whether they require the strong or the weak tincture to be dispensed "Tinctura iodi" by itself might leave the dispenser in doubt as to which tincture was intended. Practically all the drugs that have been added are already familiar to medical men, and the more important of these drugs were detailed in the article which appeared in THE LANCET of Oct 10th, 1914 p 907

THE PUBLIC HEALTH OF DUBLIN

THE annual report for 1913 on the state of public health in Dublin has recently been issued by the superintendent medical officer of health, Sir Charles Cameron So much attention has been directed to the sanitary condition of Dublin within the past 12 months that the present volume may find more readers than most of the series

The population of Dublin in the middle of 1913 was estimated to be 308 187 and the density was 39 persons per acre The actual density in the inhabited area is really much greater, as the city boundaries include large stretches of pastoral land Some of the information given is not easy to understand, and contradictory statements occur For instance, we are told (p 18) that the "number of persons residing in single room tenements" is 21,133 It appears from a table on the next page that this is the number of single room tenements, and the number of persons, as stated in the report of the Departmental Committee on Housing Conditions in Dublin[1] is 73,973 Again, in discussing the deaths from typhoid fever, it is said that the number in 1913—viz. 33—is the smallest on record except in 1910, when 32 occurred A table on the next page shows that in 1912 there were only 30 deaths Again, a statement concerning the death rate from infectious diseases (p 35) is copied without correction from the previous report. Slovenliness of this kind makes it difficult to arrive at the facts

The birth rate for the year was 31 per 1000 of the population, whereas in the suburbs it was only 17 per 1000 The birth rate in the city shows little or no tendency to decrease The death rate for the year was 21 3 per 1000, and in the suburbs it was 16 1 per 1000 Of the deaths in the Dublin that fluid The result of this increased osmotic pressure is to "press the blood out of the pulp through the tubules of the dentine up to the enamel The plasm spreads itself out under the enamel and presses it outwardly The paper is interesting if not convincing There are no demonstrations of facts, and some of the author's statements do not tally with unchallenged clinical observations —The January issue of this journal contains the first instalment of a paper by Mr J F Colyer on the Injuries of the Jaws and Teeth in Animals The paper is founded on a museum demonstration given at the Royal College of Surgeons last October, and refers to the specimens in that collection The author describes cases of fracture of the maxilla and the mandible, as well as fractures involving the zygomatic arch Amongst the latter a description is given of the skull of a bear in which there was a definite bending of the cranium from the unequal balance of muscular action Cases of complete dislocation of the teeth and several examples of injury to unerupted teeth are fully described Sir Arbuthnot Lane contributes a paper on the Mechanics of some of the Bones of the Face He discusses the subject from a general point of view, refers to the relationship of deformed arches to adenoids and points out the value of early operation in cases of cleft palate Mr F J Pearce has a practical paper on the Treatment and Filling of Root Canals and there is a good review of dental surgery in 1914

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[1] THE LANCET, [illegible] pp 623, 624

The British Dental Journal —*In this journal for Dec 15th* 1914, Hubert Humphrey recounts experiments he has carried out on the action of the essential oils on gutta percha He finds that eucalyptus dissolves gutta percha, that cinnamon and cajuput have no action, and that oil of cloves leads to an increase in size, accompanied by hardness He considers that oil of cloves is therefore the best oil to use in conjunction with gutta percha for filling the root canals of teeth J C Storey contributes an article on Efficiency in Work and C Edgar Thomas has a paper on Some Toothache Charms, in which, amongst other interesting details, he states that there is a church at Bonn which possesses a tooth of St Appollonius the patron saint of dentistry, and that this relic is exhibited *in a glass case on* that saint's particular day devotees kissing the relic as a precaution against toothache

Bulletin of the International Office of Public Hygiene Paris 195 Boulevard Saint Germain —The monthly bulletin of the International Office of Public Hygiene we are glad to note continues to appear in spite of the war In the list of the governments published in every issue as participating *in the work of* international *organisation* for public health purposes the names of Germany and Austria Hungary do not appear On the other hand Turkey has joined Of the powers of the entente the following are included Belgium Great Britain France Russia and Serbia *Our ally Japan is missing*, but *Japan* is a long way off and her coöperation is certain to be obtained later in effect, in spirit it has been most faithfully given Some distant countries have joined, such as Chili and Peru and of course Australia, Canada and the United States The *Bulletin* gives frequently *news from the countries* that do not participate in the international organisation for which it is the official organ Thus a few months ago Professor Neisser's researches on the contamination of those who nurse typhoid patients were described These statistics published in Berlin set forth that on an average out of 100 persons engaged in nursing typhoid patients three contract the disease He also affirms that 1 per cent of the men and 7 per cent of the women nurses without showing any symptom of disease become chronic typhoid carriers In the German Empire in 1913 according to Professor Neisser there were at least 70 such germ carriers and he urges that there should be a compulsory examination of all who nurse typhoid patients The reprinting of the Decree dated Paris Oct 1st 1913 and signed by the President of the Republic on the handling of dirty linen in laundries is wise for here another subject of first importance in times alike of peace and war is dealt with Only large steam laundries are under notice the absurdities of the little private laundries situated in the dirty houses of dirty slums are not regarded as laundry operations The guiding principle is the absolute separation and disinfection by the process of washing of all the dirty linen before it enters the part of the premises devoted to ironing sorting and storing the clean linen Then we have a circular issued by the French Minister of the Interior, Public Health Department, dated Sept 25th, 1914, concerning sanitary *measures* applicable to places inhabited by troops The first part deals with the purification and storage of drinking water, and the second part the cleansing and disinfecting of the premises The use of the eau de Javel is much recommended a fact our English medical services on the Continent should not neglect for it is so popular can be obtained everywhere and does not awaken hostile prejudice like carbolic acid Further we have the text of a circular issued by the Swiss Federal Government to all the Cantonal governments dated Sept 29th 1914 on measures that are to be taken to prevent the spread of typhoid fever At that date there was no epidemic but apprehension was created by the increase of sporadic cases Therefore practitioners are called upon to be more prompt and careful to notify all cases and to take all the precautions necessary when they merely notice suspicious symptoms and before the presence of the disease is fully confirmed These are only a few instances showing the practical bearing of the information the *Bulletin* contains, and it is always encouraging to note how sanitary measures are adopted by such a large number of different nations

THE NEW PHARMACOPŒIA

THE publication of a new British Pharmacopœia is an event of great importance to the medical profession, not so much by reason of the fact that it discards a certain number of more or less *obsolete* drugs and gives official sanction to others that were not included in the previous edition but mainly because it alters the strengths of various commonly prescribed galenical preparations without changing their names The omissions and additions are, of course of interest for various reasons, not the least important of which is that they represent the progress that has been made in therapeutic science and so far as the additions are concerned set up standards for drugs that had hitherto been unofficial But from the immediate practical point of view a new Pharmacopœia always needs to be most carefully examined for changes in the potency of its tinctures extracts, and other compounds As Sir Dyce Duckworth recently observed in commenting upon the omission of musk and sarsaparilla from the new Pharmacopœia "that will not prevent their employment"[1] while as regards the newly recognised drugs, most of these have been in common use for many years, and will involve little change in medical practice A general outline of the *new* Pharmacopœia was given in THE LANCET *of Oct 10th*, 1914 (pp 901 and 937) and we now *deal* in greater detail with points with which it is essential that medical practitioners should become familiar without delay Notice of publication dated Dec. 31st 1914 appeared in the *London Gazette* of Jan 1st, 1915 and according to law the new standards and formulæ came into force immediately Therefore all prescriptions written from the beginning of this year should be dispensed according to the new standards unless the prescriber expressly states otherwise The actual number of important changes in strengths is not large but some of the alterations are drastic and unless special care is taken in prescribing the preparations in question undesirable results may follow

CHANGES IN POTENCY.

The following are the most noteworthy cases in which the potency of preparations has been changed

Tincture of Strophanthus.—This is four times the strength of the tincture of the 1898 Pharmacopœia the official dose has been reduced to one third The alteration in strength has given rise to much criticism the object of the change presumably being to bring the tincture approximately to the strength laid down in the International Agreement The tincture of the Pharmacopœia of 1885 was double the strength of the 1898 tincture and therefore half the strength of the 1914 tincture It would be advisable for practitioners—for a few months at any rate—in prescribing tincture of strophanthus to indicate clearly whether they mean the tincture of 1898 or that of 1914 If [illegible] of strophanthus [illegible] any qualification [illegible]

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[1] THE LANCET Nov 28th 1914 p [illegible]

THE LANCET.

LONDON SATURDAY JANUARY 9, 1915

The British Pharmacopœia, 1914

THE receipt of an advance copy of the British Pharmacopœia enabled us[1] to give some indication of the chief changes which would come into force when the new volume was authoritatively published The actual date of appearance was, however, left uncertain at the time, and now that the publication has been gazetted medical men and pharmacists must all be grateful for the consideration shown by the General Medical Council in keeping back the volume to the latest possible moment There can be no doubt that the introduction of a new pharmacopœia is always associated with some inconvenience, both to the medical profession, who have to become acquainted with changes which may affect prescribing, and to pharmacists, who are obliged to revise their stock in accordance with the new standard These difficulties are greatly increased while the nation is at war Apart from a natural disinclination to be troubled with a fresh source of anxiety, there is, in many instances, the impossibility of obtaining from abroad many of the drugs necessitated by the directions of the new Pharmacopœia The declaration of war found the General Medical Council fully prepared to deal sympathetically with these difficulties In the absence of the President on the continent, Dr NESTOR TIRARD, the medical editor, represented to the Executive Committee the grave inconvenience the public services and manufacturers would incur through the early publication of the new Pharmacopœia, with the result that the statutory notice of publication in the official gazettes was postponed from Oct 9th to Dec 31st Thus three months have been allowed to elapse between the exhibition of advance copies and the time of publication during which period many reviews in technical journals have enabled manufacturers and others to make ready Our advertisement columns show that this time has been adequate for the production of new editions of text books, it is to be feared, however, that in some directions manufacturers may still find difficulty in meeting the requirements of the new standard, but no serious trouble should arise so long as care is shown in indicating when articles conforming to the Pharmacopœia of 1893 are necessarily employed in place of those of 1914

On comparing the published volume with the advance copy it is found that the editors have made full use of the opportunity afforded by the delay in publication, they have introduced numerous minor alterations, especially in footnotes, which add to the uniformity and utility of the book as a work of reference, they have also been able to profit by criticisms which have drawn attention to certain elusive misprints which had escaped observation While minor blemishes have thus been removed, the main facts persist, essentially as in the advance copy Reviewing the criticisms which have hitherto been published, exception has been taken to some of the synonyms, to the introduction of the metric system and to a list of abbreviated Latin names of official drugs and preparations which has been adopted in the index The synonym which appears to have caused the greatest uneasiness, if not dismay, is the retention of the term "laudanum" as the equivalent of tinctura opii To conform with recent foreign pharmacopœias this tincture has been made about one third stronger than before, thus bringing the sale to the public under restrictions which may be irksome to the retail vendor Numerous letters of protest have been published on this subject in the trade journals, but if the recorded sales are to be believed it would certainly appear to be high time to introduce some check upon the supply of laudanum to the public Apart from trade considerations, however, the alteration in the strength of tincture of opium is one which should early be recognised by all who prescribe or dispense this preparation. The introduction of the metric system has already caused some unrest amongst medical practitioners, who fear it is too late for them to learn to prescribe in a new fashion. This modest distrust is quite unnecessary, since in the preface of the Pharmacopœia nothing can be more clearly stated than that the use of the metric system is primarily intended for pharmaceutical and analytical computations, and that practitioners are at liberty to employ either the metric or imperial system for prescribing purposes It is necessary, however, to call attention to the fact that the relation between metric and imperial doses is given in approximate equivalents It is perfectly clear from the wording of the preface that at the next revision the imperial system will probably be omitted and it therefore becomes important that the rising generation of medical men should become familiar with the use of the metric system in prescribing as well as in physiological, pathological, and other laboratory work The adoption of the metric system is not only more scientific, but it is also more in accord with the custom adopted in other pharmacopœias

In our leading article on the advance copy reference was made to the above mentioned list of abbreviations, which has furnished many critics with scope for levity It should be noticed that these abbreviations are not authoritatively enjoined, they do not form part of the monographs which constitute the Pharmacopœia. The idea of some authoritative guidance is very welcome, registration area 42 6 per cent occurred in the various workhouses hospitals, asylums and prisons

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[1] THE LANCET, [illegible]

The death rate from the principal infective diseases, 2·4 per 1000, was the same as in the previous year No death from small pox has occurred in Dublin since 1904 There were 11 deaths from typhus fever, the average for the previous ten years being 3 The number of deaths due to diarrhœal diseases and enteritis of children under 2 years of age was 470 being more than double that of the previous year The high incidence of these diseases is in part due to the long, hot summer of 1913 and in part to the distress arising out of the labour disturbances in the city The infantile death rate for the year was 154 per 1000 births, as against 140 in the previous year

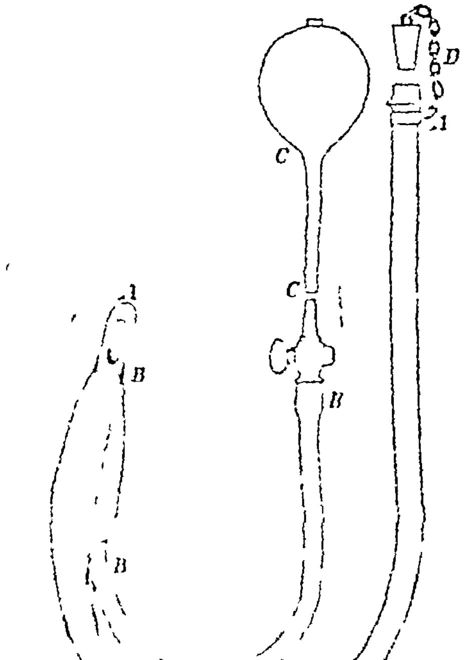
The deaths due to tuberculosis numbered 1132 of which 839 were from phthisis The total is less by 157 than the average for the previous five years The tuberculosis dispensary in Charles street came into the possession of the corporation at the end of 1912 In 1913 1559 patients were treated the number of attendances at the dispensary being 10 533 54 per cent of the patients were males A little more than half were insured under the National Health Insurance Act

Sir Charles Cameron publishes as an appendix his reply to the report of the *Departmental Committee on Housing Conditions in Dublin* Notice of it has already been taken in THE LANCET

New Inventions.

AN OBTURATING CATHETER

I WAS consulted about some bronchial affection in the case of a man 83 years of age, who as the result of an unsuccessful attempt at a suprapubic prostatectomy bore an opening from the skin into the bladder, from which the continual dribble of urine made him most uncomfortable

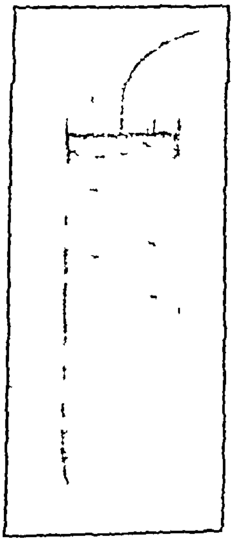


which at its end has a stop cock and a detachable bulb C C for inflation After passing it through a small infla[illegible] and introducing it into the bladder it is fastened to the body by means of a waist band in the manner of a truss The air bag is then inflated to the extent required completely to occlude the opening At the other end of [illegible] which is attached to it by a small chain and can be easily withdrawn for micturition The patient however for whom the instrument was intended was so intolerant of the slightest accumulation of urine in his bladder that he preferred to connect it with an ordinary urinal when he went out in his bath chair or driving

Wimpole-street W J B BERKART, M D

INTRATRACHEAL ETHER ANÆSTHESIA

THE method of giving open ether with a Schimmelbusch mask has been attacked on the score of pulmonary complications which are alleged to follow All who use this method are familiar with the frozen dew which collects on the outside of the mask, and it is difficult to believe that *breathing air at such a low* temperature does not in a certain number of cases prejudice the after results To obviate this I have devised an apparatus for giving hot ether vapour which I have used most *satisfactorily both as regards* immediate anæsthesia and after effects The apparatus (see Fig) consists of a thick glass test tube fitted with a rubber cork, through which pass a glass outlet tube and two terminal connexion The terminals are connected to a U shaped spiral resistance wire which reaches to the bottom of the test-tube The current can be used direct from an ordinary cautery plug The passage of the current through the wire boils the ether, which passes off through the outlet tube to the patient the quantity being regulated by the strength of current and length of wire With a given current and a given resistance the amount of ether vaporised in a unit of time can be readily estimated In practice it is found that the ether vapour reaches the patient at a higher temperature than its boiling point owing to the space above the ether becoming heated by the naked wire *In using the apparatus* I have passed the ether vapour through a rubber tube and fixed the end under a Schimmelbusch mask The subject of intratracheal ether anæsthesia has recently attracted considerable attention which has prompted me to bring forward the above method which ensures in the simplest [illegible] manner the two conditions essential to intratracheal technique these being warm vapour delivered at a constant pressure In cases where active ventilation of the lungs is desired a stream of warm oxygen can be easily added by means of a T-shaped connexion attached to the delivery tube



inter relation of the care of the individual with the care of his environment is shown to be a necessity in educating the young, and for work in this direction to be of real value it must be founded on facts observed and collated The very natural criticism suggests itself that the result of the inspection of school children, unless most carefully made and on some more or less uniform plan, may result in masses of statistical findings having no common points of comparison, and furnishing therefore little opportunity for deriving from the figures indications for practical advance The Chief Medical Officer, with a proper feeling that work done should have its executive outcome, suggests to school medical officers how they can best assist the Board to a comparative study of the data which they obtain, in a way which will not arise from mere records, however complete, of defect and disease He asks them to make a systematic and comparative study in their education areas in regard to the following five points the presence and distribution of disease in childhood, its causes and the conditions favourable to its production, the effects and sequelæ of such diseases and defects, the means of treatment and their results, and the means and methods of prevention, and in an appendix to the report specimen tables are printed as indications to school medical officers how to keep their records with a view to securing uniformity If the indications are faithfully followed, the accumulated records will have a living value, and may help in the interpretation of many obscure points in sociology

Discussing the influence of age and sex upon the physical condition of childhood Sir GEORGE NEWMAN institutes a comparative study, admitting that the classification is arbitrary rather than scientific, between "entrants" and "leavers" When we look at the figures respecting London we have at once the sad circumstance revealed to us that during the period of school the general physique of children does not tend to improve Thus in London "entrant boys show 10 8 and girls 9 8 per cent of poor and bad nutrition while of leavers no less than 14 7 per cent boys and 14 3 girls show the same conditions These figures are supplemented by others dealing with different districts in London and here the size of London stands us in good stead—as a rule that size prevents the discussion of any social problem—because we are able to consider very large populations, equivalent to populations in first class cities both at home and abroad who can be classified as belonging to groups of districts where the standards of comfort and well being are markedly different Taking Bermondsey as an extreme example of a district where deterioration of physical condition takes place during school life we find that of the entrant boys and girls 5 6 and 5 0 per cent respectively show poor and bad nutrition while of the "leavers" in Bermondsey 28 5 per cent boys and [illegible] girls display these defects This is a serious indictment of the environment which Bermondsey is able to provide for its childhood, for the percentage of poor material at the beginning is not excessive In Hammersmith the figures of the "entrants" showing poor and bad nutrition are for boys 5 6 per cent, and for girls also 5 6, while among "leavers" the figures have been transformed for boys to 7 0 per cent and for girls to 12 0, showing the same defects Another borough, which is considered in the same group as Hammersmith, is Holborn, where 5 7 per cent of the boys and 4 4 per cent of the girls show poor and bad nutrition as "entrants," while of the 'leavers" 14 0 per cent, of the boys and 8 8 per cent of the girls show the same defects We have not selected these figures arbitrarily for comparison, but only to show how information obtained methodically and on a uniform pattern cannot fail to be valuable There must be some underlying reason for the fact that the school age has such an ill effect on the girls in Hammersmith and on the boys in Holborn The influence of sex in London as a whole appears to be slightly to the advantage of girls, inasmuch as 10 8 per cent of "entrant" boys and 14 7 of "leaver" boys are reported deficient in nutrition, as compared with 9 8 per cent of "entrant" and 14 3 per cent of "leaver" girls Mr F E FREMANTLE, the medical officer of health of Hertfordshire, in his annual report supplies, however, some figures which give interesting exceptions to the London finding His figures show that at the ages of 5, 7, and 12 years girls are invariably worse off than boys At 5 years the percentages of defect for boys and girls respectively are 2 5 and 2 6, at 7 5 1 and 5 4, and at 12 7 0 and 8 1 A similar finding is recorded in the rural areas of Bedfordshire, though the standard of poorness of nutrition is more severe than in Hertfordshire, the percentages being 23 7 for boys and 25 1 for girls Among purely urban areas the return for Bilston shows the alarming proportion of 63 per cent of senior girls "below normal or bad,' as compared with 38 42 per cent of senior boys Statistics systematically gathered and intelligently read may give us the clue to these obscure discrepancies

In one important direction Sir GEORGE NEWMAN'S report transgressing his own limitations of date, deals with matters of present moment The section referring to the provision of meals for children attending public elementary schools takes notice of the situation as recently as after the outbreak of the war It will be remembered that the Education (Provision of Meals) Act, 1914, was read for the third time on August 4th, 1914, receiving the Royal Assent three days later so that the new legislation arrived exactly when responsibilities of a far reaching sort were certain to be thrust upon the authorities That the dislocation of trade following upon the war would lead to an increase of distress among the poorer classes of children was inevitable, and on the date on which the Act came into force the Board of Education issued a circular letter to all the authorities under its jurisdiction, urging them to make since it is desirable that some consistency should be shown in the methods of abbreviation. Many readers will call to mind abbreviations which seem to be almost hallowed by custom—for example, mag. sulph. or pot. iod.; these are employed so frequently that it would seem impossible to question the intention of the prescriber, and yet both of these may be misread. Quite recently serious results followed from the use of barium sulphide where sulphate had been intended, under the abbreviation "sulph." It is desirable that abbreviations, if used, should be as short as possible, consistently with clear indication of the meaning. It is understood that similar abbreviations are likely to be included in the next issue of the Pharmacopœia of the United States, and there can be little doubt that great convenience would result from the universal adoption of a recognised series of abbreviated titles. Many misapprehensions and misunderstandings might be removed by careful study of the preface, which clearly defines the scope and intention of the principal changes that have been adopted. In the preface it will be found interesting also to note the acknowledgments of assistance received by the Pharmacopœia Committee of the General Medical Council. It is evident that the task of revision was commenced almost immediately after the publication of the Pharmacopœia of 1898, and that this revision has been undertaken by many who unfortunately are not with us to welcome the new volume. Of pharmacists, the late Mr. CHARLES EKIN and Mr. K. J. DOWNES may be mentioned, while from the long list of those who have served on the Pharmacopœia Committee since 1898 the Revising Committee undoubtedly received untold help from the labours of the late Mr. TICHBORNE and Dr. LEECH. It is, we believe, an open secret that Dr. LEECH advised the *rapprochement* with pharmacists which led to the Pharmaceutical Conference, which in time gave place to the Committee of Reference in Pharmacy.

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The Physical Condition of School Children[1]

THE Annual Report for 1913 of the Chief Medical Officer to the Board of Education, Sir GEORGE NEWMAN, makes its appearance at the close of 1914, and it may be explained that these dates are not mentioned with intent to imply that the publication is belated. First, the report, although dated as referring only to 1913, covers a year ending on March 31st, 1914; and secondly, the Chief Medical Officer takes into account in his summary the reports of all the school medical officers in the country. There are over 300 areas for Elementary Education in England and Wales, each with a principal school medical officer, and in 223 of these areas schemes of medical inspection have been [illegible] [illegible]. If the local reports reached the Board of Education with punctuality—which is not the case—there is a great work of sifting and collating to be done before any comprehensive lessons can be derived from the mass of material. That punctuality is not always observed in the matter of local reports is indicated by the fact that this year the Chief Medical Officer issues a special request that these documents should be sent in as soon as possible, and not later than the end of March. The general spirit of the report is optimistic, and we commend its perusal to all those people who, when the first results of school inspection began to arrive, deafened us with plaints about the decay of the race. Circumstances in the war now raging may have caused some of these doleful prophets to reconsider their opinions, and this report should prepare many others of them to follow suit, for its whole story is one of quiet progress. Nor is the story, though in a Blue Book, hard to follow. Sir GEORGE NEWMAN has the gift of packing an enormous amount of information into a reasonably sized volume and of arranging his material in accordance with a logical plan. These things make it easy to obtain the facts, to realise their importance, and to appreciate at the proper value their bearing and the fairness of the official estimate. For in this record of the work carried on by the local education authorities of England and Wales, mainly in the field of school hygiene, while along some lines little more than a summary has been given of achievement, along others some clear and pregnant observations provide the public as well as the medical profession with exactly the sort of general principles which should assist in a mutual development of education as a great health factor. It becomes plain that the State machinery to this end is working smoothly, and, if slowly, yet surely.

The two sections of the report possessing the greatest general interest are that which deals with education in relation to infant welfare, and that which deals with the physical condition of school children. These matters claim at the present moment more than ever our close attention. As Sir GEORGE NEWMAN says, "In no direction are the ravages of war more serious or more difficult to replace than in the loss of human lives. Whatever degree of success may attend the nation in the present European war the cost in life must inevitably be heavy. Consequently, the question of the preservation of the rising generation and care for its physical fitness and equipment is of more than ordinary importance." The physical condition of our school children we can all see to be to-day a matter of paramount importance—it was to be for years [illegible] [illegible] nation for [illegible] [illegible] of peace. It is here [illegible] [illegible] be influenced by age, sex, [illegible] conditions, and by the conditions of [illegible] and throughout the [illegible] shown to regard [illegible] [illegible] medical profession our hearty congratulations At the same time we note with pleasure that Dr J Dobbie, F.R S, who acted most efficiently as a scientific referee in chemistry for the new British Pharmacopœia, and Mr Perceval Alleyn Nairne, chairman of the committee of the London School of Tropical Medicine, have received the honour of knighthood and that the Earl of Aberdeen has received the dignity of a marquisate The good work which both Lord and Lady Aberdeen have done in regard to the prevention of tuberculosis is well known to all our readers

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[1] [illegible]

EPIDEMIC POLIOMYELITIS AT WEST KIRBY

ELSEWHERE in this week's issue we publish a short record by Dr George Jubb of a small epidemic of acute poliomyelitis at Hoylake and West Kirby, the chief interest of which lies in the fact that for three years in succession small epidemics have occurred in these localities The paucity of the actual number of cases renders the drawing of any definite conclusions somewhat hazardous It may be remarked, however, that the general hygiene of these seaside resorts leaves nothing to be desired, and Dr Jubb has been able to elicit only one fact of possible etiological significance—viz., that all the Hoylake cases had a common milk supply It has been shown in many previous epidemics that the milk supply is not a factor on which any weight can be laid, nevertheless, in view of our ignorance of how the virus spreads, it is well not to overlook any possibility of this sort indeed minor epidemics may furnish data uncomplicated by other and confusing features Dr, Jubb is not in a position to demonstrate any connexion between the milk supply and the disease, but merely records the fact Greater importance should be attached to his remark that the father of the first patient of last summer's epidemic is a medical practitioner who attended two of the cases of 1913 Flexner and his collaborators have shown that the virus of poliomyelitis may remain in an active state in the nasal mucosa of individuals who have not themselves suffered from the disease but who have been in the company of affected patients In one case they were able successfully to inoculate an ape from the washings of the nasal mucosa of the parents of a case whose attack had occurred nine months previously Netter has observed the same phenomenon in some of the French cases of two years ago The fact that the virus may be kept alive by otherwise normal carriers is therefore demonstrated and Dr Jubb's surmise that in this fashion the West Kirby epidemic recommenced is probably correct It is curious that his four cases are all males, and it would be interesting to know what is the sex of the other members of the families that have remained unaffected, though presumably in contact with the infected patients Dr Jubb is not inclined to attach importance to the possibility of the virus being spread by the agency of flies of the house, stable or other variety Experimental work with the stable fly, Stomoxys calcitrans, has been distinctly inconclusive Whether the sand flea can be incriminated is doubtful Observers have frequently been struck by the occurrence of cases of poliomyelitis in association with bathing or wading in the sea and again we do well not to ignore the possibility of some direct connexion in this respect But the endemic poliomyelitis of large cities cannot be thus explained. The evidence at present suggests that apart from human carriers the virus may be kept alive and transmitted by a variety of agencies

A RARE MALFORMATION OF THE HEART

WE publish this week an account by Professor Wardrop Griffith of a rare but highly instructive anomaly of the heart The heart was that of a man, aged 30, with a communication between the right and left ventricles, but the abnormal opening, in place of occupying the site of the pars membranacea septi—the last part of the interventricular septum to be formed—was situated further forwards In this rarer form the infundibulum of the right ventricle communicates with the left ventricle under the aortic cusp from which the right coronary artery opens, in the usual anomaly the "body" of the right ventricle communicates with the left under the "non coronary" cusp of the aorta Professor Griffith has done a service by drawing attention to the fact that the rare or anterior opening is of a totally different nature from the common or posterior opening On the part of the interventricular septum which forms the lower margin of the posterior opening is found the main stalk of the auriculo ventricular bundle the bundle divides and passes down on the sides of the interventricular septum before the site of the anterior opening is reached We may thus infer, from a study of such malformations as that described by Professor Griffith, that the interventricular septum may be regarded as being made up of two parts—a posterior and an anterior Recent investigations into the comparative anatomy and development of the heart have provided an explanation of the double origin of the interventricular septum and the presence of interventricular openings of two kinds The explanation is found in the development of the mammalian right ventricle, it is produced by the fusion of two chambers—the ventricle proper and the bulbus cordis which forms the fourth or final chamber of the heart in lower vertebrate animals The ventricle proper forms only the "body" of the mammalian ventricle its infundibulum is developed from the bulbus cordis The left ventricle is also primarily of double origin but in the human heart and in that of all higher vertebrates the "bulbar" element undergoes—except as a rare anomaly—a complete atrophy The importance of Professor Griffith's communication lies in the fact that it calls attention to the double constitution of the right ventricle The physiology of the infundibulum of the right ventricle has never been studied apart from the ventricle as a whole from the history of the infundibulum we are justified in supposing that it must play a distinctive role in the physiology of the circulation

ROTARY DISLOCATION OF THE ATLAS

IN the *Boston Medical and Surgical Journal* of Nov 26th 1914 Dr John J Morton has reported a case of rotary dislocation of the atlas with certain unusual features A boy, aged 12 years was admitted to hospital complaining of pain in the back and inability to raise the head from a bowed position on the left shoulder Three days previously he was wrestling with a much bigger boy and was twisted violently towards the right while his head was firmly held between his opponent's legs.

preparations to deal with subsequent trouble On August 15th the Board issued a memorandum on the methods to be adopted in providing meals for children at public elementary schools, advising dietaries suitable to the circumstances It is too early to say what effect the thoughtful and even elaborate counsels given in the memorandum have assisted the local authorities in dealing with the situation, but there is no doubt that much has been done to grapple with it There is machinery now in every educational area for feeding all the school children if necessary, but SIR GEORGE NEWMAN'S analyses of the number of children fed and of the number of meals provided show that a great deal remains to be done He reviews all the activities of the authorities in the matter of providing meals for their charges between the year 1906, when the first Act of Parliament for providing meals for children attending public elementary schools was passed, and the present day, and points out that this manifold experience has not yet supplied any satisfactory method for selecting the children to be assisted To mention only one difficulty, the educational authorities have power to recover the cost of meals from parents who are not necessitous, while there is no obligation on the parents to send their children to receive the meals, even though the children have been recommended by the school medical officers as ill nourished subjects who should receive better food What is to stop the unfortunate child being prevented by the parents from attending the free meals? The whole of this section of SIR GEORGE NEWMAN'S report deserves anxious attention, and, indeed, it should all be read, and always from the point of view that in a scheme of State education scientifically conducted our rulers have an opportunity of mitigating at the same time the evils of heredity and the evils of environment

Annotations.

"Ne quid nimis"

MEDICAL PRECAUTIONS IN CASE OF AIR RAIDS

THE probability of shells falling on unfortified coast towns is now obvious to all That bombs may possibly be dropped upon London is clearly present to the minds of the authorities as is shown by the official announcement in the daily papers telling the general population what to do in the circumstances These instructions may be useful for the doctors' families, as for the families of any other citizens But the medical men themselves in the neighbourhood of such a catastrophe know that they have an active duty to perform for their fellow citizens and their country If the reports as to the size number, and high explosive character of the Zeppelin bombs are approximately correct the number of the casualties might be in London far in excess of those which have occurred in less densely populated towns like Antwerp And the wounds would be of a very different character from those with which the police have to deal in ordinary street accident We hear that arrangements are being made, with the full approval of the police, for the speedy despatch of a number of surgeons to the spot in the event of the terrible emergency It may reasonably be hoped that the Zeppelin ships will not succeed in reaching London itself, but it is well to be forearmed, and it is certain that if they did, the most special police regulations would be subjected to a severe test Local medical men would then be of great assistance All medical men are therefore urged to see that their professional cases or bags are well stocked, and especially that a hypodermic syringe, a tourniquet, some dry dressings and some bandages are not missing Then, while their wives and children seek shelter, they should go to the spot of which they will be advised and quietly set to work, in harmony with the police, to render such first aid as may be essential before the wounded are removed to the hospitals or other institutions which, by previous arrangement, will be prepared to receive them, and to which the police will see that they are transported as expeditiously as possible The scheme of preparation has been carefully thought out, it is not the expression of an unreasonable sense of scare, and must not be interpreted by the public as such It represents the desire and intention of the medical profession, in the face of a disaster which may arrive, to meet its terrors and minimise its effects

THE NEW YEAR HONOURS

AMONG the new Privy Councillors is the name of a medical man, Sir William MacGregor, G C M G, C B, who recently retired from the governorship of Queensland He has held a similar position in various parts of the British Empire, and was at one time Government medical officer in the Seychelles and chief medical officer for Fiji Dr Herbert Lethington Maitland, of Sydney, has been made a Knight Bachelor, Major Samuel Richard Christophers, I M S, officer in charge of the Malaria Bureau at the Central Research Institute, Kasauli, and Colonel George William Patrick Dennys, I M S Inspector General of Civil Hospitals in the Central Provinces and a member of the Council of the Chief Commissioner for making laws and regulations, have been made C I E s and Mr John Marnoch, Regius professor of surgery in the University of Aberdeen, has been made a C V O The recipients of the Kaisar i Hind gold medal include Major James Husband, I M S, civil surgeon at Bannu N W F Province and Dr Charles Albert Bentley special officer under the Sanitary Commissioner of Bengal In the new Order of the Military Cross for distinguished and meritorious service awards have been made to Captain H Stewart R A M C, Captain F D Caddell R A M C, Lieutenant C Helm R A M C Lieutenant (temporary) F J Wyler R A M C Captain J F Murphy, R A M C Special Reserve and Captain Kanwar Indarjit Singh I M S In the same honours list it is announced that the Indian Order of Merit of the Second Class has been conferred on Senior Sub Assistant Surgeon Pandit Shanker Das (attached) for cool courage in attending wounded under heavy fire at Neuve Chapelle To all these colleagues whose names are thus added to those whose distinctions we have chronicled from week to week during the conduct of the war, we offer in the name of the what was being made and sent into this country from abroad As Mr Martin rightly points out, there exists this difference in regard to experimental research in relation to medicine at home and abroad, that while in Germany and America no difficulty is placed in the path of scientific research or manufacture, we at home are hampered by numerous restrictions, and it is only with difficulty and at great expense that animals suitable for scientific purposes can be obtained In every town hundreds of animals are annually destroyed without having been of the smallest service to any human being whereas in our laboratories during their passage to euthanasia the same animals might have ministered to the suffering of humanity With Mr Martin s statements as to the hindrance to scientific research caused by the restrictions on the employment of animal life for the purpose we are in agreement, but the desire of the legislature to make the regulations as little oppressive as possible is seen to be sincere We accept also his statement, all the more gladly that the reverse has been so widely said, that we possess a flourishing British chemical industry, and that it is not so much a question of restoring lost trade as that of expanding what we possess and of putting renewed vigour into it and fresh scientific force We are glad to learn that the decadence so freely talked about is only apparent and not real, but it is none the less necessary that we should increase the scope of our activities by admitting into them all the resources of modern skill and knowledge in every detail

Dr George Sigerson has been appointed by the Lord Lieutenant of Ireland to be a Member of the Board of Visitors of the National Museum of Science and Art, Dublin, for a period of five years

Dr S A Kinnier Wilson has been elected a corresponding member of the Philadelphia Neurological Society

LEPER HOUSES AND MEDIÆVAL HOSPITALS[1]

BY CHARLES A MERCIER M D LOND, F R C P LOND, F R C S ENG

LATE PHYSICIAN FOR MENTAL DISEASES, CHARING CROSS HOSPITAL

In the last lecture[2] I said that the leper house partook of the nature of the prison the monastery and the almshouse With the prison aspect I have dealt but at least equally important in the minds of the founders not only of leper hospitals but of hospitals for whatever object, was that the hospital should be carried on as a monastic institution

The Monastic Constitution of the Mediæval Hospitals

Most hospitals had churchmen at their head [illegible] were on the same foundation as a college for priests or for canons regular or secular, and all [illegible] had a monastic or semi monastic constitution The obvious explanation is that in [illegible] when there was no [illegible] so [illegible] to [illegible] the [illegible] of the [illegible] of charitable [illegible] [illegible] such funds to those who had [illegible] and themselves

to live what is now known as the simple life This is the obvious explanation, but I believe that, like most obvious explanations, it is incorrect, or at least insufficient It is scarcely possible for us in these days to realise how large a part in the lives of our forefathers was occupied by the Church It might have been said of the Church, as was said of another matter that—

> 'Twas allotted to man with his earliest breath,
> Attends at his birth, and awaits him at death,
> Presides o'er his happiness honour and health
> Is the prop of his house, and the end of his wealth—

and in the interval it regulated a very large share of his life The chief field of industry was the tilling of the soil, and not only was one third of all the land of this country in the hands of the Church, but at every gathering of the produce of the land the husbandman must set apart one-tenth as tribute for the Church The very calendar was reckoned, not by the days of the month, but by the saints days and the feasts of the Church A date was recorded, not as the 16th of June or the 11th of August, but as the eve of St Alban or the day after the feast of St Lawrence The priest combined in himself all the learned professions, and no undertaking of importance could be effected without him At any rate in rural districts, he was not only the priest but the only available physician and lawyer When the layman was sick the priest heard his confession and exhorted him to benefit the Church by his will Then, that there might be no backsliding, the priest assumed his legal function, and as a lawyer drew his client s last will and testament In his character of physician he then put his patient to death, and finally, resuming his legal functions, he proved the will in the ecclesiastical court The reason why every hospital had a semi monastic foundation was, as I take it, that it never occurred to the pious founder that it could have any other It was as natural, as proper, as inevitable to him to provide a monastic framework for his charity as it is to us to provide physicians and nurses No additional motive was needed, but if one had been needed, it would have been found in the provision, so often made, for a perpetual succession of prayers for the soul of the founder In fact, in some hospitals, notably in that founded by the celebrated Richard Whittington, thrice Lord Mayor of London, this was frankly the main object of the foundation By his will, Whittington founded first a college of priests and clergymen and in the same foundation a hospital for 13 poor people and he strictly enjoined them all, priests clergy and poor alike, to pray daily at all the canonical hours for his soul and that of Alice his wife and at other times, when they were not at church they were to say daily thrice 50 angelical salutations, with the Lord s prayer 15 times and were all to meet daily at the tomb of the founder to say the psalm De Profundis and to invoke the mercy of God on the souls of him and his wife Alice It seems, therefore that Whittington took every precaution that was humanly possible to secure for himself and his wife a prosperous hereafter and it looks as if the charity that he exercised towards the 13 poor began, in a special sense at home

In many hospitals the same regulations as to attendance at divine service at all the canonical hours are enjoined on the inmates and in addition they are exhorted to their private devotions which were by no means to be perfunctory or neglected on punishment which would now be looked on as

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[1] [illegible]

[2] [illegible]

Immediately afterwards his head was inclined towards the left shoulder and could not be brought back to the middle line He suffered from severe pains in the neck which prevented him from sleeping for two nights Directly after the injury he could not speak aloud He had considerable difficulty in swallowing and took nothing but liquids On examination he appeared to be in much pain and spoke in a scarcely audible whisper. His head was fixed in such a position that the left cheek rested on the corresponding shoulder. He supported his forehead with his left hand and cried with pain if the hand was removed. Passive movement of the head was very painful The spines of the axis, seventh cervical, and first dorsal vertebræ were prominently felt and there was a depression below the occiput The transverse process of the atlas could not be felt in the normal position on either side The mouth could not be opened sufficiently to allow examination through the pharynx. The reflexes were exaggerated on both sides A radiogram taken from a lateral position showed a displacement between the atlas and axis, an eighth cervical vertebra, and an appearance which caused suspicion of a fracture of the atlas Under anæsthesia an attempt was made to reduce the deformity Examination then showed a prominence on the right side of the pharynx on a level with the soft palate, which was thought to be the transverse process of the atlas The head was extended on the body and gently rotated toward the right At the same time an assistant pressed on the prominence in the pharynx. The head easily came to the middle line without a catch or click of any kind. The position was maintained by a bandage around the head, neck, and chest On regaining consciousness the pain had disappeared and normal phonation was restored. At the end of two weeks the bandage was removed and passive movement of the head was possible without restriction or pain A skiagram showed the atlas and axis in normal relation. At least 14 cases of uncomplicated rotary dislocation of the atlas have been recorded and many cases associated with fracture of the odontoid process or arch of the atlas Aphonia has not been previously reported as a symptom of rotary luxation, though it has been observed in other forms of dislocation of the atlas and in dislocations of the upper cervical vertebræ It appears to be due to injury of the vagus nerve Supporting the head with the one or both hands, difficulty in opening the mouth, and dysphagia have been observed in cases of dislocation of the atlas The last of these symptoms has been attributed to injury of the upper cervical nerves

THE POSITION OF FINE CHEMICALS

AN authoritative estimate of the part played by this country in chemical manufactures was given in a paper recently read before the Newcastle section of the Society of Chemical Industry by Mr W H Martin, J P, F R S E, F C S, a well known chemical manufacturer After expressing the opinion that there is absolutely no more reason for the Government either directly or indirectly to subsidise or assume control of the dye manufacturing industry than of any other, he stated his impression that there are many important manufacturers in this country who will quickly cope with the necessities of the consumers [illegible] alluded forcibly to the ignorance which pre as to what our nation does accomplish in the way of manufacturing chemicals of prime importance, and nowhere is this more apparent, he added, than in the region of medical substances With regard to morphia, for example, regret has been expressed that the supply comes from Germany As a matter of fact, practically the whole supply for Europe, including Germany, is manufactured in Great Britain. Quinine, again, though largely made on the continent, is produced in quantities in this country which are far more than is required for the whole of the British Empire. The case of caffeine is interesting Mr Martin reminds us that it was first made by an Edinburgh firm and exhibited by them at the Vienna exhibition of 1873, after that, when the demand increased, it was made in Germany for a considerable period, until our Government allowed the waste tea which came into the London docks to be denatured Since that step was taken caffeine has been made to an enormous extent in this country In respect of other alkaloids produced in this country, Mr Martin quoted the following words of a manufacturer "On the general question of alkaloids we may assure you that in scarcely any instance have we ourselves been outstripped by Germany in such products as we have ever seriously taken up On the contrary, before the war Germany was our best customer, and we venture to think this is a fairly good answer to a great deal of the loose talk at present indulged in by writers to the newspapers on what is sometimes described as the decadence of British industries" Apparently no chloroform comes from Germany at all, but it is made there for home use, while British chloroform is exported to a considerable extent to all parts of the world The early success of certain synthetics, notably antipyrin, has proved, Mr Martin thinks, a snare to German science "Hardly a month passes," he said, "but that some new substitution compound with a trivial name to indicate its alleged medicinal properties, and a scientific name intended to suggest profound research, is introduced to English medicine" For a time, he allows, we shall be placed at a great inconvenience with respect to a few remedies which are of value, but he has been assured by one of the oldest aniline manufacturers in this country that there are no difficulties in making these drugs by anyone who understands the business, that they are being made, that their output is being increased enormously, and that probably new manufacturers are introducing synthetic medicinal products With regard to scores of other synthetic remedies (so called) he is of the opinion that the sooner they are consigned to the oblivion from which German enterprise brought them the better for science and medicine Mr Martin in the closing sentences of his interesting paper gave a very suggestive example of the severe handicap experienced in this country by the restrictions placed on experiments upon animals His firm were the first to manufacture animal extracts, following the original suggestions of Brown Sequard At the instance of Professor George Murray they prepared above all, thyroid extract But in the case of suprarenal extract they were soon outdistanced by the importation of the active principle from America and Germany This product was standardised by physiological experiment, as is necessary in order to guarantee its activity and purity Delay in developing an equally active and pure extract here was caused by the restrictions of the Government, but eventually a licence was granted and a product was put upon the market equal to was to have ninepence (about 20s now) per week, and the master, who was to be a priest, six marks per annum

Lepers' Allowances of Food and Clothing

In several hospitals the amount and quality of the food and clothing allowed to the inmates was minutely specified, and in some was extremely liberal Thus at the Leper House of St Mary Magdalen at Ripon (early twelfth century) every leper was allowed a garment called rak and two pairs of shoes yearly, and every day a loaf fit for a man s sustenance, and half a pitcher of beer, a portion of flesh on flesh days and three herrings on fish days In process of time, no lepers coming to the hospital, the charity was changed to a dole at the feast of St Mary Magdalen to every poor person coming, of one loaf worth a halfpenny, the quarter of corn being worth 5s, and one herring The loaf would now be a tenpenny one At the great Leper House of St Julians (1146) at St Albans the allowances were extremely generous Each leper had every week seven loaves, five white and two brown, and every seventh week 14 gallons of beer, and on each of the great feasts of the Church one loaf, one jar of beer, or a penny for the same At Christmas each leper received 40 gallons of good beer, or 40 pence for the same, and his share of two quarters of pure and clean corn At the feast of St Martin each leper was to have a pig, on the feast of St Valentine a quarter of oats, on the feast of St John the Baptist two bushels of salt, on each Wednesday in Lent bolted corn of the weight of one of their loaves, and in addition the following sums of money On each of the great feasts of the Church one obolus, at the feast of St Julian and at the feast of St Alban one penny, at Easter one penny, which is called flavonespani, on Ascension Day one obolus for buying potherbs, on the feast of St John the Baptist 4s for clothes at Christmas 14s divided among them for their fuel during the year and at the feasts of Easter and Michaelmas 30s 5d to be divided between them equally

At Shireburn Hospital in Yorkshire (1311), for 65 lepers the daily allowance of each leper was a loaf weighing five marks and a gallon of ale to each and betwixt every two one mess or commons of flesh three days in the week, and of fish, cheese or butter on the remaining four On high festivals a double mess, and in particular, in the feast of St Cuthbert in Lent, fresh salmon if it could be had if not other fresh fish, and on Michaelmas day four messed on one goose With fresh fish, flesh or eggs a measure of salt When fresh fish could not be had, red herrings three to each mess or cheese or butter by weight or three eggs During Lent each had a razer of wheat to make frumenty and two razers of beans to boil some times green meat or onions and every day except Sunday the seventh part of a razer of bean meal but on Sunday a measure and a half of pulse to make gruel Red herrings were prohibited from Pentecost to Michaelmas and at Michaelmas each received a razer of apples

The lepers had a common kitchen and a common cook and fuel and utensils for cooking—viz a lead two brazen pots a table a large wooden tub for washing or making wine a laver two ale vats and two bathing vats They were provided with fire candles and all necessaries the old woman who attended on the sick had every week three wheaten loaves and one mess of flesh or fish Each leper had a yearly allowance for his clothing of three yards of woollen cloth, six yards of linen, and six of canvas, and the tailor had his meat and drink the day on which he came to cut out their clothes Even the grave digger had his meat and drink when a brother or sister was buried From Michaelmas to All Saints two baskets of peat were allowed on double mess days, and four baskets daily from All Saints to Easter On Christmas Eve four Yule logs, each a cartload, with four trusses of straw, and so on, and once a year every leper received 5s 5d in money

Hospital for Persons Losing their Memory

From time to time we read in the newspapers accounts of persons found wandering in the streets, having entirely lost their memories, and knowing not who they are, where they live, or even their own names We are apt to think that this is a purely modern occurrence, and that it is due in some unexplained way to the intensity of the struggle for life in these days, and the rapid rate and high pressure at which we live It seems, however, that it was not unknown five centuries and a half ago, for in 1371 Robert Denton purchased for 40s of King Edward III a licence to found a hospital in a house of his own, in the parish of Berking Church in London, "for the poor priests and other poor men and women in the said city who suddenly fell into a frenzy and lost their memory, to reside in till cured." For some reason, perhaps for a lack of patients answering this description, Robert Denton afterwards changed his mind, for we find that Richard II, in the second year of his reign, by charter allowed him to annex his charity, and another messuage in the parish of St Laurence Pountney, to the Hospital of St Catherine by the Tower

Sources of Revenue

The liberal allowances made to so many inmates in the larger hospitals imply considerable revenues, and the revenues of some of the mediæval hospitals were very large They were derived for the most part from endowments, though then as now a portion of the revenues were obtained from alms, which we now entitle voluntary contributions, economically making eight syllables do the work of one The endowments were very varied in character, consisting for the most part of land or of the appurtenances of land, such as houses, mills, manorial rights, free pasturage, rights of lopping and topping or collection of firewood, fish ponds, and so forth Sometimes, however, the endowment was of a franchise, more or less valuable The most valuable of these was the right to hold an annual fair, which was bestowed upon, for instance, St James s Hospital near Westminster All leper houses were by a bull of Pope Alexander III freed from the obligation of paying tithes Some, such as the great house at Burton Lazars were exempted by royal grant from all sorts of taxes and contributions Some received tolls for passage by land or by water or exemption from tolls Thus Henry III gave to the Maison Dieu at Dover the tenth of the profits accruing to him by passage of the said port and Magnus, king of Man and the Isles exempted the ships belonging to Conyngesheved Hospital in Lancashire from paying any dues in the ports of his dominions

The bounty of some benefactors was so generous that they granted freely what did not belong to them Thus King Henry III granted to the Hospital of St John without the Gate at Oxford severe, was inflicted for negligence The hospital was, in fact, a fourth order of religious house, ranking after the college, as the college ranked after the priory, and this after the abbey, and any of these might be superior in wealth and influence to some neighbouring foundation of superior dignity The hospital usually, though not invariably, had some charitable function tacked on to its monastic purpose Most hospitals, especially after the cessation of leprosy, were almshouses for the support of the poor and the infirm, many were for the relief of travellers, and others for the care of the sick

Hospitals Founded in the Middle Ages

The first hospital founded in England was established early in the tenth century at Flixton in Yorkshire by one Acehorne Its government was entrusted to an alderman and 14 brothers and sisters, and its purpose was the preservation of travellers, that they might not be devoured by wolves and other wild beasts abounding there Curiously enough, the second English hospital, which was founded shortly afterwards in the reign of the same king, Athelstan, was also connected with wolves, for it was endowed by the King with Peter corn—that is to say, one sheaf of corn from every plough throughout the bishopric of York These sheaves came into the King's hand by gift from the diocese on condition that he should destroy the wolves, which were so numerous in those parts that they devoured the cattle, and they were accordingly quite extirpated by King Athelstan Of this hospital, which was first dedicated to St Peter, and afterwards, on its refoundation by King Stephen to St Leonard, the ambulatorium still exists at York It was, at the visitation in the time of Henry VIII, the wealthiest hospital in England, its revenues exceeding those even of St Bartholomew's in Smithfield St Leonard's still remains a charitable foundation, and still supports 21 poor persons in place of the 224 that it maintained at the height of its prosperity

These appear to be the only hospitals founded in this country before the Conquest, but ten years after that event the Pilgrims' House was founded in connexion with Battle Abbey, and two others, St Nicholas at Lewes and St Wulstan at Worcester, were founded in the reign of the Conqueror A third, St Nicholas at Nantwich, was founded in the year of his death, but what the objects of these hospitals may have been cannot now be known, for no record remains It was Lanfranc, however, the great Archbishop of William, who founded in the succeeding reign the first hospitals for the sick ever established in this country These were the Leper House of St Nicholas at Harbledown, near Canterbury, and the Hospital of St John the Baptist without the North Gate of Canterbury for poor men and women "suffering from several diseases"—that is to say, from diseases other than leprosy Both these foundations are actively dispensing charity at the present day, though they are no longer devoted to their original purpose of receiving the sick These six hospitals were all that we know of that were founded in this country in the eleventh century, and all of them were founded in the last 34 years of that century

In the next 50 years there were founded 46 hospitals, of which 24 were leper houses, and the whole of the twelfth century saw the foundation of 168 hospitals, including 80 leper houses In the wonderful thirteenth century the foundation of leper houses had begun to slacken, in spite of the increase of the population, the number being only 75, but 167 hospitals for other purposes were founded in that century, the combined number being 242. In the middle of the fourteenth century occurred the Black Death, which swept off from a half to two thirds of the population, and accordingly we find that while 111 hospitals (42 of them leper houses) were founded between 1300 and 1350, only 67 (including 20 leper houses) were founded in the remainder of the century The falling off of leper houses was due in great part, no doubt, to the diminution of leprosy, for in the next half century no leper house at all was founded, and in the rest of our history the number was not more than ten However, for some reason the rate of foundation of hospitals was not maintained, only 96, including five leper houses, being founded in the fifteenth century, at the conclusion of which the Middle Ages may be considered to have come to an end The total number of hospitals founded in this country in the Middle Ages was, as far as is known, at least 691, of which 224 were leper houses This provision for the poor and sick was, of course, in addition to the very large amount that was provided by the monasteries and friaries, and in proportion to the population was certainly generous

The Objects of the Foundations

The objects of these foundations were various, and some of them strike us as whimsical They were sometimes purely monastic, but usually there was some charitable purpose tacked on to the monastic constitution of lay brothers and lay sisters, and most of them were wholly or in part almshouses In many cases the recipients of the charity were the poor and infirm, in one case poor, sick, and lame, in one case poor distressed people, blind, and other poor persons, in one for the poor, the sick, and for entertaining travellers Some hospitals were merely for the dispensation of doles, either of money or of food At Billeswicke, near Bristol, the foundation provided that a hundred poor men were to be fed daily for ever, and each of the poor was to have a loaf of the weight of 45 shillings and made of equal parts of bean flour and barley He was to have also a sufficient quantity of pottage made with oatmeal This was in 1229 Or the dole was of money Queen Eleanor, the dowager of Henry II, directed that at St Catherine's by the Tower (after the usual religious services had been satisfied) every day in the year till the 16th of November there should be given to 24 poor one halfpenny each, equivalent at the present day to about fifteen pence, and on the 16th of November, being the day on which King Henry died, one halfpenny each to a thousand poor In many cases the hospitals provided lodging for poor persons, sometimes alone, sometimes with board and clothing, sometimes with a pecuniary allowance instead of board or of clothing, or in addition to both Thus, William Elsing, the founder of Elsing Spittle (1329), provided that "in regard that many poor people got their bread by the alms of good Christians, yet had no lodging to entertain them," there should always be beds and rooms for one hundred blind and other poor wretched persons This was the first hospital founded in this country specifically for the blind At Newstede, near Stamford in Lincolnshire (twelfth century), a hospital was founded for seven infirm poor persons, who were to reside there and to have necessary food and clothing At St Bartholomew's at Oxford, there were to be six infirm brothers and two sound to take care of its business, and each brother

A MONTHLY RECORD OF ATMOSPHERIC POLLUTION

COMMITTEE FOR THE INVESTIGATION OF ATMOSPHERIC POLLUTION

Summary of Reports for Month ending Oct 31st, 1914

1	2	3	4	5	6	7	8	9	10	11	12
			Metric tons of deposit per square kilometre during month								
			Insoluble matter			Soluble matter			Included in soluble matter		
Place	Correspondent	Rainfall in milli metres	Tar	Carbonaceous other than tar	Ash	Loss on ignition.	Ash	Total solids	Sulphate as (SO_4)	Chlorine (Cl)	Ammonia (NH_3)
ENGLAND—											
Birmingham Central	Dr J Robertson M.O H.	39	0·12	4·36	12·37	1·54	4·81	23·20	2·72	0·31	0·09
Aston		39	0·04	2·63	2·38	1·17	3·05	9·32	1·25	0·20	0·04
S W		42	0·04	0·89	1·86	0·83	2·08	5·70	0·91	0·19	0·03
Bolton	Dr J E Gould M O H	72	0·21	1·85	7·42	3·17	8·34	21·10	4·73	0·92	0·15
Exeter	Mr H Lloyd Parry Town Clerk	24	0·04	1·37	3·22	0·68	1·41	6·73	0·76	0·27	0·01
Kingston upon Hull	Mr A. R Tankard Public Analyst	53	0·13	3·68	5·44	5·26	7·02	21·53	4·24	1·18	0·01
Liverpool	Dr E. W Hope M O H	52	0·19	2·23	9·50	3·13	3·87	18·97	3·03	0·59	0·17
London—											
Meteorological Office	Director THE LANCET Laboratory	26	0·08	0·61	1·70	2·13	2·98	7·52	1·62	0·54	0·02
Embankment Gardens	Mr J Ollis Chief Officer Public Control Department L.C C	26	0·14	3·14	4·86	3·80	10·62	22·56	3·13	1·70	0·02
Finsbury Park		31	0·03	0·98	2·21	0·68	2·96	6·91	1·28	0·22	0·04
Ravenscourt Park		22	0·03	0·78	1·46	0·57	1·51	4·35	0·74	0·25	0·06
Southwark Park		31	0·02	3·93	6·48	1·07	5·33	16·83	2·93	0·47	0·05
Wandsworth Common		29	0·03	1·64	3·16	0·70	3·45	8·98	1·76	0·37	0·03
Victoria Park		19	0·06	1·23	1·96	1·56	4·56	9·37	2·65	0·23	0·05
Golden Lane	Dr W J Howarth M O H	26	0·06	3·30	5·24	1·53	3·58	13·71	2·33	0·45	0·13
Malvern	Mr W Osborne Thorpe Engineer U D C	36	Nil	0·20	0·22	0·50	0·79	1·72	0·43	0·19	0·02
Manchester—											
Cheadle	Mr J Warrington Secretary Air Pollution Advisory Board	29	0·05	1·48	2·19	2·20	6·48	12·40	3·17	1·18	0·12
Davyhulme		33	0·02	1·41	4·69	0·51	4·12	10·75	2·61	0·35	0·08
Fallowfield		33	0·06	1·50	4·78	0·91	4·25	11·50	2·53	0·51	0·04
School of Technology		42	0·12	5·04	9·12	1·26	4·41	19·95	2·94	0·52	0·06
Whitehall		56	0·03	1·36	4·83	0·59	5·77	12·58	3·32	0·39	0·04
Newcastle on Tyne	Dr H Kerr M O H	42	0·18	3·74	5·78	1·91	4·15	16·47	2·34	0·60	0·13
Oldham	Dr J B Wilkinson M O H	62	0·62	6·65	15·80	1·49	4·47	29·00	2·54	0·44	0·29
Sheffield—											
Attercliffe Burial Ground	Prof W P Wynne The University	51	0·27	4·78	8·73	1·58	6·85	22·21	3·03	1·76	0·16
Hillsborough Park		49	0·06	1·49	4·04	1·26	3·79	10·64	2·22	0·76	0·04
Meersbrook Park		46	0·13	1·43	3·38	0·72	4·74	10·40	1·97	0·56	0·04
Weston Park		50	0·11	1·53	3·03	1·45	4·30	10·42	2·58	0·74	0·04
York	Dr E M Smith M O H	41	0·02	1·43	3·08	1·49	1·83	7·91	1·48	0·46	0·28
SCOTLAND—											
Greenock	—	—	—	—	—	—	—	—	—	—	—
Leith	Mr Thomas Bishop, Sanitary Inspector	44	0·03	2·40	4·72	1·14	3·86	12·20	1·00	0·53	0·09
Paisley	Mr W W Kelso Sanitary Inspector	36	0·1	2·89	3·21	2·01	2·15	10·40	1·40	0·25	0·08
Coatbridge	Mr A G Dunch Chief Sanitary Inspector	41	0·05	1·12	2·30	0·56	1·73	5·76	0·90	0·21	0·05

* No returns to date

Col 4 includes all matter insoluble in water but soluble in CS_2. Col 5 includes all combustible matter insoluble in water and in CS_2. Col 6 includes all earthy matter (fuel ash, &c.). One metric ton per sq kilometre is equivalent to (a) Approx. 9 lb per acre (b) 2·56 English tons per sq mile (c) one gramme per sq metre (d) 1/1000 millimetre of rainfall (see Col 3).

The analytical work involved in the above return was undertaken respectively by J F Liverseege F I C Birmingham, Harry Hurst B Sc F I C Bolton, [illegible] B Sc F I C Exeter, A R Tankard F I C Kingston upon Hull, W H Roberts M Sc F I C Liverpool, [illegible] F I C [illegible] THE LANCET Laboratory (London Meteorological Office collection), J H Coste F I C (Embankment Gardens, Finsbury Park, Ravenscourt Park, Southwark Park, Wandsworth Common, Victoria Park collections, London), [illegible] F I C, C C Duncan F I C Malvern, J Knight Ph D M Sc Cheadle, Davyhulme, Fallowfield, School of Technology, [illegible] J J Dunn D Sc Newcastle-on-Tyne, [illegible] W P Wynne Attercliffe Burial Ground, Hillsborough Park, Meersbrook Park, Weston Park (Sheffield collections), S H Davies M Sc York, J W Biggart F I C Greenock, [illegible] Leith and Paisley, Messrs [illegible] Taylor and Thomson Coatbridge. The correspondents referred to in col 2 are for the [illegible] with the cities.

EDINBURGH ROYAL INFIRMARY.—The report by the managers of the Royal Infirmary, Edinburgh, shows that [illegible] of in-patients during the year ending October 1914 was 12,115. Of these 4205 were [illegible] 7 [illegible] 77 and the [illegible] 706 [illegible] treated there had passed through the infirmary wards a considerable number of recruits who suffered from varicose vein, hernia, and other conditions calling for operative treatment before these men could be accepted for military service. The surgeons were still treating cases of this [illegible] and in fact they are being admitted daily. Sir Joseph [illegible] has been relieved of his [illegible] the [illegible] Hospital [illegible] Dr [illegible] John [illegible] The [illegible] John [illegible] to [illegible] to the [illegible] the garden of the Jews at Oxford but he generously reserved to the owners sufficient land wherein to bury their dead King John gave to the poor of St Giles's Hospital at Shrewsbury both hands full of every sack of corn brought into the market there, and one handful of every sack of flour The Knights of St John of Jerusalem petitioned the King for the grant of the tithes of the parish of Boston in Lincolnshire, and the King was graciously pleased to rob the parish church accordingly, and to make the Knights of St John receivers of the stolen goods

Some forms of charity were distinctly economical, and were designed to benefit the hospitals at a minimum of cost to the benefactor For instance, King Henry III granted to the Hospital of St John Baptist at Coventry free licence to the brothers and sisters to go or send any messengers abroad to beg for alms during the space of seven years, and enjoyned all persons to defend and assist them The most thrifty bequest ever made to any hospital was that made by former Kings of England, and confirmed by Henry IV, to the Hospital of St Giles near Maldon in Essex The keeper or master thereof was to have towards the maintenance of the leprous burghers of the said town the forfeitures of bread, ale, and fish that were not good and wholesome in the said town of Maldon. It seemed to me very unlikely that a device of such a thrifty and economical character could have been originated by the unaided genius of the English, and I looked to a more northern source for the original of the plan, nor did I look in vain It was provided, I find, by the Parliament of Scone, in 1386, that "gif ony man bring to the markit corrupt swine or salmond to be sauld, they sall be taken by the Bailies and incontinent without any question at all sall be sent to the lipperfolke, and gif there be no lipperfolke, they sall be destroyed uterlie"

The Ruin of the Mediæval Hospitals

In the course of time, as leprosy died out in the country, the leper houses were put to other uses In some, the endowment was faithfully applied to other charitable uses Thus St Mary Magdalen at Ripon, when no more lepers came there, was devoted to the relief of wayfarers, especially begging clergymen, meaning, no doubt, Franciscan friars, that they should be therein relieved one night with food and a bed, and be gone in the morning This hospital also dispensed doles to the poor But in many leper houses, and other hospitals also the successive visitations ordered from time to time by different kings and bishops disclosed gross abuses Hospitals intended for the poor dispensed their hospitality to well to do people who paid for their accommodation, thus reminding us of the similar transformation of the great public schools and of the hospitals founded in modern days for the reception of the needy insane The master or warden often became an absentee, and drew his emoluments without performing any duties, so that the hospital fell into decay and neglect, and not only in this but in holding a plurality of such posts the masters of hospitals emulated the parochial clergy Not only was the income of the hospital spent for the private benefit of the officials, but its capital was raided for the same purpose, so that in less than 40 years the income of St Leonard's at York diminished by nearly two thirds

But the ruin of the mediæval hospitals was the eat spoliation by Henry VIII He began with the small monasteries, then the great monastic bodies were destroyed, and at length his greed devoured almost every charitable institution in the country Many of the hospitals were affiliated to religious houses, and these were the first to be robbed There is no doubt that the monastic constitution of the hospitals, which had been for centuries their safe guard, was now the cause and even the pretext of their ruin We have seen that many hospitals were in fact collegiate bodies of priests, some with but little charitable function, and some with none at all Hence they were involved in common ruin with the formally monastic bodies, and the wealth of both went into a common fund for the enrichment of court parasites

Many municipalities, concerned at this robbery of the poor, petitioned the king to be allowed to re establish the charities that he had destroyed, and in some instances his Grace was graciously pleased to permit them to make good out of their own corporate funds or out of their own pockets, the funds that he had stolen In this way were re established the great Hospitals of St Bartholomew in Smithfield and St Thomas in Southwark, St Mary of Bethlehem in Moorfields, and many another hospital throughout the country St Bartholomew's is still a great and wealthy hospital, with large revenues, and livings in its gift, but it is shorn of most of the ample privileges bestowed upon it by Henry I, who declared that it should have all the privileges and immunities that any church in England enjoyed, and that it should be as free as his own crown, and accordingly he released it from shire and hundred, from suits and pleas and murders and geld and Danegeld, and hidage and assize, and works at castles or rebuilding of them or of bridges, or enclosing of parks, and carrying of wood and other things, as also from ferdwit, hengwit, wardpan, averpan, blodwite, futwite, childewite, hundredespan, tethinepan, muchbryche, mischeninge, schewinge, fridsoore, westgeiltheof, wardwithe, utterne, fowinge, and withfange

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THE Governor of Mauritius, in a telegram to the Secretary of State for the Colonies received at the Colonial Office on Jan 4th states that 10 cases of plague were reported for the week ended Dec 31st, all of which were fatal.

TINCTURE OF OPIUM AND THE POISONS SCHEDULES —At an inquest held by Dr F J Waldo at Southwark upon the body of a woman who had died from heart failure following pneumonia it came out in the evidence that the deceased had been in the habit of consuming four or five ounces of tincture of opium weekly In connexion with this and with observations made as to the ease with which narcotics could be purchased, the attention of the jury was called by the coroner to the fact that after Jan 1st, 1915 tincture of opium would find itself transferred from the second to the first schedule of the Pharmacy Act The drug as sold would be stronger owing to the issue of the new edition of the British Pharmacopœia, and the signature of the poisons book at each transaction and other precautions and formalities associated with the sale of drugs in the first schedule might be expected to have an effect upon the number of deaths from narcotic poisoning Dr Waldo in summing up explained and dwelt upon this point which druggists will have to bear in mind and also made observations upon the frequency with which in cases of death inquired into by him the habit of taking drugs had been contracted through medical men prescribing them in oriental countries and through the use of them being continued by the patients afterwar is without medical advice In other instances the habit was first acquired through the easy purchase by the public of quack compounds and advertised remedies' for disease

University of London Contingent Senior Division Second Lieutenant Bernard F Armitage, from the Cambridge University Contingent, Senior Division Officers Training Corps, to be Second Lieutenant, for service with the Medical Unit

THE NEW YEAR HONOURS

Major Samuel Rickard Christophers I.M S, and Colonel George William Patrick Dennys I.M S, have been made C I E s and Major James Husband I M S, has received the Kaisar i Hind gold medal In the new Order of the Military Cross for distinguished and meritorious services awards have been made to Captain H Stewart, R A M C, Captain E D Caddell, R A M C, Lieutenant C Helm, R A M C Lieutenant (temporary) E J Wyler, R A.M C Captain T F Murphy R A M C Special Reserve, and Captain Kunwar Indarjit Singh, I.M S The Indian Order of Merit of the Second Class has been conferred on Senior Sub-Assistant Surgeon Pandit Shanker Dass (attached) "for cool courage in attending wounded under heavy fire at Neuve Chapelle"

DEATHS IN THE SERVICES

Colonel David Douglas Cunningham C I.E, I M S Bengal (retired), at Torquay in his seventy second year He joined the Bengal Medical Service in 1869 and served from 1874 as special assistant to the Sanitary Commissioner with the Government of India From 1879 to 1897, the year in which he retired he was professor of physiology in the Calcutta Medical College and was actively associated with the late Sir George King in researches with regard to quinine which subsequently resulted in an inexpensive process of manufacture In 1886 he accompanied the Tibet Expedition as Government naturalist He was granted the honorary rank of colonel in 1907 Colonel Cunningham was an honorary physician to the King

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

In the 97 English and Welsh towns with populations exceeding 50 000 persons at the last Census, 9261 births and 7395 deaths were registered during the week ended Saturday, Jan 2nd The annual rate of mortality in these towns, which had been 15 7, 16 1, and 14·0 per 1000 in the three preceding weeks, rose in the week under notice to 21 3 per 1000 of their aggregate population, estimated at 18 120 063 persons in the middle of 1914 During the 13 weeks of the quarter just ended the mean annual death rate in these towns averaged 14·9 against a corresponding rate of 15 3 per 1000 in London The annual death rate last week ranged from 8 6 in Bournemouth 10·6 in Oxford, 12 2 in Acton 12 3 in Hornsey, 13·0 in Lincoln and 13 1 in Darlington to 27 5 in Liverpool 27 7 in Newcastle-on-Tyne, 30 8 in Wigan 32 1 in St Helens and 33 1 in Grimsby

The 7395 deaths from all causes were 2513 in excess of the number in the previous week and included 575 which were referred to the principal epidemic diseases against 455 and 411 in the two preceding weeks Of these 575 deaths, 263, resulted from measles, 89 from diphtheria 86 from infantile diarrhoeal diseases 50 from whooping cough 31 from scarlet fever, and 20 from enteric fever, but not one from small pox. The mean annual death rate from these epidemic diseases was equal to 1 7 against 1 2 per 1000 in the previous week The deaths attributed to measles which had been 181, 210 and 175 in the three preceding weeks rose to 259 last week and caused the highest annual death rates of 3 1 in Newcastle on Tyne 3 7 in Plymouth and in Merthyr Tydfil 4 1 in St Helens 4 3 in Huddersfield, 5 1 in Wigan 5·5 in Devonport and 8·0 in Grimsby The deaths referred to diphtheria which had been 62 70 and 66 in the three preceding weeks rose to 89 last week and included 26 in London 5 in Birmingham 4 each in Liverpool and Cardiff and 3 each in [illegible] Manchester, Bradford, Sheffield and [illegible] The fatal cases of diarrhoea and enteritis among infants under 2 years which had been 71 51 and [illegible] in the three preceding weeks rose to 86 last week of which 27 [illegible] in London 7 in Liverpool and 6 each in [illegible] and Manchester The deaths attributed to [illegible] which had steadily increased from 35 to [illegible] in the [illegible] weeks further rose to 50 last week

London Fever Hospital, which had declined from 5035 to 4583 in the five preceding weeks, had further fallen to 4503 on Saturday last, 436 new cases were admitted during the week, against 504 451, and 348 in the three preceding weeks These hospitals also contained on Saturday last 1686 cases of diphtheria, 70 of enteric fever, 59 of measles and 40 of whooping-cough, but not one of small pox. The 2050 deaths from all causes in London were 941 in excess of the number in the previous week, and corresponded to an annual death rate of 23 7 per 1000 The deaths referred to diseases of the respiratory system, which had been 316, 314, and 270 in the three preceding weeks, rose to 562 in the week under notice, and were 282 in excess of the number recorded in the corresponding week of last year

Of the 7395 deaths from all causes in the 97 towns, 299 resulted from different forms of violence and 727 were the subject of coroners' inquests, while 1915 occurred in public institutions The causes of 80, or 1 1 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Newcastle-on Tyne, Salford, and in 66 other smaller towns Of the 80 uncertified causes, 20 were registered in Liverpool, 19 in Birmingham, 6 in London, 4 in Sheffield, and 3 each in Stoke-on Trent, Bootle, and Preston

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns 952 births and 791 deaths were registered during the week ended Saturday, Dec 26th, 1914 The annual rate of mortality in these towns, which had been 18 3, 17 7, and 18·0 per 1000 in the three preceding weeks was again 18·0 per 1000 in the week under notice During the first 12 weeks of last quarter the mean annual death rate in these towns averaged 16·5, against a corresponding rate of 14 4 per 1000 in the 97 large English towns Among the several towns the death rate in the week ranged from 5 1 in Kirkcaldy 10 7 in Perth, and 10 8 in Hamilton to 19 8 in Glasgow, 20 7 in Greenock, and 22 2 in Dundee and in Aberdeen

The 791 deaths from all causes were equal to the number in the previous week, and included 77 which were referred to the principal epidemic diseases, against 76 and 81 in the two preceding weeks Of these 77 deaths, 23 resulted from whooping-cough, 16 from diphtheria, 15 from scarlet fever 12 from infantile diarrhoeal diseases, 5 from measles, and 1 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 1 8, against 1 2 per 1000 in the 97 large English towns The deaths attributed to whooping-cough which had steadily increased from 7 to 35 in the six preceding weeks, declined to 28 of which 21 were registered in Glasgow and 5 in Dundee The deaths referred to diphtheria which had been 20 16 and 9 in the three preceding weeks, rose to 16, and included 5 each in Glasgow and Aberdeen and 2 each in Edinburgh and Dundee The fatal cases of scarlet fever which had been 15 14, and 17 in the three preceding weeks fell to 15, and included 8 in Glasgow and 5 in Aberdeen The deaths of infants (under 2 years) attributed to diarrhoea and enteritis which had been 10 8 and 15 in the three preceding weeks fell to 12, of which 8 belonged to Glasgow The 5 deaths referred to measles were 2 in excess of the average in the earlier weeks of the quarter and comprise 4 in Dundee and 1 in Aberdeen The fatal case of enteric fever occurred in Glasgow

The deaths referred to diseases of the respiratory system, which had been 163 154 and 169 in the three preceding weeks, further rose to 175 in the week under notice, 36 deaths resulted from different forms of violence, against 23 and 35 in the two preceding weeks

In the 16 largest Scotch towns with an aggregate population estimated at 2,293 200 persons at the middle of 1914, 1035 births and 893 deaths were registered during the week ended Saturday Jan 2nd The annual rate of mortality in these towns which had been 17 7 18·0 and 18·0 per 1000 in the three preceding weeks further rose to 20·5 per 1000 in the week under notice During the 13 weeks of the quarter just ended the mean annual death rate in these towns averaged 16 8 against a corresponding rate of 14·9 per 1000 in the 97 large English towns The annual death rate last week ranged from 7 7 in Perth 8 8 in Kilmarnock and 8·9 in Kirkcaldy to 23 9 in Glasgow, 27·4 in Greenock and 30 2 in Dundee

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned have been granted temporary Commissions as Surgeon in His Majesty's Fleet —Thomas Stothart Farnes and John Alexander Thompson (dated Dec 29th, 1914)

ROYAL NAVAL VOLUNTEER RESERVE

The following appointment has been notified —Surgeon Probationer J S Webster to the *St George*, additional, for the *Rother*

ROYAL ARMY MEDICAL CORPS

Charles Vincent Mackay to be temporary Major (dated Dec 2nd, 1914)

Lieutenant Ernest R Walker relinquishes his temporary commission (dated Dec 9th, 1914) Lieutenant Donald Aucutt relinquishes his commission (dated Nov 25th, 1914)

The undermentioned to be temporary Lieutenants —Dated Sept 3rd, 1914 Arthur Martin Leake, V C Dated Sept 23rd, 1914 Frank Dallimore Dated Oct 1st, 1914 Philip Heinrich Bahr Dated Oct 10th, 1914 Owen Richards Dated Oct 24th, 1914 Alfred George Stewart Dated Nov 17th, 1914 James Anthony Delmege Dated Nov 22nd, 1914 John Cuthbert Matthews Dated Nov 25th, 1914 Hugh Hercus Cavendish Fuller Dated Nov 27th, 1914 Charles Aloysius Kenny Dated Dec 10th, 1914 William Hugh Steele and Allan Read Wilson Dated Dec 11th, 1914 Noel Ravenchil Rawson Dated Dec 14th 1914 Donald John Gollan Grant Richard Till Worthington, and James McKee Ferguson Dated Dec 15th, 1914 William Brown, James Maud Rishworth, and Wilfrid Robert Pagen Dated Dec 16th, 1914 Rhys Vaughan Powell John Cornock Hawkes, James Jack, Edward Sandwith Johnson, William John Henry, William Readman, Harold Wacher, Erskine Herbert Worth, Charles Thompson Bishop, Herbert Roycroft Ford, John Bruce Low, Alexander Mearns, Ernest Godfrey Wheat, Walter William Hallchurch, Edward Seymour Chapman, Matthew James Johnston, John Duffin, Robert Best Jackson, Francis Joseph Ord King Edward Percival Hadden Vickery, Eric Alfred Lumley, John William Grice, John Grimson Moseley, William Ernest Graves, Oswald Arnold Gee, Eric Alfred Wright, Edward Henry Allon Pask, George Macleod, Douglas Elder, James Johnston Sinclair, and Samuel Burnside Boyd Campbell Dated Dec 18th, 1914 Edward Loggie Middleton, Edward Ernest Hobson, Leslie Ellis Pimm, Samuel Lyle, Geoffrey Richard Heard, John Bertram McCabe, William McHutchison Binning, Evan Evans, Edmund Christie Fawcett John Chisholm, and James Lee Dated Dec 20th, 1914 Francis Graham Crookshank and Thomas James Logan Thompson

The undermentioned to be temporary Captains whilst serving with the Duchess of Westminster's War Hospital — Dated Jan 6th Charles Samuel Myers and Thomas Munn Body.

The undermentioned cadets and ex-cadets of the Officers Training Corps to be Lieutenants (on probation) —Dated August 17th, 1914 David Stanley Martin Dated Nov 30th 1914 ,John George Bennett Dated Dec 7th, 1914 George Brownrigg Hadden and Hallowes Lloyd Addison

The undermentioned to be Lieutenants (on probation) — Dated Nov 10th, 1914 Robert Alexander Anderson Dated Nov 27th, 1914 William Morris Lansdale Dated Nov 30th, 1914 Thomas Pollock Inglis and Francis Claud Lapage Dated Dec 4th, 1914 James Francis Quigley Dated Dec 7th, 1914 Francis Joseph Hallinan Dated Dec 15th, 1914 Howell Meyrick Williams Dated Dec 18th, 1914 Henry Parkes Whitworth

The undermentioned are granted temporary rank whilst serving with the Australian Medical Unit To be Major Edward Thomas Thring To be Captain Walter Seymour Armstrong

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

Captain Morton W Ruthven is placed temporarily on the Half pay List on account of ill health

TERRITORIAL FORCE

Army Medical Services

Captain John J H Beckton to be a Deputy Assistant Director of Medical Services of the South Midland Territorial Division, vice Major James W Jennings, D S O, who vacates the appointment

Royal Army Medical Corps

2nd South Western Mounted Brigade Field Ambulance Captain Henry N Barnett to be Major (temporary) To be Lieutenants Philip Stanley Martin, Harold Burnet Porteous, and Bertram Michell Young

2nd Northern General Hospital Alfred Richardson to be Captain, whose services will be available on mobilisation

Welsh Border Mounted Brigade Field Ambulance To be Captains Lieutenant Robert F Gerrard (temporary) and David William Reese (late Captain, Northern Bengal Mounted Rifles)

2nd East Lancashire Field Ambulance To be Lieutenants George Robert Hitchin and William Joshua Cowan

3rd East Lancashire Field Ambulance To be Lieutenants James Cowan and Frederic Battinson Smith

2nd West Lancashire Field Ambulance Captain Owen H. Williams to be seconded To be Lieutenants James Herbert Rawlinson, Edward Mansfield, George Charles King, and Leonard Sadgrove Gaskell

5th London Field Ambulance Captain William C Macaulay to be Major (temporary)

2nd North Midland Field Ambulance The undermentioned Lieutenants to be Captains (temporary) Claude M Cowper and Alfred C F Turner

2nd Welsh Field Ambulance John Hargreaves Robinson to be Lieutenant

4th London General Hospital Robert Knox to be Captain whose services will be available on mobilisation David Ernest Stephens Davies to be Lieutenant.

1st Lowland Field Ambulance Lieutenant Neil MacInnes to be Captain (temporary)

Lowland Mounted Brigade Field Ambulance Major James Bruce to be Lieutenant-Colonel (temporary) To be Majors (temporary) Captain Farquhar Gracie and Captain Robert Y Anderson Edward Napier Thomson (late Cadet Glasgow University Contingent, Senior Division, Officers Training Corps) to be Lieutenant

1st Western General Hospital Ernest Edward Glynn to be Captain, whose services will be available on mobilisation

1st London (City of London) Sanitary Company Captain Heaver S Fremlin to be Major (temporary)

2nd London Sanitary Company Captain Arthur J Martin to be Major (temporary) To be Lieutenants Kenneth MacLennan and John Henry Noel Price

3rd West Riding Field Ambulance Herbert Harry Emmerson (late Captain, West Riding Divisional Engineers) to be Captain

3rd London General Hospital Major Arthur E J Barker is seconded Major James E Lane is restored to the establishment

West Lancashire Casualty Clearing Station Captain George C E Simpson, from 2nd West Lancashire Field Ambulance, to be Captain

1st Home Counties Field Ambulance Captain Thomas H Peyton to be Major (temporary) John Samuel Ward to be Lieutenant

2nd Home Counties Field Ambulance Captain George T Willan to be Major (temporary)

3rd Home Counties Field Ambulance Captain Hector G G Mackenzie to be Major (temporary) To be Lieutenants Milward Cecil Hayward, Henry Wood Wier (late Cadet, Edinburgh University Contingent Senior Division, Officers Training Corps), and Edgar William Matthews

2nd Northumbrian Field Ambulance To be Lieutenants Thomas William Crowley and Arthur Edwin Tait

1st Wessex Field Ambulance Captain Francis D Blandy, from Attached to Units other than Medical Units, to be Captain

4th Northern General Hospital Basil Hugh Campbell Lea Wilson to be Captain, whose services will be available on mobilisation

Sanitary Service Lieutenant-Colonel and Honorary Surgeon Colonel William Robert Smith, retired list, Territorial Force, to be Lieutenant Colonel (temporary)

East Lancashire Casualty Clearing Station Lieutenant Thomas B Wolstenholme to be Captain (temporary)

2nd East Anglian Field Ambulance Arthur William Hayward to be Lieutenant

3rd East Anglian Field Ambulance Lieutenant Leonard R Toswill to be Captain (temporary) To be Lieutenants Laurence Henry Hutchins and Edward Coomber Hobbs

Attached to Units other than Medical Units —To be Majors (temporary) Captain George P Chappel and Captain William G Sutcliffe Lieutenant Charles S Wink to be Captain (temporary) To be Captains Surgeon Captain Ernest Solly, retired list (late 5th Battalion, The Prince of Wales's Own (West Yorkshire Regiment)), and Lieutenant Arthur Scott Turner To be Lieutenants Norman Preston Laing, Ralph Austin Burditt, John Herbert Jordan Samuel Rutherford Robert Lyall Guthrie, Frederick Hunton Tom Ramsden Kenworthy (late Cadet Corporal, Leeds University Contingent, Senior Division, Officers Training Corps), George Eustace James Hornidge Chauncy, Frank Greenhalgh Prestwich (late Second Lieutenant, 7th Battalion, the Lancashire Fusiliers), and Percy Herbert Burton

Officers Training Corps

Royal College of Surgeons in Ireland Contingent Senior Division Second Lieutenant John S Pegum to be Lieutenant (temporary) to make sure that no corpses remained unburied Imperfect burials are a source of great danger by polluting springs and wells For a long time the inhabitants must use only boiled water or water sterilised by the addition of hypochlorite of lime The graves must be visited and covered with lime, and should even be surrounded by a deep trench containing lime The fields of battle also must be sprinkled with disinfectants for they are still covered with débris of all kinds The dwellings that have been occupied by the enemy have the floors of the houses and the soil of the garden still strewn with foul débris The pollution of the waters and the dust raised in cleaning up are also to be feared The Bureau of Hygiene in the Ministry of the Interior has given the prefects the necessary instructions Rigid surveillance of food stuffs, milk and meat, must be practised For the rebuilding of the destroyed dwellings it will be necessary at first to raise shelters, for often the basements are all that remain for those who return Later, when the villages are rebuilding it will be necessary to watch the cubic air space allowed for the rooms, and the height of the buildings, and to see that acknowledged necessary modifications are introduced Attention must also be paid to prophylaxis and treatment of disease, and to disinfection, for epidemics are especially to be feared among those in a lowered state of health Attention to these matters is urgently demanded

A Gift in Memory of Dr Reymond

Madame Reymond, widow of the Senator Dr Reymond, a médecin major of the 1st Class, who was mortally wounded during an aeroplane reconnaissance[1] has offered to the Army the flying machine with which that heroic officer practised during peace time The offer has been accepted

Obituary Notes

Professor Alfred Fournier died recently at the age of 81 During his long career he added lustre to the chair of the dermatological clinic at the Hôpital Saint Louis A pupil of Ricord, he devoted himself to the study and treatment of syphilis His descriptions of this disease, hereditary or acquired are perfect His entire teaching concerning the effects of the disease on the different organs and especially on the nervous centres remains correct to this day He pointed out the specific character of locomotor ataxy and established the certainty of a similar origin for progressive general paralysis By making known their origin Fournier showed how to avoid them At the Hôpital Saint Louis he founded a school organised a remarkable museum and collected a huge number of precious specimens —Last week also died another highly esteemed medical man

Correspondence.

"Audi alteram partem"

CRIMINAL ABORTION AND PROFESSIONAL SECRECY

To the Editor of THE LANCET

SIR,—In your last issue you raised a very important and delicate question in a leading article relating to the action of a medical practitioner as regards cases of abortion which may come under his professional care In considering this subject it is well to bear in mind that abortion from natural causes is an extremely common occurrence, and that cases of criminal abortion are fortunately of rare occurrence Every medical practitioner attending a case of abortion is perfectly justified in regarding the case as one of natural abortion unless he has definite objective evidence to the contrary, which he can see for himself without asking any questions In attending a case of abortion where there is no conclusive objective evidence of criminal interference the medical practitioner will be wise to regard the case as one of natural abortion, and any questioning on his part as to the possibility of any criminal cause is most strongly to be deprecated It is undoubtedly the medical man's duty to do the best he can for his patient, and any action on his part in the nature of detective inquiry is to be condemned The medical practitioner will wisely refrain from putting questions to his patient or receiving information from her which will throw upon him the difficult burden of "professional secrecy"

If a patient desires on her own account to disclose certain facts it would be wise for the medical practitioner to caution his patient, and to allow her to take such steps on legal advice as she thinks fit, provided, of course that her health is not endangered There is no need for the practitioner to be a party to these proceedings

A class of case sometimes occurs where the medical practitioner cannot play a passive part I refer to cases of abortion where there is conclusive objective evidence of criminal interference Several such cases have come to my notice Examples of such cases are as follows Visible perforating wounds of the cervix uteri or of the roof of the vagina Marked signs of the action of a corrosive agent on the cervix uteri or vagina Perforating wounds of the uterus or vagina revealed at operation on the patient In cases of this kind the medical practitioner who takes no steps at all is

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Charles Vincent Mackay *to be temporary Major* (dated Dec 2nd, 1914)

Lieutenant Ernest R Walker *relinquishes his temporary* commission (dated Dec 9th, 1914) Lieutenant Donald Aucutt relinquishes his commission (dated Nov 25th, 1914)

The undermentioned to be temporary Lieutenants —Dated Sept 3rd, 1914 Arthur Martin Leake, V C Dated Sept 23rd, 1914 Frank Dallimore *Dated Oct 1st*, 1914 Philip Heinrich Bahr Dated Oct 10th, 1914 Owen *Richards Dated Oct 24th, 1914 Alfred George* Stewart Dated Nov 17th, 1914 James Anthony Delmege Dated Nov 22nd, 1914 John Cuthbert Matthews Dated Nov 25th, 1914 Hugh Hercus Cavendish *Fuller Dated Nov* 27th, 1914 Charles Aloysius Kenny *Dated* Dec 10th, 1914 William Hugh Steele and *Allan* Read Wilson Dated Dec 11th, 1914 Noel Ravenchil Rawson Dated Dec 14th 1914 Donald John Gollan *Grant*, *Richard* Till *Worthington*, *and James McKee Ferguson* Dated Dec 15th, 1914 William Brown, James Maud Rishworth, and Wilfrid Robert *Pagen* Dated Dec 16th, 1914 Rhys Vaughan Powell, John Cornock Hawkes, James Jack, Edward Sandwith Johnson, William John Henry, William Readman, *Harold Wacher*, *Erskine Herbert Worth*, Charles Thompson Bishop, Herbert Roycroft Ford, John Bruce Low, Alexander Mearns, Ernest Godfrey Wheat, Walter William Hallchurch, Edward Seymour Chapman, Matthew James Johnston, John Duffin, Robert Best *Jackson*, Francis Joseph *Ord King Edward Percival Hadden Vickery*, Eric Alfred Lumley, John William Grice, John Grimson Moseley, William Ernest Graves, *Oswald* Arnold Gee, Eric Alfred Wright, Edward Henry Allon Pask, George Macleod, Douglas Elder, James Johnston Sinclair, and Samuel Burnside Boyd Campbell Dated Dec 18th, 1914 Edward Loggie Middleton, Edward Ernest Hobson, Leslie Ellis Pimm, Samuel *Lyle*, Geoffrey Richard Heard, John *Bertram* McCabe, William McHutchison Binning, Evan Evans, *Edmund Christie Fawcett John* Chisholm, and James Lee Dated Dec 20th, 1914 Francis *Graham* Crookshank and Thomas James *Logan* Thompson

The undermentioned to be temporary Captains whilst serving with the Duchess of Westminster's War Hospital — Dated Jan 6th Charles Samuel Myers and Thomas Munn Body.

The undermentioned cadets and ex-cadets of the Officers Training Corps *to be Lieutenants* (on probation) —Dated August 17th, 1914 David Stanley Martin Dated Nov 30th, 1914 John George Bennett Dated Dec 7th, 1914 George *Brownrigg Hadden and Hallowes Lloyd Addison*

The undermentioned to be Lieutenants (on probation) — Dated Nov 10th, *1914 Robert Alexander Anderson Dated* Nov 27th, 1914 William Morris Lansdale Dated Nov 30th 1914 Thomas *Pollock* Inglis and Francis Claud *Lapag* Dated Dec 4th, 1914 James Francis Quigley Dat Dec 7th, 1914 Francis Joseph Hallinan Dated Dec 15th 1914 *Howell Meyrick* Williams *Dated Dec* 18th, 1914 Henry Parkes Whitworth

The undermentioned are granted temporary rank whilst serving with the Australian Medical Unit To be Major Edward *Thomas Thring To be Captain* Walter Seymour *Armstrong*

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

Captain Morton W Ruthven is placed temporarily on the Half pay List *on account of ill health*

TERRITORIAL FORCE

Army Medical Services

Captain John J H Beckton *to be a Deputy* Assistant Director of Medical Services of the South Midland Territorial *Division*, vice *Major James W Jennings*, *D S O*, who vacates the appointment

Royal Army Medical Corps

2nd *South Western Mounted Brigade* Field Ambulance Captain Henry N Barnett to be Major (temporary) To be Lieutenants *Philip Stanley Martin*, *Harold* Burnet Porteous and Bertram Michell Young

2nd Northern General *Hospital Alfred Richardson to be* Captain, whose services will be available on mobilisation

Welsh Border Mounted Brigade Field Ambulance To be Captains Lieutenant Robert F Gerrard (temporary) and David William Reese (late Captain, Northern Bengal Mounted Rifles)

2nd East Lancashire Field Ambulance *To be* Lieutenants George Robert Hitchin and William Joshua Cowan.

3rd East Lancashire Field Ambulance To be Lieutenants James Cowan and Frederic Battinson Smith

2nd West Lancashire Field Ambulance Captain Owen H. Williams to be seconded To be Lieutenants James Herbert Rawlinson, Edward Mansfield, George Charles King, and Leonard Sadgrove Gaskell

5th London Field Ambulance Captain William C Macaulay to be Major (temporary)

2nd North Midland Field Ambulance The undermentioned Lieutenants to be Captains (temporary) Claude M Cowper *and Alfred C F Turner*

2nd Welsh Field Ambulance John Hargreaves Robinson *to be Lieutenant*

4th London General Hospital Robert Knox to be Captain, whose services will be available on mobilisation David Ernest Stephens Davies to be Lieutenant

1st Lowland Field Ambulance Lieutenant Neil MacInnes *to be Captain (temporary)*

Lowland Mounted Brigade Field Ambulance Major James Bruce *to be Lieutenant-Colonel (temporary) To be* Majors (temporary) Captain Farquhar Gracie and Captain Robert Y Anderson Edward Napier Thomson (late Cadet, Glasgow University *Contingent, Senior Division, Officers* Training Corps) to be Lieutenant

1st Western General Hospital Ernest Edward Glynn to be Captain, whose services will be available on mobilisation

1st London (City of London) Sanitary Company Captain Heaver S *Fremlin to be Major (temporary)*

2nd London Sanitary Company Captain Arthur J Martin to be Major (temporary) To be Lieutenants Kenneth MacLennan and John Henry *Noel Price*

3rd West Riding Field Ambulance Herbert H
Emmerson (late Captain, West *Riding Divisional* En
to be Captain

3rd London General Hospital Major Arthur E
is seconded Major James E Lane is restor
establishment

West Lancashire Casualty Clearing St
George C E Simpson, from 2nd West
Ambulance, to be *Captain*

1st Home Counties Field Ambula
H Peyton to be Major (tempora
be Lieutenant

2nd Home Counties Field Amb
Willan to be Major (tempor

3rd Home Counties F
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Captain
Ernest So
Wales's O
Arthur Scott
Laing, Ralph
Rutherford Ro
Ramsden Kenn
Contingent Senio
Eustace, James
Prestwich (late Sc
Lancashire Fusiliers)

Off

Royal College of Surge
Division Second Lieuten
tenant (temporary)

In sleeplessness due to gastro intestinal restlessness a few drops of peppermint or spirit of camphor or a wineglassful of orange flower water will often exert a quasi hypnotic effect

Whatever the effect of errors of refraction it is certain that insomnia results from many other small causes —I am, Sir, yours faithfully,

ALFRED S GUBB, M D

No 15 Auxiliary Hospital Aix les Bains

CIVIL MEDICAL PRACTICE AND THE WAR

To the Editor of THE LANCET

SIR,—The statistics in THE LANCET of Dec 26th last, as given by the President of the General Medical Council, would have been still more interesting if they had shown the percentage of decrease in each class of medical students, and also if they had set out the actual numbers in ordinary times of the excess over those removed by death, &c , which, of course, is sure to be larger this year As Sir Donald MacAlister says the whole question calls for consideration, I may be permitted as an old member of the General Medical Council to make a humble suggestion as to how the deficiency of doctors might for a time at least be met

While I agreed at the time to the addition of a fifth year to the medical curriculum, I and others did so on the clear understanding that the additional year should be devoted *wholly* to clinical—i e , practical—work It is notorious that this has not been so The fifth year as a rule has been appropriated by further study, and comparatively little has been left for taking charge of individual patients as house surgeon's or house physician's clerk, or as *pupil* assistant Wherever we turn the state of war has of necessity altered existing arrangements, and new ways of going to work have had to be considered Not only many medical students but many medical men have gone "to the front" While it is true that in their absence their neighbours have generously looked after their patients, or locum tenents have been found to take their place, I fear at great expense, yet both the patriotic practitioner and the public have suffered from this dearth of doctors This being so for the good of all, and I firmly believe without detriment in the interests of real medical education, a large proportion of fifth year students (including during war hospital internes) might be allowed to act as unqualified assistants for the time being, and afterwards to go up for their final examination before being admitted to the Medical Register on producing a certificate that their time on probation had been conscientiously spent—in other words, that their apprenticeship had been profitably accomplished

If the result of this temporary experiment were found to be satisfactory then the same system might be continued after the war was over, and the coming scarcity of doctors would be met It would be the means of adding, if not quite a fifth year by year at least a tenth to the working army of the profession

I am Sir, yours faithfully,

[illegible] WILLIAM BRUCE M D

P S —Since the foregoing was written I have carefully perused both Sir Donald MacAlister's further letter and the able report of Dr Norman Walker's speech at Glasgow The thanks of the profession for the trouble taken by these gentlemen are most heartily due As regards the new order of the War Office for which we have to thank the President and the Medical Council, will in many cases greatly relieve the situation for the time being, while the action of Dr Walker and his committee is sure to bear good fruit All the same, practically nothing is being done to meet the deficiency in numbers which Dr Walker clearly shows must go on increasing Whereas by shortening the term of academic residence a very considerable addition, as I have said, would be effected to the whole body of medical practitioners were it to include those fully licensed and those in process of being qualified for registration

To the Editor of THE LANCET

SIR,—The prospective diminution of our reserve supply of medical men will perhaps call attention to the question if we are making the best use of the abilities of the men we have already qualified Apart from the Scottish born student, who can if he thinks fit get his training at the expense of the Carnegie Trust, the cost of the curriculum to the English trained student may run to anything from £500 to £1000 After qualifying, if the student has a capital of £1000 to £1500 his course will be plain sailing But what are the restrictions on others who have not this reserve? They are brought up against restrictions of a commercial kind, for the most part framed to protect the business or trading interests of the established practitioner Hence the legal bond not to practise within ten miles of a place where a qualified practitioner may have been compelled from economic circumstances alone to accept a subsidiary position If the qualified practitioner sets up in practice on his own, so to speak, he is again met with the restrictions of the insurance doctors, whose panel patients cannot change their attendant more than once a year, and then only by a very troublesome clerical procedure So that unless the young qualified man can get together some £2500 and spend many years getting his capital back, he may very well think twice before taking up the occupation There is more in the question surely than our academicians can alter or control I am, Sir, yours faithfully,

Burnley, Dec. 28th, 1914 JAMES I HALSTEAD

MAGNESIUM SULPHATE IN TETANUS

To the Editor of THE LANCET

SIR,—In connexion with the great prevalence of tetanus among the wounded soldiers in France and the inefficiency of tetanus antitoxin except as a prophylactic, allow me to call the attention of your readers to the great service of magnesium sulphate administered by hypodermoclysis in from 1 to 2 per cent solution, in quantities and at intervals depending upon the severity of symptoms—a pint to a quart even every three hours if necessary I inclose for your perusal a copy of the notes of two cases I reported some years ago [1]

The effect of this salt in solution, administered intraspinally as an anticonvulsant, is generally well known, but that the same result may be obtained with much greater ease and safety by employing dilute solutions in large amounts hypodermatically is I think not recognised and might I am sure at this juncture prove of great service I venture to urge its trial extensively, especially where established measures have failed

I am Sir yours faithfully,

Brooklyn New York H GILLETT M D

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[1] [illegible]

whooping cough, which had been 32, 35, and 28 in the three preceding weeks, rose to 44 last week, and included 27 in Glasgow, 6 in Dundee, 4 in Clydebank, 3 in Greenock, and 2 in Motherwell The deaths referred to scarlet fever, which had been 14, 17, and 15 in the three preceding weeks, rose to 17 last week, of which 6 were registered in Glasgow 5 in Aberdeen, and 3 in Paisley The fatal cases of diphtheria, which had been 16, 9, and 16 in the three preceding weeks, fell to 14 last week, and included 4 in Edinburgh, 3 in Glasgow, and 2 each in Aberdeen and Motherwell The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 8 15, and 12 in the three preceding weeks, were 11 last week, of which 4 belonged to Dundee and 3 to Glasgow The 10 deaths referred to measles were 7 above the average in the earlier weeks of the quarter, and included 8 in Dundee The 2 fatal cases of enteric fever were registered in Glasgow

The deaths referred to diseases of the respiratory system, which had been 154, 169 and 175 in the three preceding weeks, further rose to 210 in the week under notice, 42 deaths resulted from various forms of violence, against 36 in each of the two preceding weeks

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HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland 383 births and 393 deaths were registered during the week ended Saturday, Dec 26th 1914 The annual rate of mortality in these towns, which had steadily increased from 17 7 to 21 8 per 1000 in the six preceding weeks, fell to 17 0 per 1000 in the week under notice During the first 12 weeks of last quarter the mean annual death rate in these towns averaged 18 0, against corresponding rates of 14 4 and 16 5 per 1000 in the English and Scotch towns respectively The annual death rate during the week was equal to 16 4 in Dublin (against 12 8 in London and 19 8 in Glasgow), 22 0 in Belfast, 14 3 in Cork, 11 4 in Londonderry, 13 5 in Limerick, and 9 5 in Waterford, while in the 21 smaller towns the mean death rate was 12 5 per 1000

The 393 deaths from all causes were 110 fewer than the number in the previous week, and included 32 which were referred to the principal epidemic diseases, against 43 and 46 in the two preceding weeks Of these 32 deaths, 9 resulted from measles, 9 from infantile diarrhœal diseases, 5 from whooping-cough, 3 each from scarlet fever, diphtheria, and enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 1·4, against corresponding rates of 1 2 and 1 8 per 1000 in the English and Scotch towns respectively The deaths attributed to measles, which had been 8, 12, and 8 in the three preceding weeks, numbered 9, and were all registered in Belfast The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 12, 17, and 15 in the three preceding weeks, fell to 9, of which 5 occurred in Dublin The fatal cases of whooping-cough, which had been 4 3, and 5 in the three preceding weeks, were again 5, and were all recorded in Belfast The deaths attributed to scarlet fever, which had been 8 8, and 10 in the three preceding weeks fell to 3, but showed no excess in any town The 3 deaths referred to enteric fever of which 2 occurred in Dublin and 1 in Sligo were equal to the average in the earlier weeks of the quarter Of the 3 fatal cases of diphtheria, 2 were recorded in Dublin and 1 in Cork

The deaths referred to diseases of the respiratory system, which had been 90, 120, and 105 in the three preceding weeks, further fell to 96 in the week under notice Of the 393 deaths from all causes 97, or 25 per cent, occurred in public institutions, and 9 resulted from various forms of violence The proportion of uncertified causes of death was equal to 4 1 against 1 1 per cent, in the 97 English towns

In the 27 town districts of Ireland with an aggregate population estimated at 1,205,280 persons at the middle of 1914 649 births and 643 deaths were registered during the week ended Saturday, Jan 2nd The annual rate of mortality in these towns, which had been 21 1, 21 8, and 17·0 per 1000 in the three preceding weeks rose to 27 8 per 1000 in the week under notice During the 13 weeks of the quarter just ended the mean annual death rate in these towns averaged 18 8, against corresponding rates of 14·9 and 16 8 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 35 2 in Dublin (against 23 7 in London and 23 9 in Glasgow), 23 1 in Belfast, 30 6 in Cork, 22 8 in Londonderry, 28 4 in Limerick, and 51 3 in Waterford, while in the 21 smaller towns the mean rate did not exceed 19 5 per 1000

The 643 deaths from all causes were 250 in excess of the number in the previous week, and included 42 which were referred to the principal epidemic diseases, against 46 and 32 in the two preceding weeks Of these 42 deaths, 10 resulted from infantile diarrhœal diseases 9 each from measles and scarlet fever 7 from whooping cough, 4 from enteric fever and 3 from diphtheria, but not one from ll pox The mean annual death rate from these diseases equal to 1 8, against 1 7 and 2 2 per 1000 in the English and Scotch towns respectively The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 17, 15, and 9 in the three preceding weeks were 10 last week, of which 8 were registered in Dublin The deaths referred to measles which had been 12, 8, and 9 in the three preceding weeks, were again 9 last week, and comprised 8 in Belfast and 1 in Queenstown The fatal cases of scarlet fever, which had been 8, 10, and 3 in the three preceding weeks rose to 9 last week, and included 4 in Waterford and 2 each in Dublin and Belfast The 7 deaths attributed to whooping-cough of which 4 occurred in Dublin and 2 in Belfast were 3 in excess of the average in the earlier weeks of the quarter Of the 4 deaths referred to enteric fever, 2 each were registered in Dublin and Belfast The 3 fatal cases of diphtheria included 2 in Dublin and 1 in Belfast, and were equal to the average in the earlier weeks of the quarter In addition to the above, a death from typhus occurred in Waterford

The deaths referred to diseases of the respiratory system, which had been 120, 105, and 96 in the three preceding weeks, rose to 162 in the week under notice Of the 643 deaths from all causes, 196, or 30 per cent, occurred in public institutions, and 7 resulted from different forms of violence The causes of 37, or 5 8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the 97 English towns the proportion of uncertified causes did not exceed 1 1 per cent

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PARIS

(FROM OUR OWN CORRESPONDENT)

The Licence Fees of Mobilised Medical Men

A DELEGATION from the Societe Centrale and from the Association Generale des Medecins de France attended recently at the office of direct taxation at the Ministry of Finance to call attention to the situation of mobilised doctors in regard to their licence fees during the years 1914 and 1915 It was stated in reply to the delegation's representations that it was impossible to make any abatement for 1914, but that mobilised medical men whose usual residence was in Paris would not appear on the register of practitioners for 1915 or during the period of hostilities, and that provincial practitioners should apply to the director of direct taxation of the province for a discharge, which would be favourably considered in every case This measure is indeed only just In Paris, especially, all the medical men have to pay for their licence to practice a heavy fee in proportion to their rent Since, however, during mobilisation their emoluments are entirely inadequate to compensate them for the loss caused by the abandonment of their practice, it is not right that they should be called on to pay the fee for their licence

Hygiene in War Devastated Areas

In the fighting area and in regions under military occupation hygienic knowledge is indispensable When the dispossessed inhabitant returns to his village a great danger arises from the sources of contamination that every battle or the long occupation by troops leaves behind It is necessary, therefore, that all such country should be purified, for the sources of infection are innumerable A deputy from the Ardennes, Dr Doisy, who has returned from a visit to the battle area of the Marne, gave an address on this subject in a conference organised by the Alliance d'Hygiene Sociale He pointed out that the first difficulty encountered by the military sanitary service had consisted in the vastness of modern battlefields, another in the season of the year and the high temperature which still prevailed at the beginning of September This explained why the burials had been conducted in such an inadequate manner, why disinfectants gave out, and why it was now necessary to secure protection against grave dangers This whole region of bloody battlefields must be visited and probed

In sleeplessness due to gastro intestinal restlessness a few drops of peppermint or spirit of camphor or a wineglassful of orange flower water will often exert a quasi hypnotic effect

Whatever the effect of errors of refraction it is certain that insomnia results from many other small causes —I am, Sir, yours faithfully,

ALFRED S GUBB, M D

No 15 Auxiliary Hospital Aix les Bains

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While I agreed at the time to the addition of a fifth year to the medical curriculum, I and others did so on the clear understanding that the additional year should be devoted *wholly* to clinical—i e, practical—work It is notorious that this has not been so The fifth year as a rule has been appropriated by further study, and comparatively little has been left for taking charge of individual patients as house surgeon s or house physician's clerk, or as *pupil* assistant Wherever we turn the state of war has of necessity altered existing arrangements, and new ways of going to work have had to be considered Not only many medical students but many medical men have gone "to the front" While it is true that in their absence their neighbours have generously looked after their patients, or locum tenents have been found to take their place, I fear at great expense, yet both the patriotic practitioner and the public have suffered from this dearth of doctors This being so for the good of all and I firmly believe without detriment in the interests of real medical education a large proportion of fifth year students (including during war hospital internes) might be allowed to act as unqualified assistants for the time being and afterwards to go up for their final examination before being admitted to the Medical Register on producing a certificate that their time on probation had been conscientiously spent—in other words, that their apprenticeship had been profitably accomplished

If the result of this temporary experiment were found to be satisfactory then the same system might be continued after the war was over, and the coming scarcity of doctors would be met. It would be the means of adding, if not quite a fifth year by year at least a tenth to the working army of the profession

I am Sir yours faithfully

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Burnley, Dec. 28th 1914 JAMES I HALSTEAD

MAGNESIUM SULPHATE IN TETANUS

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SIR—In connexion with the great prevalence of tetanus among the wounded soldiers in France and the inefficiency of tetanus antitoxin except as a prophylactic allow me to call the attention of your readers to the great service of magnesium-sulphate administered by hypodermoclysis in from 1 to 2 per cent solution, in quantities and at intervals depending upon the severity of symptoms—a pint to a quart even every three hours if necessary I inclose for your perusal a copy of the notes of two cases I reported some years ago[1]

The effect of this salt in solution, administered intraspinally as an anticonvulsant is generally well known, but that the same result may be obtained with much greater ease and safety by employing dilute solutions in large amounts hypodermatically is I think no recognised and might I am sure at this juncture prove of great service I venture to urge its trial extensively, especially where established measures have failed

I am Sir, yours faithfully

[illegible] H GRIFFITH M D

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[1] [illegible]

the foremost place, and the medical practitioner in charge of a patient will be right in permitting no steps to be taken which are dangerous to her life or detrimental to her condition of health

In cases of abortion where, after consultation with a specialist, it is decided that there is conclusive objective evidence of criminal interference, quite irrespective of any statements made by the patient, then there is no doubt that the duty rests with the medical practitioner to inform the legal authorities His duty to the public and to himself must, I think, in such cases override any obligation of secrecy arising out of the confidential relationship to which a doctor stands towards a patient

I am, Sir, yours faithfully,

W H WILLCOX, M D, F R C P

Welbeck-street, W, Jan 5th, 1915

INSOMNIA AND SUICIDE

To the Editor of THE LANCET

SIR,—The paper by Mr C E Pronger under the above title in your issue of Dec 12th, 1914, has brought into prominence what some of us have been preaching for years, and it has seemed as if the preaching were in vain The medical profession allows that there is such a thing as eyestrain, and that the correction of errors of refraction may cure headaches, and there many appear to stop, and do not realise that if eyestrain can cause headaches, why not also numerous other forms of reflex irritation or waste of nerve energy—in fact, any "functional" nerve disorder? When some years ago Gould, of Philadelphia, published his "Biographic Clinics" and illustrated the enormous harm that uncorrected astigmatism could do and had done, he was laughed at and called a madman, and yet those who have followed in his footsteps look up to him as a pioneer in ophthalmology second only to the great Donders

If small errors of refraction may play such an important rôle it will be surely asked why the profession generally have not accepted the fact, and the answer is because a large majority of the *oculists* themselves have not done so They laugh at the man who corrects 0 12 D of astigmatism or 0 25 D of anisometropia, and almost infer that he is "next door" to a quack We are so conservative in the medical profession and forget that the only form of conservatism for us is to conserve what is good As soon as one of us opens a new door and ets in a new light it seems as if the whole rofession did their best to close the door instead of helping to open it wider

The explanation of this attitude is not far to seek in the subject under discussion It is that the "older school" have failed to recognise the paramount importance of the use of cycloplegics in this particular work Very low errors of astigmatism or of anisometropia, such as 0 12 D, 0 25 D, 0 37 D, and possibly 0 5 D play the chief rôle in causing nervous disorder in a particular class of nerve patient These low errors, and only these low errors, can be corrected unconsciously by the patient, and are only fully revealed when a cycloplegic is used in all under 45 (and in some cases 50) years of age Homatropine generally suffices for the older patients, but atropine must be used for all up to the age of 25 or even 30 The masking of the defect enables the patient to have apparently normal vision, and he is totally unconscious of, and very often indignant at the mere suggestion of, ective vision. This unconscious correction of small errors must always lead to waste of nerve energy, but in the robust it may never manifest itself, or the manifestation may be long delayed, but in those whose nervous organisation is of a more delicate character it very soon shows itself in some form of functional nerve disorder—insomnia, depression, suicide, drug taking, alcoholism, dyspepsia, &c

Having found the defect—and in doing this the ophthalmometer is a priceless servant—the logical treatment is the prescription of the correction for constant use, and herein we perform a double good, for not only do we remove the symptoms, but also the cause, for in the younger patients the removal of the eyestrain tends to the disappearance of the error I have heard it said that most of the cures are the result of "suggestion", it is possible that an occasional case does occur of such a class, but suppose suggestion were the cure in all, is that an argument against the treatment? Is not our one and only aim to cure the patient? It should be remembered that the cases referred to above only occur very sparsely in hospital work, they must be looked for in the upper classes, especially in the professional classes Some of the most typical cases I have seen have been members of our own profession Women at the climacteric are especially prone to this form of eyestrain, the oncoming presbyopia added to the static error increasing the trouble or starting it The opticians' art has rendered a lasting benefit by inventing the invisible bifocal glass, wherein the upper portion corrects the static error and the lower portion the same, plus the presbyopia

If the good that men do in this world is gauged by the benefits it confers on the race then the oculist who does his refraction work sensibly and carefully must have the consciousness of being a large benefactor —I am, Sir, yours faithfully,

Chandos-street, W, Jan 1st 1915

ERNEST CLARKE

To the Editor of THE LANCET

SIR,—If it be true, as suggested by Mr C Ernest Pronger in THE LANCET of Dec 12th, 1914, that errors of refraction play a part in the production of habitual insomnia, it only affords another proof of the fact that this distressing condition is often dependent upon trifling disturbances of physiological equilibrium Nothing, for instance, is more fatal to a good night's rest than going to bed with a loaded rectum, especially in presence of a tendency to flatulence, because this tends to excite peristalsis and wakefulness A glycerine suppository or injection under these conditions will exert distinctly hypnotic effects An empty stomach is also adverse to sleep and should be combated by a biscuit or a cup of warm milk on retiring, these being far more efficacious than the customary alcoholic nightcap Then, too, there is the question of having the head high or low, which is a matter of personal idiosyncrasy A cold bedroom is more conducive to sleep than one artificially heated, and free ventilation, provided no cold air impinge directly on the exposed surfaces, is favourable to deep, refreshing sleep The use of a feather bed or unduly thick, heavy bedclothes, by overheating the body, produces restlessness, and in elderly men is apt to cause bladder irritability, with consequent disturbance of rest Another frequent cause of troubled nights is the practice of taking a heavy meal late in the day with too short an interval between the meal and the hour

In sleeplessness due to gastro intestinal restlessness a few drops of peppermint or spirit of camphor or a wineglassful of orange flower water will often exert a quasi hypnotic effect

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CIVIL MEDICAL PRACTICE AND THE WAR

To the Editor of THE LANCET

SIR,—The statistics in THE LANCET of Dec 26th last, as given by the President of the General Medical Council, would have been still more interesting if they had shown the percentage of decrease in each class of medical students, and also if they had set out the actual numbers in ordinary times of the excess over those removed by death, &c, which, of course, is sure to be larger this year As Sir Donald MacAlister says the whole question calls for consideration, I may be permitted as an old member of the General Medical Council to make a humble suggestion as to how the deficiency of doctors might for a time at least be met

While I agreed at the time to the addition of a fifth year to the medical curriculum, I and others did so on the clear understanding that the additional year should be devoted *wholly* to clinical—i e, practical—work It is notorious that this has not been so The fifth year as a rule has been appropriated by further study, and comparatively little has been left for taking charge of individual patients as house surgeon's or house physician's clerk, or as *pupil* assistant Wherever we turn the state of war has of necessity altered existing arrangements, and new ways of going to work have had to be considered Not only many medical students but many medical men have gone "to the front" While it is true that in their absence their neighbours have generously looked after their patients, or locum tenents have been *found* to take their place, I fear at great expense, yet both the patriotic practitioner and the public have suffered from this dearth of doctors This being so, for the good of all and I firmly believe without detriment in the interests of real medical education, a large proportion of fifth year students (including during war hospital internes) might be allowed to act as unqualified assistants for the time being, and afterwards to go up for their final examination before being admitted to the Medical Register on producing a certificate that their time on probation had been conscientiously spent—in other words, that "their apprenticeship" had been profitably accomplished

If the result of this temporary experiment were found to be satisfactory then the same system might be continued after the war was over, and the coming scarcity of doctors would be met It would be the means of adding if not quite a fifth year by year at least a tenth to the working army of the profession

I am Sir yours faithfully,

[illegible] WILLIAM BRUCE M D

P S—Since the foregoing was written I have carefully perused both Sir Donald MacAlister's further letter and the able report of Dr Norman Walker's speech at Glasgow The thanks of the profession for the trouble taken by these gentlemen are [illegible] heartily due As you say the new order of the [illegible] for which we have to thank the President and the Medical Council, will in many cases greatly relieve the situation for the time being, while the action of Dr Walker and his committee is sure to bear good fruit All the same, practically nothing is being done to meet the deficiency in numbers which Dr Walker clearly shows must go on increasing Whereas by shortening the term of academic residence a very considerable addition, as I have said, would be effected to the whole body of medical practitioners were it to include those fully licensed and those in process of being qualified for registration

To the Editor of THE LANCET

SIR,—The prospective diminution of our reserve supply of medical men will perhaps call attention to the question if we are making the best use of the abilities of the men we have already qualified Apart from the Scottish born student, who can if he thinks fit get his training at the expense of the Carnegie Trust, the cost of the curriculum to the English trained student may run to anything from £500 to £1000 After qualifying, if the student has a capital of £1000 to £1500 his course will be plain sailing But what are the restrictions on others who have not this reserve? They are brought up against restrictions of a commercial kind, for the most part framed to protect the business or trading interests of the established practitioner Hence the legal bond not to practise within ten miles of a place where a qualified practitioner may have been compelled from economic circumstances alone to accept a subsidiary position If the qualified practitioner sets up in practice on his own, so to speak, he is again met with the restrictions of the insurance doctors, whose panel patients cannot change their attendant more than once a year, and then only by a very troublesome clerical procedure So that unless the young qualified man can get together some £2500 and spend many years getting his capital back, he may very well think twice before taking up the occupation There is more in the question surely than our academicians can alter or control I am, Sir, yours faithfully,

Burnley Dec. 28th, 1914 JAMES I HALSTEAD

MAGNESIUM SULPHATE IN TETANUS

To the Editor of THE LANCET

SIR,—In connexion with the great prevalence of tetanus among the wounded soldiers in France and the inefficiency of tetanus antitoxin except as a prophylactic, allow me to call the attention of your readers to the great service of magnesium sulphate administered by hypodermoclysis in from 1 to 2 per cent solution, in quantities and at intervals depending upon the severity of symptoms—a pint to a quart even every three hours if necessary I inclose for your perusal a copy of the notes of two cases I reported some years ago[1]

The effect of this salt in solution, administered intraspinally as an anticonvulsant, is generally well known, but that the same result may be obtained with much greater ease and safety by employing dilute solutions in large amounts hypodermatically is, I think, not recognised and might, I am sure at this juncture prove of great service I venture to urge its trial extensively, especially where established measures have failed

I am, Sir, yours faithfully,

Brooklyn New York H GREELEY, M D

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[1] [illegible] 1907 vol. xlix, pp [illegible]

the foremost place, and the medical practitioner in charge of a patient will be right in permitting no steps to be taken which are dangerous to her life or detrimental to her condition of health

In cases of abortion where, after consultation with a specialist, it is decided that there is conclusive objective evidence of criminal interference, quite irrespective of any statements made by the patient, then there is no doubt that the duty rests with the medical practitioner to inform the legal authorities His duty to the public and to himself must, I think, in such cases override any obligation of secrecy arising out of the confidential relationship to which a doctor stands towards a patient

I am, Sir, yours faithfully,
W H. WILLCOX, M D , F R C.P

Welbeck-street W , Jan 5th, 1915

INSOMNIA AND SUICIDE

To the Editor of THE LANCET

SIR,—The paper by Mr C E Pronger under the above title in your issue of Dec 12th, 1914, has brought into prominence what some of us have been preaching for years, and it has seemed as if the preaching were in vain The medical profession allows that there is such a thing as eyestrain, and that the correction of errors of refraction may cure headaches, and there many appear to stop, and do not realise that if eyestrain can cause headaches, why not also numerous other forms of reflex irritation or waste of nerve energy—in fact, any "functional" nerve disorder? When some years ago Gould, of Philadelphia, published his "Biographic Clinics" and illustrated the enormous harm that uncorrected astigmatism could do and had done, he was laughed at and called a madman, and yet those who have followed in his footsteps look up to him as a pioneer in ophthalmology second only to the great Donders

If small errors of refraction may play such an important role it will be surely asked why the profession generally have not accepted the fact, and the answer is because a large majority of the oculists themselves have not done so They laugh at the man who corrects 0 12 D of astigmatism or 0 25 D of anisometropia, and almost infer that he is "next door" to a quack We are so conservative in the medical profession and forget that the only form of conservatism for us is to conserve what is good As soon as one of us opens a new door and lets in a new light it seems as if the whole profession did their best to close the door instead of helping to open it wider

The explanation of this attitude is not far to seek in the subject under discussion It is that the "older school" have failed to recognise the paramount importance of the use of cycloplegics in this particular work Very low errors of astigmatism or of anisometropia, such as 0 12 D , 0 25 D , 0 37 D , and possibly 0 5 D play the chief rôle in causing nervous disorder in a particular class of nerve patient These low errors, and only these low errors, can be corrected unconsciously by the patient, and are only fully revealed when a cycloplegic is used in all under 45 (and in some cases 50) years of age Homatropine generally suffices for the older patients, but atropine must be used for all up to the age of 25 or even 30 The masking of the defect enables the patient to have apparently normal vision, and he is totally unconscious of, and very often indignant at the mere suggestion of, defective vision This unconscious correction of small errors must always lead to waste of nerve energy, but in the robust it may never manifest itself, or the manifestation may be long delayed, but in those whose nervous organisation is of a more delicate character it very soon shows itself in some form of functional nerve disorder—insomnia, depression, suicide, drug taking, alcoholism, dyspepsia, &c

Having found the defect—and in doing this the ophthalmometer is a priceless servant—the logical treatment is the prescription of the correction for constant use, and herein we perform a double good, for not only do we remove the symptoms, but also the cause, for in the younger patients the removal of the eyestrain tends to the disappearance of the error I have heard it said that most of the cures are the result of "suggestion", it is possible that an occasional case does occur of such a class, but suppose suggestion were the cure in all, is that an argument against the treatment? Is not our one and only aim to cure the patient? It should be remembered that the cases referred to above only occur very sparsely in hospital work, they must be looked for in the upper classes, especially in the professional classes Some of the most typical cases I have seen have been members of our own profession Women at the climacteric are especially prone to this form of eyestrain, the oncoming presbyopia added to the static error increasing the trouble or starting it The opticians' art has rendered a lasting benefit by inventing the invisible bifocal glass, wherein the upper portion corrects the static error and the lower portion the same, plus the presbyopia

If the good that men do in this world is gauged by the benefits it confers on the race then the oculist who does his refraction work sensibly and carefully must have the consciousness of being a large benefactor —I am, Sir, yours faithfully,

Chandos-street, W , Jan 1st 1915 ERNEST CLARKE

To the Editor of THE LANCET

SIR,—If it be true, as suggested by Mr C Ernest Pronger in THE LANCET of Dec 12th, 1914, that errors of refraction play a part in the production of habitual insomnia, it only affords another proof of the fact that this distressing condition is often dependent upon trifling disturbances of physiological equilibrium Nothing, for instance, is more fatal to a good night's rest than going to bed with a loaded rectum, especially in presence of a tendency to flatulence, because this tends to excite peristalsis and wakefulness A glycerine suppository or injection under these conditions will exert distinctly hypnotic effects An empty stomach is also adverse to sleep and should be combated by a biscuit or a cup of warm milk on retiring, these being far more efficacious than the customary alcoholic nightcap Then, too, there is the question of having the head high or low, which is a matter of personal idiosyncrasy A cold bedroom is more conducive to sleep than one artificially heated, and free ventilation, provided no cold air impinge directly on the exposed surfaces, is favourable to deep, refreshing sleep The use of a feather bed or unduly thick, heavy bedclothes, by overheating the body, produces restlessness, and in elderly men is apt to cause bladder irritability, with consequent disturbance of rest Another frequent cause of troubled nights is the practice of taking a heavy meal late in the day with too short an interval between the meal and the hour for retiring to rest in evidence to impair their usefulness as railway servants and to reject them. I can recall no instance in which a man rejected for a nervous stammer was also found to be red green blind During the past three years I have carefully watched for such a combination There is a complete record of all cases examined in this office In one case only was a man rejected for defective colour sense who also had a nervous stammer He was normal by Holmgren's wools, but he named pale green white in the lantern Unfortunately at that time I had no knowledge of the value of either Stilling's or Nagel's test and therefore cannot state the real value of his colour defect From this evidence it is at least probable that a nervous stammer is much rarer in colour blind persons than in colour normal persons

I am, Sir, yours faithfully,

GEORGE HENRY TAYLOR,
Railway Medical Officer

Medical Officer's Office, New South Wales Government
Railways and Tramways, Sydney Nov 11th 1914

265

THE ABUSE OF TEA.

To the Editor of THE LANCET

SIR,—While conducting investigations into the dietary of the labouring classes I have been most forcibly impressed by the injurious effects of excessive tea drinking amongst them Tea is the invariable accompaniment of every meal, and as though this were not sufficient it is frequently drunk between meals The effects of this over indulgence, though noticeable on all sides, are particularly pronounced in the case of nursing and expectant mothers the general disturbance of nutrition, in addition to local digestive troubles, being accentuated in them I feel sure that the abuse of tea is one of the most potent causes of the inability of the women to suckle their babies, and is thus an indirect cause of a high infantile mortality In Birmingham during the hot weather 30 times more bottle fed babies die than those breast-fed, and among the survivors the bottle fed are at a great disadvantage as compared with the naturally fed babies In my work at Birmingham I have therefore sought to find a substitute for tea. It is of no use to counsel moderation and advance the virtue of plain water, the poor refuse to consider such a change Cocoa, however, has proved in practice an acceptable alternative to them and I am satisfied as to the good results which accrue to the mother and the *children* when cocoa is substituted for tea as the family beverage It seems to me that the present is a favourable time for urging a general reform in *this direction*—first, because the price of tea has increased beyond that of cocoa, and secondly, because the people are now more open to receive and *follow advice* with regard to their food I should be much obliged if you could give publicity to this matter, which, though it may appear trivial, is, I am *convinced*, of national importance I am, Sir, yours faithfully,

Birmingham Dec 29th 1914 A E CARVER, M D

TENDIMUS HUC OMNES

To the Editor of THE LANCET

SIR —We are all aware that 'to every man upon this earth death cometh soon or late, but the usual impression is that the man whose profession is fighting runs a greater ris[illegible] and when he enters on a campaign, that his chances of escaping from "[illegible] decay" are appreciably increased An American statistician has, however, stated that "ominous as are the soldier's dangers in war, they are really but little greater than are the civilian's dangers of dying before he has time to set aside the necessary nest egg for his dependents" By comparing the statistics of the four considerable wars of the last 50 years—namely, the American Civil War, the Franco German War, the South African War, and the Russo Japanese War of 1904–05—he finds that the average *mortality from all* causes, including the killed in battle and the deaths from wounds and disease, amounted to 90 1 per 1000 per annum in the Civil War it was yet higher, in the South African War it was *only* 40·2 The deaths from disease were practically double those from wounds in the Civil War (66 compared with 32 5) and in the South African War (26 compared with 14 3), the proportions were reversed in the Franco German War (28 8 and 67 7) and in the Japanese War (25 1 and 54 2) Mr E. B Phelps, editor of the *American Underwriter*, of New York, whose figures I am quoting, calculates that if the present war continues for a full year, the number of men engaged amounting to five, or possibly six, millions, it will cost more lives than all causes will demand among the entire adult male population of the United States But he then says that, as a matter of experience, the chances of even the youngest man of marriageable age living long enough to set aside the most modest competence for his family when he is gone are not much better than are the soldier's chances in time of war, instancing, as an example, that whereas out of 92,637 young men, aged 20, engaged in war 84,290 might be expected to be alive at the end of a year's fighting, out of the same number of men of that age engaged in ordinary occupations not more than 84,000 would survive to 32 years of age By a similar comparison he finds that the fighting soldier's chance is better than that of a civilian of 30 surviving to 41, of 40 surviving to 49, or of 50 to 56 These figures are rather startling, and would indicate that the soldier's dangers in war are really but little greater (and in some cases actually less) than are the civilian's chances of dying before he has time to set aside the necessary provision for those dependent on him The bearing of this observation lies in the application of it, which is, of course, that everyone should insure his life, and that the earlier he begins the better bargain he will make I am, Sir, yours faithfully,

Jan. 4th 1915 A M D

Medical News.

1638

UNIVERSITY OF LONDON —At the First Examination for Medical Degrees held recently the following candidates were successful —

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VACCINES AND THE GERMAN RAID A USEFUL ANALOGY

To the Editor of The Lancet

Sir,—Dr F C Eve's letter in The Lancet of Jan 2nd shows in *picturesque* language the closeness of the analogy between *the effect of a* vaccine on the resisting power of a patient and the effect of a raid *on the* resisting power *of this* country I suppose that all *of us* who have been busy inoculating soldiers and nurses against typhoid since the war *began* have been making daily use of this illustration When the patient asks what *is the vaccine* expected to do, *one can invite him* to consider the effect of a German raid on our east *coast in times of* peace, drawing a picture of the bustle at the War Office, the activity of the local authorities, *the movement of troops by* road and rail, and above all the prompt enlistment of recruits So far we are agreed *that the illustration is a* very useful one, it is when it is stretched to provide arguments against inoculating in a general infection that I think it ceases to fit the facts In a systemic infection the body is *not* necessarily "swamped with *toxins*," *but*, at any rate in the commencement, is semi poisoned with toxins or bacterial substances scattered throughout it The parallel is the case of England permeated with spies and potential enemies, *citizens of a* foreign power Dr Eve assumes that in such a condition of systemic infection all the defences are thoroughly aroused We know that this is not true in the case of England, I believe that it is not necessarily true in the case of the body Both are lethargic, neither *may* have mobilised their full resources though the danger is urgent The reason in both cases is, I think, that the danger though urgent is diffuse Nowhere is it concentrated, nowhere is it sufficient to stimulate the locality into resistance In such a case the east coast raid (or an inoculation) would *provoke* a powerful local stimulus, and this may break down the lethargy and help to stimulate defence against the hidden danger within The more the country is permeated with *enemies, or* the more the body is permeated with bacterial substances, the greater is *the difficulty* or danger of stimulating a local production of protective powers, yet such protective powers must be produced or the body will die

Of course, in the extreme case supposed by Dr Eve, all the country being "swamped with toxin" (i e, a million or more *German soldiers* being in full possession of the country), the human body, or the body *politic*, would be moribund, and any inoculation would be far too late These analogies can only serve to illustrate one's point of view, they can never provide arguments for that point of view

I am, Sir, yours faithfully

J Freeman

Devonshire-place W, Jan 4th 1915

WHAT IS STRUMA?

To the Editor of The Lancet

Sir,—Virchow once described "struma" as an "abnormal vulnerability of the tissues," a definition, be it observed, which does not imply any connexion with tuberculosis Accepting, then, for argument's sake this definition as correct, the logical inference is that strumous looking persons are merely those whose tissues *form* an admirable cultivation medium for many pathogenic organisms, but most of all for the tubercle bacillus The latter, being the most ubiquitous, has possibly the best opportunity for infecting the favourable soil, and thus *it may be* that strumous looking persons actually become the *subjects of* tuberculosis for the reason that their tissues happen to offer the least resistance to the cultivation attempts of this particular bacillus. Meanwhile, the strumous looking person is one whose "abnormal vulnerability" *depends* upon hypothyroidism, the signs of which cease under thyroid treatment

I am, Sir, yours faithfully,

Percy Dunn

Wimpole street, W, Jan 4th, 1914

TWO UNLOOKED FOR EFFECTS OF DRUG EXCRETION

To the Editor of The Lancet

Sir,—The two following cases came to my notice while acting as medical officer of a submarine cable company Before describing them I must say a word about the structure of a cable In the middle is a core of copper wire surrounded by a layer of guttapercha insulation This in turn is surrounded by a layer of brass tape spirally wound, and outside of this a layer of hemp and one of galvanised steel wires, the whole being surrounded by an outermost coat of guttapercha composition Now in repairing a "fault" it is necessary to cut out the fault and joint a new piece in The jointing is done by special men and is a business requiring considerable skill and practice The most important parts of the job are the soldering of the copper core and the efficient application of the insulating guttapercha The jointers put this on hot *and a little at a* time, *forming* layer upon layer, and as each layer is rubbed on they make use of their saliva to rub it smooth and to make it fix in with or adhere to the one before

I can tell now of my two cases One was a jointer who was under treatment for syphilis and was saturated with mercury, and the other was suffering from gonorrhœa and had treated himself lavishly with "santal midi" capsules In both cases the joints made by these men broke down—a somewhat serious matter when you come to consider the cost of submarine cable repairing The reason I can only speculate on, doubtless some of your readers can explain it better than I can My theory is this *that in the* mercurial case there was sufficient mercury excreted in the saliva to make the insulation a partial conductor, in the other case, that the oil in the saliva kept the layers of gutta percha from binding together, for when the joints made by this man were reopened the insulation could be peeled off in thin flakes Both cases are, I think, sufficiently interesting to merit a *record*—I am, Sir, yours faithfully,

E C Hardwicke, M R C S Eng,
L R C P Lond

Nov 11th 1914

COLOUR SENSE IN RELATION TO NERVOUS STAMMER

To the Editor of The Lancet

Sir,—During the past seven years 60,000 candidates for employment in the railway service of this State have been examined in this office, the examination in each case including a test for colour sense by Holmgren's wools and the Williams lantern, and during the past five years by the modified Williams lantern Of these candidates 0 18 per cent had a nervous stammer sufficiently n evidence to impair their usefulness as railway servants and to reject them I can recall no instance in which a man rejected for a nervous stammer was also found to be red green blind During the past three years I have carefully watched for such a combination There is a complete record of all cases examined in this office In one case only was a man rejected for defective colour sense who also had a nervous stammer He was normal by Holmgren's wools, but he named pale green white in the lantern. Unfortunately at that time I had no knowledge of the value of either Stilling's or Nagel's test and therefore cannot state the real value of his colour defect From this evidence it is at least probable that a nervous stammer is much rarer in colour blind persons than in colour normal persons

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SIR,—While conducting investigations into the dietary of the labouring classes I have been most forcibly impressed by the injurious effects of excessive tea drinking amongst them Tea is the invariable accompaniment of every meal, and as though this were not sufficient it is frequently drunk between meals The effects of this over indulgence, though noticeable on all sides, are particularly pronounced in the case of nursing and expectant mothers the general disturbance of nutrition, in addition to local digestive troubles, being accentuated in them. I feel sure that the abuse of tea is one of the most potent causes of the inability of the women to suckle their babies, and is thus an indirect cause of a high infantile mortality In Birmingham during the hot weather 30 times more bottle fed babies die than those breast fed, and among the survivors the bottle fed are at a great disadvantage as compared with the naturally fed babies In my work at Birmingham I have therefore sought to find a substitute for tea. It is of no use to counsel moderation and advance the virtue of plain water, the poor refuse to consider such a change Cocoa, however, has proved in practice an acceptable alternative to them, and I am satisfied as to the *good results* which accrue to the mother and the children when cocoa is substituted for tea as the family beverage It seems to me that the present is a favourable time for urging a general reform in this direction—first, because the price of tea has increased beyond that of cocoa, and secondly, because the people are now more open to receive and follow advice with regard to their food I should be much obliged if you could give publicity to this matter, which, though it may appear trivial, is, I am convinced, of national importance I am, Sir, yours faithfully,

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J FREEMAN

Devonshire-place W, Jan. 4th 1915

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TWO UNLOOKED FOR EFFECTS OF DRUG EXCRETION

To the Editor of THE LANCET

SIR,—The two following cases came to my notice while acting as medical officer of a submarine cable company Before describing them I must say a word about the structure of a cable In the middle is a core of copper wire surrounded by a layer of guttapercha insulation. This in turn is surrounded by a layer of brass tape spirally wound, and outside of this a layer of hemp and one of galvanised steel wires, the whole being surrounded by an outermost coat of guttapercha composition Now in repairing a "fault" it is necessary to cut out the fault and joint a new piece in The jointing is done by special men and is a business requiring considerable skill and practice The most important parts of the job are the soldering of the copper core and the efficient application of the insulating guttapercha The jointers put this on hot and a little at a time, forming layer upon layer, and as each layer is rubbed on they make use of their saliva to rub it smooth and to make it fix in with or adhere to the one before

I can tell now of my two cases One was a jointer who was under treatment for syphilis and was saturated with mercury, and the other was suffering from gonorrhœa and had treated himself lavishly with "santal midi" capsules In both cases the joints made by these men broke down—a somewhat serious matter when you come to consider the *cost of submarine* cable repairing The reason I can only speculate on, doubtless some of your readers can explain it better than I can My theory is this *that* in *the* mercurial case there was sufficient mercury excreted in the saliva to make the insulation a partial conductor, in the other case, that the oil in the saliva kept the layers of gutta percha from binding together, for when the joints made by this man were reopened the insulation could be peeled off in thin flakes Both cases are, I think, sufficiently interesting to merit a record —I am, Sir, yours faithfully,

E C HARDWICKE, M R C S Eng,
L R C P Lond

Nov 11th 1914

COLOUR SENSE IN RELATION TO NERVOUS STAMMER

To the Editor of THE LANCET

SIR,—During the past seven years 60,000 candidates for employment in the railway service of this State have been examined in this office, the examination in each case including a test for colour sense by Holmgren's wools and the Williams lantern, and during the past five years by the modified Williams lantern Of these candidates 0·18 per cent had a nervous stammer sufficiently

Obituary.

THOMAS BRYANT, F R C S ENG, HON M CH R U I, HON M D DUB, HON F.R C S IREL,

CONSULTING SURGEON TO GUY'S HOSPITAL LATE SURGEON IN ORDINARY TO THE KING

THE death of Mr Thomas Bryant, which took place on Dec 30th at his residence, 21 FitzGeorge avenue, Kensington, deprives the profession of a prominent figure in Victorian surgery

Thomas Bryant, who was the eldest son of the late Mr Thomas Egerton Bryant, M R C S, an intimate friend of Sir Astley Cooper, was born in Kennington on May 26th, 1828, and had therefore reached the age of 86 at the time of his death He received his education at King's College School, and in 1846 entered Guy's Hospital as a student, remaining connected with it for the whole of his professional life and being one of its consulting surgeons at the time of his death He qualified as M R C S in 1849 He took the Fellowship of the Royal College of Surgeons by examination on May 12th, 1853, with Mr Richard Barwell, and was therefore one of the two oldest surviving Fellows of the College In 1857 Thomas Bryant was appointed assistant surgeon to Guy's Hospital and in 1859 lecturer on operative surgery On the full staff of the hospital at that time were Gull, Hilton, and Cock, while Wilks was the junior assistant physician, corresponding to Bryant on the surgical side He became full surgeon in 1871 and lecturer on surgery in 1875 He relinquished these posts in 1888 and became consulting surgeon, continuing, however, to give lectures on clinical surgery for a while During his active connexion with Guy's Hospital he was simultaneously carrying on a very large private practice as an operating and consulting surgeon—indeed, during what may be called the immediate pre Listerian period he was one of the leading surgeons in the metropolis, and fully deserved the position

Thomas Bryant

Mr Bryant's connexion with the Royal College of Surgeons of England was an exceedingly long one He became a member of the Council in 1880, at the same time as Lister, whom he just beat in the voting While on the Council he filled with efficiency every available appointment He was a member of the Court of Examiners from 1882 to 1892, as well as a representative of that court on the Board of Examiners in Dental Surgery in 1887 In 1888 he was Hunterian professor of surgery and in 1889 Bradshaw lecturer of the College In 1890 he was elected President, and in 1891 he became the representative of the College on the General Medical Council In 1893 he was Hunterian orator He was President of the College for three years, but in this position made no particular mark, for his business aptitude was not great His handsome presence, urbanity, and real kindness of heart were his chief assets in public life Bryant was for many years—namely, from 1891 to 1904—the representative of the Royal College of Surgeons of England on the General Medical Council, and for part of this time he acted as honorary treasurer He was a pleasant colleague on the Council, and had a very high standard of professional ethics, but he was treasurer at a difficult period in the finances of the Council, and his designs for meeting the position did not escape criticism He also occupied the presidential chair of various professional societies, the Medical Society of London in 1872 the Hunterian Society in 1873, the Clinical Society in 1885, and the Royal Medical and Chirurgical Society in 1898–99

St Geo Joseph M Huggett S W Polytechnic Institute and St. Thomas s Hospital Herbert Vivian Jackson University of Bristol Jerusha Jacob Jhirad Grant Medical College, Bombay and private study David Lavington Glyde Joseph Charterhouse and Guy s Hospital John Wilfred Joule St Paul's School Ernest Francis Kerby, Guy s Hospital Maurice Edmund King University College Maurice Laurent, University Tutorial College (distinction in inorganic chemistry) Teresa Jadwiga Lesser London (Royal Free Hospital) School of Medicine for Women Glyndwr Morison Lewis University College Douglas McClean Berkhamsted School and St. Thomas's Hospital Murdo Mackenzie Guy's Hospital Arthur George Abraham Miller B Sc Middlesex Hospital, John Clifford Rowland Morgan University College Cardiff and private study Robert Gordon Morrison Epsom College and St Thomas s Hospital William Drew Nicol St. Bartholomew's Hospital Robert Hughes Parry, Middlesex Hospital Percival George Quinton University College Arthur Hywel Richards Epsom College Esther Rickards Birkbeck College, Jessie Craig Ritchie London (Royal Free Hospital) School of Medicine for Women Frank Paul Schofield St. Bartholomew's Hospital and private study (distinction in physics) Marguerite Garnett Sheldon University of Liverpool and private tuition Satyavan Singh University College Victor Alexander Trevor Spong Dulwich College and St Bartholomew's Hospital Horace Rees John Thomas and John Phillip Traylen London Hospital, and Reginald Frank White University of Bristol

N B —This list, published for the convenience of candidates is issued subject to its approval by the Senate

Royal Medical Benevolent Fund —At the last meeting of the committee 29 cases were considered and grants amounting to £237 were voted to 25 of the applicants The following is a summary of the cases relieved —

Widow aged 74 of M.R C S Eng who practised at Braintree Husband died 23 years ago and left her without means She has managed to support herself but unable to save until incapacitated by old age Lives with married son who has three children and only a small salary Voted £2 and referred to the Guild.—M.R.C S Eng and L.R C P Lond, aged 48 who practised in Lancashire Has become blind Married two children Wife and children live with relatives Wants a little help to obtain some training in massage Voted £10 and referred to the Guild —Widow aged 66 of L.S A. Lond who practised at Bournemouth At her husband s death in 1913 was left without any income and unable to obtain suitable employment. Only income 10s per week from the Society of Apothecaries Voted £12 in six instalments and referred to the Guild — Daughter aged 45 of M D Edin who practised at Southampton. Trained as a midwife but recently had to undergo a serious operation and has been ten weeks in bed Voted £10 in two instalments and referred to the Guild —Daughter aged 40 of M D St. And who practised at Swinton Lancs Was a teacher but underwent a severe operation in September 1913, and has not been able to work since. Mother has only a small annuity and has to keep an invalid son Voted £18 in 12 instalments —Daughter aged 68 of M.R C S Eng who practised in London Has been a teacher for 40 years in England Russia and Germany On account of the war had to return from Moscow four months ago where she had been in one post for seven years All her savings were in the Deutsche Bank, Berlin and could not obtain any Voted £12 in 12 instalments and referred to Guild —Widow aged 66 of M.R.C S Eng who practised at Heywood Lancs Has endeavoured to earn a living by acting as housekeeper and cook but owing to age and the war finds it impossible at present to obtain a suitable post Voted £2 and referred to the Guild.—Daughter aged 74 of M R C S Eng who practised in London Up to quite recently has acted as a church visitor at £35 per annum but owing to age has had to give it up Has a small pension from the Mercers Company Voted £12 in 12 instalments —Daughter aged 47, of M D St And who is too old to practise and too poor to help Earned her living as a teacher until three months ago when owing to internal trouble had to enter a nursing home and now all her savings are gone Voted £5 and arrangements to be made to have the applicant operated upon.—Widow, aged 40 of M R.C S Eng and L R C P Lond who practised at Norwood Husband died quite suddenly from typhoid leaving the applicant and three young children in straitened circumstances Voted £5 —Daughter aged 50 of M R C S Eng who practised at St Clears Has double curvature of the spine Lives with mother who is a pensioner of the Fund and two delicate brothers who *cannot afford to* keep her Relieved once £6 Voted £6 in 12 instalments.—Widow aged 41 of M R C S Eng who practised in N Wales Has two young children. Endeavours to earn a living by selling clothes on commission but owing to the war the sales have greatly diminished Relieved three times £30 Voted £10 in two instalments —Widow aged 60 of L.R C P & S Edin who practised in London Present distress caused by death of only son who supported her Earns a little by needlework. One daughter allows her 5s per week otherwise no other support Relieved twice £20 Voted £10 in two instalments —Daughter aged 56 of L.R C P Lond who practised at Hammersmith Unable to work through ill health Only income a little from the Guild and occasional gifts of food and clothing Relieved seven times £36. Voted £18 in 12 instalments.—Widow aged 69 of M R C S Eng who practised in Ireland and America. Suffers from muscular rheumatism One son who has not been heard of for a long time No income and unable to work Relieved five times £50 Voted £12 in 12 instalments —Daughter aged 68 of M D Edin who practised at Cheltenham Eyesight very bad and ill health prevents her doing any work Only income £13 10s per annum and a little from friends Relieved once £12. Voted £12 in 12 instalments —Widow aged 63 of M R C S Eng who practised at Yelverton Takes paying guests but owing to the bad season is in difficulties. Relieved five times £52. Voted £12 in 12 instalments —Daughter aged 58 of L.R C P Lond and L.S A. Lond who practised at Brierley Hill Health very bad and unable to do any permanent work Income a R.U K B Assoc. pension of £21 per annum and from frie[illegible] month Relieved seven times £41 Voted £12 in 12 instalments — Daughter, aged 52, of M R.C S Eng who practised in London Has had several internal operations and obliged to mortgage her small capital to pay for same Lives with married sister who gives her a home but unable to keep her Relieved five times £54 Voted £10 in two instalments —Daughter aged 63 years of M R C S Eng. who practised at Northampton Health very indifferent Has a small annuity but not sufficient to live on Relieved once, £5. Voted £5 — Daughter aged 47 of M R C S Eng who practised in India. Is bedridden and quite helpless Only income an annuity from the British Home for Incurables Relieved three times £36. Voted £12 in 12 instalments —Widow aged 43 of M D Irel who practised at Newcastle-on Tyne Health indifferent, but endeavours to make a little by taking lodgers Allowed £25 per annum for education of only child Relieved four times £30 Voted £. — Daughter aged 48 of M R C S Eng who practised at Gillingham. Has very indifferent health and unable to find suitable employment Recently has been selling papers in the streets at a remuneration only sufficient to pay the rent of a room Relieved once £5 Voted £12 in 12 instalments and referred to the Guild —Widow aged 56, o L.S A. Lond who practised at Limehouse Endeavours to make a living by letting rooms but not very successfully Two daughters who are in service can only allow her 5s per month Health bad. Relieved nine times £46 Voted £12 in 12 instalments —Daughter aged 66, of M R C S Eng who practised at Great Torrington Has acted as housekeeper and general help, but at present out of employment *as her age is against her* Relieved *once* £12. Voted £1 and referred to the Guild for report

In addition to the above the committee appointed from the grantees six annuitants at £20 each This brings the total of annuitants up to 142 Contributions may be sent to the honorary treasurer Dr S West 11, Chandos street Cavendish square, London W

Royal College of Surgeons in Ireland —At a meeting of the College held last week Professor Edward H Taylor was unanimously elected to the place on the council vacant by the death of Mr F T P Newell.

Anthrax and its Notification —An adjourned inquiry was concluded on Jan 4th by Dr F J Waldo, at the Southwark coroner s court into the death of a butcher s manager named Tarrant, aged 46, who died in Guy's Hospital from anthrax. It was stated that Tarrant's employer purchased his meat from a firm whose head slaughterman died from anthrax at Croydon, and about the same time the deceased complained of a pustule on his neck which was diagnosed as anthrax A clerk of the same wholesale firm and a son of Tarrant s employer were also suffering from the same disease, but were recovering and another man had since contracted the disease and a horse had died from it Dr T M Legge, H M Inspector of Factories and Workshops, in the course of his evidence, stated that anthrax was a notifiable disease when occurring in a factory, but a butcher s premises were not technically a factory He had never heard of anthrax being communicated by frozen rabbits The coroner read a letter from the High Commissioner for New Zealand informing him that there had not been a case of anthrax in that country for years, and that frozen rabbits had never been known to carry the infection Dr Legge further stated that in some districts registrars of deaths reported deaths from anthrax to the chief factory inspector, which was very useful and in his opinion the disease should be compulsorily notifiable to coroners in fatal cases Evidence on behalf of the wholesale firm showed that great care was taken in the purchase of cattle, and that since the present cases their premises had been thoroughly disinfected Dr R V Clarke, medical officer of health of Croydon, said that every possible assistance had been given him by this firm, who had supplied a complete list of all animals they had dealt with and their sources He agreed that it would be very useful if all deaths from anthrax were reported to the coroner He had never seen anthrax in frozen meat The city coroner in the course of his summing up, said that he had always advocated the addition of anthrax to the list of infectious diseases compulsorily notifiable to the medical officer of health The Guy s Hospital authorities always notified fatal cases of anthrax to him. It seemed strange that whereas all cases of anthrax in the human subject were not compulsorily notifiable, all cases in the lower animals were compulsorily notifiable under the stringent regulations of the Contagious Diseases (Animals) Act The jury returned a verdict of "Death from anthrax" but added that there was not sufficient evidence to show how it was contracted, the verdict amounting thus to one of "Death from misadventure" In a rider they suggested that all doctors attending such cases should be compelled to notify to the medical officer of health and that all deaths should be compulsorily reported to the coroner This recommendation will be forwarded by the coroner to the Local Government Board and other authorities practically certain to ensue, yet he never shirked responsibility, though I know with what extreme anxiety he always approached these cases and how keenly he felt failure when it occurred

Bryant's position in regard to Listerism was peculiar, he never could bring himself to adopt it, and he was one of the two leading surgeons who spoke for the 'opposition' at the conclave held—early, I think, in the 'seventies'—at St Thomas's Hospital to consider the merits of this method as then evolved He spoke against it in an unqualified manner, but to this, I think, he was prompted by the success undoubtedly enjoyed by the general methods of cleanliness that he had so long practised and to which he thought little could be added by way of improvement And at that time it must be remembered that carbolic acid was rather a two edged tool to play with, for it was far from pure, causing intense irritation, not only to the operator, but to the patient, and that to a degree unsuspected by those who now have only to deal with the absolutely pure chemical He necessarily also never made use of the 'spray,' though he could not in the nature of things withhold from being gradually influenced by what was developing around him, so the various antiseptic Listerian dressings were by degrees adopted, at least in his hospital practice Having never adopted the antiseptic methods in their entirety, his immediate results were presently not so favourable as those of his colleagues, such as Howse or Davies Colley, who were antiseptic to their finger ends Later on he almost entirely dropped carbolic acid, employing peroxide of hydrogen and iodine water (i e, water with a little tinct iodi added) both in his operations and for the cleansing of foul cavities This is the more interesting to note now, since these two drugs have sprung into notoriety, but my own experience of them in Bryant's practice, which I not only witnessed but which at times I was asked to take charge of, failed to inspire me with confidence in their efficacy, whatever value an immediate compress of tinct iodi on a recent wound may have, for in this way I never knew him to employ the drug

As an ovariotomist, too, Bryant had a great reputation, and he undoubtedly scored many a success in his earlier operations by a scrupulous attention to general details and to cleanliness, as well as to his habit of refraining from all meddlesome handling of organs His success here was markedly increased when he began to employ the extra abdominal method of treating the pedicle by clamping—a practice that, I believe, he was the first to employ in Guy's Hospital, and which was followed for many years There can be no doubt that his scope of work was largely limited in his later years by his never having fully adopted antiseptic methods—for aseptic methods do not apply to his time—and from conversations I have had with him I am convinced he was far too conscientious a man to undertake some of the more modern operations, from a feeling that he was handicapped by not being able to give his patient the full benefit of recent scientific knowledge If Bryant prided himself more on one thing than another it was in being a conservative surgeon and he constantly instilled into his pupils the doctrine that it was wrong, if not immoral, to remove an atom more of the human body than the actual disease warranted Doubtless this, broadly speaking was a good principle to inculcate, but carried too far, as it sometimes was especially in amputations, it led in his practice to some awkward and inconvenient results His teaching, however, in regard to the relationship between surgeon and patient had always an under current of high ideal and straightforwardness Bryant always thought more of his patient than of himself, and I never knew him to be influenced by the desire to improve his statistics—much as he liked these figures—to the extent of either unnecessarily operating or in any way adding to his patient's risk or discomfort

A handsome man, of commanding presence, with a personality that impressed itself on others, genial, kindly, and always ready to lend an ear to any that sought his advice, Bryant was the friend of all who knew him, whether student, colleague, or patient The student felt that in him he had a friend to whom he could go for advice at all times, and never fail to get his sympathy and help To his dressers' mistakes he was lenient, and whilst he never overlooked anything nor hesitated to correct, he at the same time explained and instructed so as to avoid a repetition of a similar mischance As a colleague he was valued by all, and though "once upon a time" there arose a serious difference between himself and a colleague that even threatened the peace of the hospital, he met his quondam friend in the open court of the operating theatre at the instance of their other colleagues, and both men publicly shook hands and thus closed the incident for ever Beyond this nothing ever happened to disturb the harmony with which Bryant performed his public duties at Guy's Hospital, and those who knew him personally will always cherish the memory of him as of a true friend, a courteous gentleman, and if not exactly a pioneer, at any rate a splendid example of the British surgeon

Dr Frederick Taylor writes —"It would be presumptuous in me to say much about Mr Bryant's special qualifications as a surgeon, but I may be allowed to give my impressions of him as a teacher in the school of Guy's Hospital and as a colleague on the medical staff In the middle 'sixties' the surgical teachers most followed by the students at Guy's Hospital were among the surgeons Mr John Hilton, and among the assistant surgeons Mr Thomas Bryant Mr Bryant was then approaching 40 years of age, was tall, upright, handsome, with an easy confident carriage, a cheerful look, and a clear pleasant voice—altogether a very taking personality, with every appearance of knowing exactly what he was about, and without anything that could be fairly regarded as undue self satisfaction He attracted the student by his friendly manner of dealing with his dressers and clerks, and I may also say with his hospital patients Happily these surface markings, so to say, were not belied by anything that he gave us as a surgeon and teacher of surgery In the latter capacity he was highly successful Whether in the out patient room, at the bedside, or in the lecture theatre he always had a large class, and with his clear, incisive speech and the clever arrangement of his facts and arguments he kept the attention of his audience to the last moment of the allotted time At the bedside and in the out patient room he interested himself in the progress of every student even the most junior, and developed to the full the excellent system of teaching by question and answer

As a surgeon he was keen and courageous to a degree He was one of the early successful operators for ovariotomy, and he had the courage to remove

In 1872 he published the first edition of his "Practice of Surgery," which reached a fourth edition in 1884. The book attracted immediate attention from its original features. The illustrations were for the most part original, instead of the old stock illustrations which had for years been reproduced *ad nauseam*; secondly, Bryant introduced the principle of colouring arteries and veins respectively red and blue, and thirdly, he quoted his references to previous authors in place of paraphrasing them with or even without acknowledgment, as was then too commonly the practice. The book was at once recognised as essentially the fruit of experience by a well-practised surgeon, but it was not written upon any plan which enabled it to be kept in the front by new editions as a standard work. It dated from the pre-Listerian era, was an admirable manual, and sold largely, but could not be modernised as surgery progressed. He also published works on "Diseases of the Breast" (1887) on the "Surgical Diseases of Children" (1893), and on "Villous Growths and Common Diseases of the Rectum" (1899), and was a frequent contributor to THE LANCET.

Among the honours that fell to him, he was Sergeant Surgeon to the late Queen Victoria and Surgeon in Ordinary to King Edward VII. Academically he was honoured in 1887 by the Royal University in Ireland with its honorary M.Ch. degree, and in 1892 the University of Dublin gave him its honorary M.D., while the Royal College of Surgeons in Ireland conferred on him its honorary Fellowship.

At the time of his death Mr. Bryant had for some years retired from practice, and it is an open secret that his connexion with certain disastrous financial undertakings left him in very modest circumstances.

Mr. C. H. Golding Bird writes:—"With the death of Thomas Bryant, a representative surgeon and teacher of his day, a link between past and present surgical practice and a man of noble presence has passed away. It was in the late 'sixties' that I first knew him, when he was assistant surgeon to Guy's Hospital, and to his careful, thorough, and lucid teaching many, like myself, owe the foundation of their surgical knowledge. His out-patient day was always crowded, and that not only by students but often by practitioners, whilst his firm yet kindly manner and his sympathetic treatment of the poor attracted the patients themselves, and his name was a household word amongst the dwellers in South London. Always optimistic, contact with him helped the young student along the difficult paths of surgical practice, and even where his hopeful prognostications were seen not to be fulfilled his pupils seemed instinctively to feel that it was no fault of his; for if it—whatever it was—had been possible to any, Bryant was the man to have done it; if he failed, no one else could have achieved it. He was the man to trust. Method, precision, and clear expression in teaching were the keynotes of his success; he would come, always very punctually, to the hospital armed with several note-books, and almost every patient was therein entered with the diagnosis and remarks on the case; and it was from these books he largely drew the statistics for which he had a great liking, but on which I certainly cannot but think an exaggerated value was often placed and from which deductions not always safe were drawn.

The year after his appointment as full surgeon to the hospital his text-book of surgery appeared and was at once welcomed as the best and most up-to-date work for the student. Written rather from the author's clinical experience than from reference to that of others, the book possessed an individuality of its own, and inspired a confidence in what it taught.

A general hospital surgeon in the full sense of the word, Bryant had little sympathy with specialists and specialisms; but in his palmy days research had not differentiated the various departments of surgery as it has done in later years. He, however, was considered by some as a specialist in at least two subjects—viz., the surgery of the breast and the abdomen, particularly in colotomy and ovariotomy. In breast surgery he had been preceded by John Birkett, whose practice, which I knew well, undoubtedly influenced his successor, and though both surgeons only operated in the limited way of their period, the immediate results obtained by Bryant were clinically very remarkable. Strict cleanliness, though only that of soap and water and clean towels, together with rapidity in operating and the important recognition of the harm resulting from the retention of blood and serum in the wound, were his main elements of success. His dressing of a breast case, after the suturing of the wound, consisted in the application for some minutes of firm pressure to express all fluid, and then of a towel, folded as it came from the laundry, over each flap—with generally Friar's balsam on the wound itself—followed by very firm bandaging to prevent the possibility of any re-accumulation of blood. I can vouch for it that Bryant had rarely any complication follow which was directly due to the operation or to the immediate after-treatment, and primary union was not infrequently secured. With the same methods the same success followed his amputations of the breast—a common enough operation at that time. Bryant was most anxious to avoid the use of buried ligatures, which for some time consisted only of silk dipped in boiling wax and carbolic acid, so when torsion was found feasible he became its pioneer at his hospital, and the forceps for the purpose used for many years, and which preceded Spencer Wells forceps, were, I believe, of his own pattern—at any rate, they always bore his name. He was keen to try anything new, and before either adopting it or abandoning it gave it an exhaustive—and to his dressers instructive—trial. Hence, amongst other reasons, the great demand for a dressership in his wards. Bryant was a bold though careful and neat operator. He used his knife without hesitancy, and anything but a clean cut was abhorrent to him. The medical operations, if I may so style them, were few in his day, but he never hesitated to act at the request of his medical colleagues, even if there were no precedent for it, if he honestly thought there was a reasonable chance of success, and he has told me that he was the first to explore a 'perityphlitic' swelling and found the 'date stone,' though he never suspected, as no one then did, any connexion with the appendix. As a colotomist he had a wide reputation, and I know, since I often assisted him in private, that many cases from abroad sought his aid. A summons once took him to Constantinople to one of these cases, an occurrence of which he was justly proud. These were, of course, the days of the lumbar operation, when if the peritoneum were by chance injured a fatal peritonitis was

THE WAR

THE CASUALTY LIST

When H.M S *Formidable* was sunk in the English Channel in the early hours of New Year's Day her three medical officers were on board, and the Admiralty assumes that they have lost their lives. Their names are Fleet Surgeon Godfrey Taylor, R N , Surgeon William Mearns, R N , and Surgeon Septimus Hibbert, R N V R

THE AMBULANCE CONSTRUCTION COMMISSION

This is the first great war in which field motor ambulances have been extensively used It was inevitable that many defects should be found in existing types, and in various quarters experts began to ask whether something could not be done to standardise the patterns and to improve the type At the instance of Mr Henry S Wellcome, founder of the Wellcome Bureau of Scientific Research, a commission has been formed, and the names of members show that the matter is regarded as of high importance by those most intimately connected with the welfare of the wounded soldier

Sir Frederick Treves will act as chairman The Admiralty is represented by the Director General of the Medical Department, R N Surgeon General Sir Arthur May, while the Quartermaster General to the Forces, Major General Sir John Cowans, and the Acting Director General, Army Medical Service, Surgeon General Sir Alfred Keogh, represent the War Office The British Red Cross Society is represented by Sir Frederick Treves, and the St John Ambulance Association by Sir Claude Macdonald and Sir John Furley The remaining members are Lord Montagu of Beaulieu, Professor W E Dalby, F R S Mr John Robertson, and Dr Andrew Balfour (honorary secretary and treasurer) This commission will act as a judging committee for the award of prizes of the value of £2000 provided by the Wellcome Bureau of Scientific Research These prizes are offered for the best designs of an ambulance body which shall fit a standard pattern motor chassis for field motor ambulances The last day for the receipt of competing designs is June 30th, 1915 It is hoped that the competition will bring in a number of ingenious designs from which the ideal field ambulance body will be evolved

The reason why the competition is restricted to designs for a body and not for the complete ambulance, including a chassis, is that a chassis takes much longer to build than a body, and that, when war breaks out, it is impossible to get at short notice anything like a sufficient number of any one type of chassis On the other hand, a standardised body to fit any chassis of approved dimensions can be constructed in numbers at comparatively short notice Moreover, a perfected body is badly wanted to ensure complete comfort for the wounded

It is hoped that the information obtained by the competition, and in other ways, will be published in some permanent form, available for future reference Probably, in addition to one design of special excellence, there will be submitted various ingenious suggestions which may be incorporated in the pattern design approved by the commission For these a portion of the prize money has been set apart The first prize is of £1000 the second of £500, and the third of £300 All details of conditions may be obtained from the secretary, the Ambulance Construction Commission, 10, Henrietta street, Cavendish square, London, W The competition is open to citizens of all nations, and designs may be submitted up to June 30th, 1915

FRENCH STATISTICS OF THE WOUNDED

The French Army Medical Service recently published figures showing the percentages of French soldiers wounded in the present war who are, or are likely to be, fit to return to active service The approximate percentages up to Dec 1st last were given as follows —

	Per cent
Wounded but now returned to the front	54 50
Wounded and on convalescent leave	24 50
Wounded and under treatment in hospital	17 40
Discharged as unfit for further service	1 46
Died from wounds	3 40

It will be noted that these add up to more than 100 A former member of the Cabinet has written to us suggesting that corresponding figures, showing the mortality from wounds and the percentages of complete and partial recoveries in the British Expeditionary Force, would be of profound interest to medical men and military students We hope the Army Medical Department may be willing to furnish such returns

THE BRITISH RED CROSS SOCIETY —In its summary of work accomplished during the week ending Jan 2nd the British Red Cross Society states that the number of auxiliary home hospitals accepted by the War Office to date was 662, containing 18,418 beds, including 1124 accepted during the past fortnight The following additional ambulance cars were despatched 8 ambulances, 1 touring car, 1 soup kitchen, and 1 motor cycle to Dunkirk , 2 ambulances and 1 touring car to Boulogne , 1 ambulance to Southampton , and 4 ambulances to Bishop s Stortford Five medical men have been engaged for service in Serbia and two for Montenegro, and are ready to leave when required During the past fortnight the Red Cross hospital at Netley has been very full, and a number of entertainments were held at Christmastide The contractors have begun work upon the "Irish Hospital " Between Dec. 29th and Jan 2nd 712 cases from the stores department were supplied to 98 hospitals—67 English hospitals and 31 foreign hospitals—and a large number of garments were received and distributed A list is received daily by the society from Boulogne containing the names of officers reported missing, and reports from brother officers or soldiers stating what they know about these When the reports are considered reliable they are forwarded to the relatives, and copies are also sent to the War Office Every wounded man journeying to England is handed a postcard on the boat, whereon he gives the name of the hospital to which he is going, and this enables his relations to find him at the earliest opportunity A great number of daily callers are received inquiring for missing officers, and every endeavour is made to trace these through the Paris or Boulogne offices Daily correspondence is maintained with Geneva, the Prisoners of War Bureau, and the Allies Relief Committee

AUSTRALIAN MEDICINE AND THE WAR —Our Melbourne correspondent writes, under date of Nov 23rd — ' The departure of the first Australian contingent was accomplished without serious accident The health of the men had been good while at the training camp In a force of about 8000 there were some 60 cases of measles, this disease being prevalent then These were treated at the Infectious Diseases Hospital, Fairfield Several deaths occurred in the Melbourne Hospital from pneumonia among soldiers transferred from the camp The Australian hospital unit is about to leave next week It will occupy a ship under Red Cross conditions for the voyage and will require no convoy A staff of 780 people will be on board which will be subsequently divided among the different hospitals to be established Particulars have already been given as to these [1] A further contingent of men is now in training the spleen in two cases, but only two, of splenic leukæmia at a time when leukæmia was rarely recognised until the spleen had become enormous, and when the supreme difficulty of checking hæmorrhage in a highly leukæmic patient had not been fully recognised The substitution of torsion for ligature of arteries was another innovation about that time, which he adopted with great ardour and employed successfully, I believe that in his later years he was regarded as being somewhat behindhand in the matter of antiseptic and aseptic surgery, but it could not have been from any disagreement with the principle of such treatment, for I well remember that he tried, enthusiastically and hopefully, Lister's treatment in its first phase—namely, the thorough dressing of wounds with carbolic oil

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[1] THE LANCET Oct 2 th (p. 10[illegible]) and Dec 5 h (p 133[illegible]) 1914

Mr Bryant was a good colleague He took his fair share of the administrative work of the school and hospital, was punctual and exact in his attendance, and always courteous, considerate, and helpful in committee or council He wrote attractive and valuable articles in the *Guy's Hospital Reports*, and frequently contributed cases from his wards to the 'Mirror' of THE LANCET I will leave to others to appraise the merits of his book on the 'Practice of Surgery,' about which he took an immense amount of trouble and which at its first appearance was unique amongst British works in the profuseness of its illustrations, and had a pronounced success "

Sir Dyce Duckworth writes —" I was brought into close relation with Mr Bryant for some years on the General Medical Council, and I have none but kindly remembrances of him He took his duties seriously, and was always a pleasant colleague who laboured diligently in the Council, and in his study, at its committee work. We represented our respective Royal Colleges and the English Conjoint Examining Board I did not always see eye to eye with him on some matters in the Council when it became necessary to withstand opposition, but such little differences never ruffled his kindly nature or cooled our friendship for a moment I can bear no worthy testimony as to his surgical skill and teaching, but I always regarded these as expressive of the recognised soundness of the Guy's school of surgery of his day He was tenacious of all that he felt sure of, and his convictions were certainly founded on a large practical experience I am sure that he was esteemed by his colleagues, his pupils, and his patients as a tender hearted and sympathetic man, and one cannot doubt that his record as a surgeon will surely add to the reputation of his school —*Exstinctus amabitur idem* "

A CENTENARIAN —The death is announced at Newry of Miss Ellen Byrne, who is said to have been the oldest woman in Ireland, having reached the reputed age of 115 years

BRISTOL INFECTIOUS HOSPITAL —At the last meeting of the Bristol city council it was decided to increase the isolation hospital accommodation by extensions at the Novers Hill Hospital The scheme is estimated to cost about £7700, and will provide for 24 additional beds and increased accommodation for the staff

DONATIONS AND BEQUESTS —The late Mr J H Burley, of Leamington has bequeathed £5000 to the Leicester Infirmary for a " Burley Ward or for beds to be called 'Burley Beds' and £2000 each to the Leicester Institution for the Blind the Children's Hospital Leicester the Home for Incurables, Leamington, and the Cancer Hospital, Fulham.

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

DURING the week terminating on Tuesday, Jan 5th, the subscriptions announced below have come in, and the correspondence which has been received by the secretaries shows that interest in the movement is spreading The objects of the Fund which aims at alleviating the misfortunes of Belgian doctors and pharmacists, both those remaining in Belgium and those who are refugees with us, have been seen to concern closely the two professions in this country, and the response to appeals for the Fund has been considerable A number of representative men have joined the General Committee

An appeal is now being distributed by the Executive Committee of the Fund, which it is hoped will be followed by more general support

The subscriptions which have been received up to Tuesday evening last by the honorary treasurer, Dr Des Vœux, in addition to £2505 previously announced, and not including the subscriptions received in Dublin, are as follows —

	£	s	d.
Dr E Kaye-Smith	3	3	0
Dr C P Handson.	1	1	0
Dr E J Wood	1	1	0
' The Barrhead Medical Men" (per Dr R Corbett)	5	0	0
Dr May Thorne	2	2	0
Surgeon H W Scott, R.N	2	2	0
Dr R. O Moon	5	5	0
Dr Pelham C Maitland	1	0	0
Dr Dora E L Bunting	1	0	0
Dr Guy B Courtney	1	1	0
Dr H Cooper Pattin	1	1	0
Mr Kenneth Scott	2	2	0
Dr E T Larkham	1	1	0
Dr Bruce C Kelly	2	0	0
Messrs. H Mitchell and Son	0	10	6
Dr James Green	2	2	0
Mr George Waugh	5	5	0
Dr R Wilde	0	10	0
Surg General O Dwyer A M S	1	1	0
Dr T A. Chapman	2	2	0
Mr W H Vickery	1	1	0
Dr Rossiter	1	1	0
Mr Frederic Durham	2	2	0
Dr South	1	1	0
Mr Charles Spurrell	2	2	0
Dr D H Forty	1	1	0
Dr H P Fairlie ...	5	0	0
Dr Douglas D Malpas	2	2	0
Dr H L Ormerod	3	3	0
Dr Eliza L Walker Dunbar	2	2	0
Dr T Hammond Williams ..	2	2	0
Midland Railway Surgeons Association (per Mr F W J Coaker Hon Treas)	3	3	0
Dr F St John Bullen	5	5	0
Mr J P Ellerington (La Pharmacie Française") (third donation)	5	0	0
Miss Edith M Ironie	2	0	0
Mr H J Kluge	3	3	0
Consett Division B M A (per Dr J Charles Hon Sec.)—			
Dr Thos Grainger	3	3	0
Dr William Bratten	1	1	0
Dr A D M Macintyre	1	1	0
Dr J Murray	1	1	0
Dr W C Fraser ..	2	2	0
Dr W M Morison	1	1	0
Dr Alex Cook	1	1	0
Dr R E Ingram Johnson	1	1	0
Dr E G D Benson	1	1	0
Dr D A. Dewar	1	1	0
Dr J Charles ..	1	1	0
Dr H. Finzel	1	1	0
Dr Semple	1	1	0
Dr Reginald A Yeld	0	10	0
Canterbury and Faversham Division B M A (second donation) (per Dr Neil Robson Hon Sec) —			
Dr John Greasley	1	1	0
Dr S R Alexander	1	1	0
Dr W M. Scott	1	1	0
Dr F W Penfold..	1	1	0
Dr John Watson	1	1	0
Dr A. E Barclay	10	10	0
Shropshire and Mid Wales Branch B M A second donation (per Dr A. G Mackenzie Hon Sec)—			
Dr H G P Le Fanu	1	1	0
Dr J H Clark	1	1	0
Dr E A. Elkington	1	1	0
Mr Prosper H Marsden	1	1	0
Messrs T and H Smith Limited	25	0	0
Employees of Messrs. Reynolds and Branson Limited (per H S Sykes Esq)	5	5	0
Lieutenant Colonel Walsh I M S (by sale of gold medal)	10	10	0

Subscriptions to the Fund should be made payable to the Belgian Doctors and Pharmacists Relief Fund, crossed Lloyds Bank, Limited, and sent to Dr H. A Des Vœux, 14, Buckingham gate, London, S W

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries begs to acknowledge with thanks the receipt of surgical instruments, &c , kindly contributed by the following gentlemen since the publication of the last list —

Dr W F Gibb, Paisley, Anonymous, Dr Wakefield, Northwood, Middlesex, Dr Pickett, Croydon

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, such information for gratuitous publication*

ALEXANDER W H M M.B C M Glasg has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Crowle District of the county of Lincoln

BUSHNELL, F G., M D D.P H has been transferred as Tuberculosis Officer and Deputy Medical Officer of Health to the County Borough of Plymouth

ELLIS L ERASMUS M D Brux M R.C S L R C P Lond has been appointed Assistant Physician to the Johannesburg General Hospital Johannesburg South Africa

GRANTHAM H M.B B S has been appointed House Surgeon at the Swansea Hospital.

NIMBKAR V D L.R C P & S Edin has been appointed Resident Ophthalmic Officer at the General Infirmary Leeds

ROBINSON GEOFFREY S., B M B Ch Oxon. M.R C S L R C P Lond has been appointed House Surgeon at the Royal Infirmary Sunderland

SPENCE, R J M.B B Ch R U I has been appointed Medical Officer for Stewartstown Dispensary District and Medical Officer of Health of Stewartstown county Tyrone

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

ASHTON UNDER LYNE UNION WORKHOUSE.—Resident Assistant Medical Officer Salary £150 per annum with rations, laundry, and residence

AYLESBURY ROYAL BUCKINGHAMSHIRE HOSPITAL.—House Surgeon unmarried. Salary £150 per annum with board washing and lodging

BARNSLEY BECKETT HOSPITAL AND DISPENSARY —Second House Surgeon unmarried Salary £120 per annum, with apartments board, and laundry

BARNSTAPLE, NORTH DEVON INFIRMARY —Female House Surgeon Salary £100 per annum with board residence and laundry

BARROW IN FURNESS NORTH LONSDALE HOSPITAL.—House Surgeon Salary £150 per annum with residence, board and laundry

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary £100 per annum, with board and laundry

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church-street.—Senior and Junior House Surgeons Salaries £110 and £100 per annum respectively with residence and board &c.

BIRMINGHAM CITY MENTAL HOSPITAL, Rubery hill.—Female Junior Assistant Medical Officer Salary £200 per annum with apartments board laundry &c.

BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer unmarried Salary £240 per annum with apartments fire lights and attendance

BIRMINGHAM UNION —DUDLEY ROAD INFIRMARY Second Assistant Medical Officer Salary at rate of £210 per annum Third Assistant Medical Officer Salary at rate of £170 per annum. Fourth Assistant Medical Officer Salary at rate of £160 per annum SELLY OAK INFIRMARY: Assistant Medical Officer Salary at rate of £160 per annum All with apartments rations, laundry and attendance

BRADFORD ROYAL INFIRMARY —House Surgeon unmarried Salary £100 per annum with board residence and washing

BRADFORD ST LUKE'S HOSPITAL AND UNION HOUSE.—Assistant Resident Medical Officer unmarried Salary £150 per annum with rations apartments and washing

BRENTWOOD ASYLUM Brentwood Essex.—Locum Tenens Assistant Medical Officer Salary £5 5s per week with board attendance lodging and washing

BRIDGWATER HOSPITAL.—House Surgeon unmarried Salary at rate of £125 per annum with board lodging and washing

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood —House Surgeon Salary £120 per annum with board lodging and washing

BRISTOL EYE HOSPITAL.—House Surgeon Salary £100 per annum, with board residence and laundry

BRISTOL GENERAL HOSPITAL.—Resident Obstetric Officer for six months Salary at rate of £120 per annum with board residence &c

BRISTOL, NORDRACH UPON MENDIP SANATORIUM Blagdon —Assistant Medical Officer Salary £200 per annum with board and residence

BURTON UPON TRENT COUNTY BOROUGH —Assistant Medical Officer of Health Salary £300 per annum

BURY AND DISTRICT JOINT HOSPITAL BOARD —Assistant to Medical Superintendent. Salary £200 per annum with board washing and lodging

BURY INFIRMARY —Junior House Surgeon. Salary £150 per annum, with board residence and washing

CANTERBURY KENT AND CANTERBURY HOSPITAL.—Senior House Surgeon and Junior House Surgeon unmarried Salary £100 and £80 per annum respectively with board, lodging and washing

CANTERBURY KENT COUNTY ASYLUM Chartham —Third Junior Assistant Medical Officer Salary £250 per annum with quarters board washing &c

CARDIFF KING EDWARD VII S HOSPITAL.—Female House Surgeon for Ophthalmic and Ear and Throat Departments Salary £140 per annum with board laundry and residence

CARDIFF KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION —Assistant Resident Medical Officer Salary £250 per annum and maintenance

CHICHESTER WEST SUSSEX COUNTY MENTAL HOSPITAL.—Second Assistant Medical Officer Salary £250 per annum with apartments board laundry, and attendance

CITY OF LONDON UNION INSTITUTION AND INFIRMARY 42 Clifden road Lower Clapton N E —Assistant Medical Officer unmarried Salary £200 per annum with apartments rations, and washing

CITY OF WESTMINSTER UNION INFIRMARY Fulham road S W — Second Assistant Medical Officer and Third Assistant Medical Officer Salaries £160 and £140 per annum respectively with board, residence and washing

CROYDON GENERAL HOSPITAL.—Senior House Surgeon Salary £105 per annum with residence board and laundry

DUDLEY GUEST HOSPITAL.—Assistant House Surgeon for six months Salary £100 per annum with board, residence and washing

DUMFRIES AND GALLOWAY ROYAL INFIRMARY —Resident House Surgeon Salary £130 per annum.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION —Assistant House Surgeon for six months Salary at rate of £80 per annum with board residence and washing

GREAT YARMOUTH HOSPITAL.—House Surgeon unmarried Salary £200 per annum with board lodging and washing

GUILDFORD ROYAL SURREY COUNTY HOSPITAL.—House Surgeon Salary £150 per annum with board, residence and laundry

HIGHLANDS AND ISLANDS (MEDICAL SERVICE) BOARD North Harris — Medical Practitioner Salary £300 per annum with house

HULL CITY ASYLUM.—Junior Assistant Medical Officer Salary £200 per annum with board lodging and washing

KENT COUNTY COUNCIL.—Tuberculosis Officer Salary at rate of £500 per annum.

LANCASTER ROYAL INFIRMARY —House Surgeon unmarried Salary £120 per annum with residence, board attendance and washing

LEEDS PUBLIC DISPENSARY —Female Resident Medical Officer Salary £130 per annum with board residence and laundry

LEICESTERSHIRE EDUCATION COMMITTEE.—Temporary Assistant School Medical Officer Salary at rate of £300 per annum

LERWICK PARISH COUNCIL AND SHETLAND COMBINATION POORHOUSE COMMITTEE.—Medical Officer Salary £78 per annum

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL —House Physician and House Surgeon for six months. Salary at rate of £60 per annum each with board residence and laundry

LIVERPOOL STANLEY HOSPITAL.—House Surgeon Salary £80 per annum with board residence, and laundry

LONDON THROAT HOSPITAL, 204 Great Portland street, W —House Surgeon. Salary £50 per annum.

MANCHESTER CORPORATION —Two Assistant Tuberculosis Medical Officers Salary £350 each per annum

MANCHESTER COUNTY ASYLUM Prestwich —Assistant Medical Officer unmarried Salary £250 per annum with board apartments attendance and washing Also Locum Tenens unmarried. Salary £6 6s per week

MANCHESTER HULME DISPENSARY Dale-street Stretford road —House Surgeon Salary £180 per annum with apartments attendance coal and gas

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon Salary £80 per annum with residence board, and washing

MANCHESTER ST MARY'S HOSPITALS FOR WOMEN AND CHILDREN — Resident Surgical Officer Salary £90 per annum with board and residence. Also House Surgeon for three or six months Salary at rate of £70 per annum with board and residence

MANCHESTER, VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham — Female Resident Medical Officer for six months Salary at rate of £100 per annum, with rooms board and laundry

METROPOLITAN ASYLUMS BOARD INFECTIOUS HOSPITALS AND SANATORIA.—Assistant Medical Officers unmarried Salary £250 per annum with residential allowances

MILLER GENERAL HOSPITAL FOR SOUTH EAST LONDON Greenwich road S.E —Junior House Surgeon for six months. Salary £85 per annum with board, residence and laundry

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST —Surgeon Laryngologist.

NEWPORT (MON) ROYAL GWENT HOSPITAL.—Resident Medical Officer Salary for first six months at rate of £100 per annum second six months £125 and third six months £150 with board, residence and laundry

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician Salary £120 per annum, with board residence and laundry

PRESTON ROYAL INFIRMARY —Assistant Resident Medical and Surgical Officer Salary £120 per annum with board residence and laundry

QUEEN'S HOSPITAL FOR CHILDREN Hackney road Bethnal Green E — House Surgeon for six months Salary £80 per annum, with board residence and washing Also Assistant Physician

ROCHESTER ST BARTHOLOMEW'S HOSPITAL.—Assistant House Surgeon unmarried for six months

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL, 234 Great Portland-street W —Resident House Surgeon. Salary £100 per annum, with board, washing &c.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN S E — Resident Medical Officer Salary at rate of £150 per annum with board and washing

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand W C —Assistant House Surgeon for six months Salary £20 with lunch and tea

ST MARYLEBONE.—District Medical Officer to attend the Poor in St John s District of the Parish Salary £100 per annum.

ST MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E — Resident Medical Officer Salary at rate of £90 per annum with board residence and laundry

SALFORD ROYAL HOSPITAL.—Resident Surgical Officer and Casualty House Surgeon for six months. Salary at rate of £120 and £100 per annum respectively with board and residence

SALISBURY INFIRMARY —Assistant House Surgeon unmarried. Salary £75 per annum with apartments, board lodging and washing

SCARBOROUGH HOSPITAL AND DISPENSARY —Senior and Junior House Surgeons Salary £100 and £80 per annum respectively with board residence &c.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician unmarried Salary £80 per annum with board lodging and washing

SHEFFIELD ROYAL INFIRMARY —House Surgeon and Assistant House Physician. Salary £100 per annum with board and residence

The Melbourne University held a special final examination for any students who were anxious to volunteer for service and whose period of work was satisfactory No concession was made as to standard of pass work. Four candidates presented themselves and all were passed Several very well known members of the Victoria profession are included in the hospital unit about to leave They are Dr Henry Maudsley, Dr J, W Springthorpe, Dr G A. Syme, Dr T P Dunhill, and Dr J W Barrett On Nov 21st the departing Victorian medical men were entertained by the members of the Victoria Branch of the British Medical Association at a farewell dinner Complimentary speeches were made, and Dr Springthorpe stated that on the best authority he was able to say that Australia had contributed more money to the Red Cross Association in proportion to population than any other community The Australian Medical Federal Council opened a subscription list for the supply and maintenance of motor ambulance facilities for the Australian hospital unit Already over £700 has been subscribed by medical practitioners, although the fund is only a fortnight old "

Care of the Wounded in Edinburgh —Our correspondent writes "100 wounded and disabled soldiers drawn almost entirely from Scottish regiments arrived in Edinburgh from Southampton on Dec 31st The majority of them had come direct from the firing line, and many still had the mud of the trenches on their coats, kilts, and puttees They complained of the weather and of the condition of the trenches, but were enthusiastic about the way in which they were being treated as regards clothes, food, comforts, reliefs, &c Of the 100 men about half were wounded, and the remainder were suffering from frost-bite, rheumatics, or pneumonia, testifying to the rigorous conditions under which the war operations are being conducted Several members of the 8th Royal Scots (T F) were among the number The 100 men were distributed as follows Craigleith Military Hospital, 50 , Dalmeny House, 35 , and the Deaconess Hospital, 15 For the purpose of stimulating recruiting for all the battalions of the Royal Scots regiment and for enrolling the names of men eligible for a 'Bantam battalion,' for submission to the War Office after the Royal Scots regiment is up to establishment and organisation, has been formed ,with Lord Rosebery as prime mover Rest-rooms for sailors and soldiers have been opened at No 9, Croall place, Leith walk under the auspices of the Edinburgh Branch of the British Women's Temperance Association, and are provided with comfortable club rooms where leave time may be spent "

The Treatment of Cholera —Dr A G Newell, of Assam, has published[1] particulars of four cases of Asiatic cholera at Lahore treated with tincture of iodine internally Three of the cases recovered, two being natives and one a European (female), these were adults The fourth case, an infant of 18 months, died. The adult cases were severe ones, and were proved bacteriologically to be true cholera. The dose administered was one minim of tincture of iodine in water every hour or half hour until decided amelioration of the symptoms, and thereafter at longer intervals until recovery Dr Newell found that the germicidal action on cholera vibrios was distinct, even in a 1 per cent. solution of tincture of iodine, about equal to 1 in 4000 of iodine, after 24 hours, and in a 10 per cent solution after 10 minutes This shows the theoretical efficacy of iodine and that the treatment is rational Iodine tincture allays vomiting and acts as a disinfectant It is of course impossible to draw any conclusion from four cases and as the outbreak was coming to an end the type of case would naturally tend to become milder and more amenable to treatment

Vacancies for Medical Officers —We are asked by the Assistant Director of Medical Service of the 1st London Division Territorial Force to state that there are vacancies for several medical officers in the field ambulances of the 1st London Division, T F These units are now training at their war stations and the rank and file are of exceptionally good quality Officers must be duly qualified and registered medical men Applications should be made by letter or in person to Colonel J Harper A.D M S 1st London Division, T F , Headquarters, Lea Crowborough, Sussex, and will receive an immediate reply Captain C G Kay Sharp asks us to state that his unit—the Eastern Mounted Brigade Field Ambulance (Reserve) R A M C (T F), stationed at Luton, Beds —requires three medical officers to bring it up to the full war establishment Applications should be made to the officer commanding the unit, at Luton There are still a few vacancies for officers in the 2nd East Anglian Field Ambulance Reserve unit. Pay and allowances will be as in the regular Royal Army Medical Corps, and immediate application should be made to Lieutenant-Colonel Blake Masson, 148, Broadway, Peterborough.

The Union Jack Concert Party —"Will you help the Union Jack Concerts ?" is the question which Miss Helen Mott (violoncellist) and Miss Florence Castelle, writing from Dr and Mrs F W Mott's house, 25, Nottingham place London, W , put to our readers, and through them to the public, supplying excellent reasons why the answer should be in the affirmative The Union Jack Concert Party provides a weekly entertainment to wounded soldiers and sailors in military and other hospitals, and also assists at least two or three different necessitous artists at each concert, by giving them a small fee for their services Concerts have already been given at the 4th London General Base Hospital, Denmark Hill, St George's Hospital, 1st London General Base Hospital, Camberwell, St Bartholomew's Hospital, 2nd London General Base Hospital, Chelsea (Christmas Eve) , University College Hospital, and Queen Alexandra Hospital, Millbank (New Year's Day), at which the following well known artists, amongst others, very generously came and gave their services Miss Ellaline Terriss, Mr Ben Davies, Mr Lewis Sydney, Mr Nelson Jackson, Miss Ruby Helder, Mr Harold Montague, Mr Ernest Shand, Miss Cicely Courtneidge, Mr Harry Tate, Miss Wish Wynne, Mr Albert Whelan, Miss Violet Loraine, Mr Harrison Hill, Mr Jock McKay, Miss Margaret Balfour, and Mr Jack Pleasants During the next few weeks the Union Jack Concert Party will be going to the Dreadnought Hospital, Greenwich , 3rd London General Base Hospital, Wandsworth , Royal Free Hospital , Queen Alexandra Hospital , and Great Northern Hospital Anyone who could see the keen apppreciation and enjoyment of the "Tommies" during these little perfomances would we are sure, gladly support the work. All contributions will be gratefully acknowledged by Miss Helen Mott and Miss Florence Castelle (25, Nottingham place London, W) who are acting as honorary secretaries as well as giving their artistic aid

The Treatment of So-called "Frostbite"—Dr J Porter Parkinson, senior physician to the Queen's Hospital for Children and to the London Temperance Hospital, has sent us the following brief note —"During the past few weeks large numbers of soldiers have been invalided from the front suffering from a painful affection of the feet due to prolonged standing in the trenches Several of them have told me that after having been 24 or 48 hours in the fighting line they were removed to rear trenches where they took off their boots and socks and warmed their feet before a fire The feet became numbed and exceedingly painful the pain extending up the portion of the leg covered by the boot and above the ankle On admission to hospital there is little to see as a rule, the foot may appear slightly congested, with prominent subcutaneous veins But at night, when the pain is greatest, some slight swelling and blueness of the feet is visible Though feeling numb, there is no anæsthesia to touch prick, heat or cold In addition there is often a superficial gangrene of the skin at the extremity of the big toe or one of the other phalanges The condition resembles erythromelalgia, and is no doubt due to prolonged damp and cold acting on the vasomotor and sensory nerves of the feet

I would suggest that as soon as possible after the soldier is relieved from the trenches the feet be thoroughly rubbed to restore circulation and not be heated artificially before a fire , and such orders might be given by the commanding officer, who could point out the danger of omitting it As regards treatment of the cases, elevation of the feet by a pillow under the lower part of the legs is a great comfort while I have had real success from the administration of antipyrin grs x. with aspirin grs xv thrice daily The result is that the pains in the feet are usually quite gone in 48 hours ' pomp as if there was no more danger than in an ague, that is the truth, if in a *dead man there can be danger, I thinke* there is least in a dead Turk, especially a rich man then in any other, for they wash the body, though never so poor—and then with rowlers of wood squeeze out all the excrements they can, then after it is cleansed they stop all the passages with cotton. I always counted the cloaths more infectious than anything. The sick Turks this time fled into country houses and up the Bosphorous, and by their means the plague was scattered almost everywhere for 10 or 12 miles round ... We have an English apothecary here who went about dayly. At last it fell in his house and seized his wife's sister, too far for remedies to take place. She dyed, but his wife and several others escaped by your incomparable *bezoarticum animale*, whereof I have now had good tryal. There was a little boy belonged to one of my Lord's servants formerly, the father came to me for something for it, telling it had convulsion fitts. I asked him if it were not *morjack*—for so the Turks call the plague. He assured me no, no but the next morning the boy was dead. He himself soon sickened, with a dose of your *bezoarticum animale* and a saffron water which I made here he recovered, and his wife likewise. In August he was smitten again—a thing I think very rare. He sought no more to me but dyed. Feare is a horrid companion in time of pestilence, I thank God I had banished that. Your Jews all, and poor Turkes, Greeks and Armenians, live so abominably nastily and in such narrow filthy streets and so many clustered together that it is a marvel to me that the plague should ever cease untill it had swept them all away, yet it is now quite over and the streets so full of people as none seem to be wanting ... I suppose you have heard of their eating of opium. It is very true, and I assure you moreover I know one whom I have seen take the quantity of a hazel nut at a time, and he tells me he cannot live without doing it at least three or four times a day, and I have seen an Arab, that is a messenger sometimes between Aleppo and this place, take above a dram at one time by weight. It presently gives them *keif*, makes them exceeding pleasant but an houre or two after they are as dull as logs, yet I do not find in them any remarkable drowsiness at all. Many that are used to it in their *romazan*—their fast—when it is death if it be known that anyone eats the least thing imaginable from sunrise to sunset, the forbearance of this their *keif* destroys them."

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[1] The Treatment of Cholera a Cure by A. G Newell M D Lahore: Civil and Military Press 1914 Price Rs 1.8

Abigail Harley to her Father, Sir E Harley, at Brampton—"London, June 25 1687—My aunt Bromfield has spoken to Dr Windebank concerning my mother drinking waters and his opinion is that all waters are very improper for a cancerous tumour. He says Hoxton waters would be least prejudicial, as there is nothing of alum or steel in them, but advises to meddle with none."

Edward Harley to Lady Harley—London July 7, 1688 a letter enclosing the following prescription for a water for an ulcerated cancer for his mother's use "Scrape lead very thin with a knife boyle it wel in good spring water and with it frequently wash the sore. Let it be fresh lead every time you make it the same will not serve."

Edward Harley to Sir Edward Harley—"Aug 7, 1688—Mr Fisher has told me of a spring upon Malvern Hills that had cured some years since a cancer in a lady's breast who came from London to use it. Since then it has grown famous for curing sores by bathing them there."

Sir E Harley to Robert Harley at Brampton—"1689, Aug 10—Mr Geldsthorp sends in a box camomile flower lime tree flower and black cherry water for the child, to be mixed or taken singly to remedy wind."

Robert Harley to Sir E Harley—1694 Dec 3—My wife has sent some of the Countess of Kent's powder of her own making. If it be thought fit for my brother to take he may take as much as will lie upon a sixpence at any time of the day. The ingredients are Contrayaria, Bizoar, crab's claws viper's skin jelly &c.

The Same to the Same—1694 Dec 27. My Aunt Foley sayth she experiences a chain of gold about the neck is good to keep the throat clear."

Henry Guy to Robert Harley—"1695 January—Though I have the greatest mind in the world to come to see Mr Harley—for I have had the small pox and therefore cannot fear them—yet he is not so farre advanced in his recovery as to warrant him for much talking for which cause I presume to give you the trouble of telling you the discourse which I have heard both learned and experienced persons make concerning the methods to be used at the departure of this disease. Some say that letting blood againe is good but all agree that there must bee very often purging for the infirmity which our King labours under came purely from not purging enough after it. They likewise say that after sufficient purging it is absolutely necessary when he is in the country, to go into asses milke for six weeks, or some such rule to rectify the whole figure of his blood which this distemper had corrupted."

Henry Guy to Sir E Harley—"1698, Sept 20 London—*I am infinitely concerned* at the unfortunate accident which has happened to your son, and the more because there were so many hours between his fall and the letting of blood the only remedy for such a mischance, and which must be repeated to prevent fully any future ill in the head."

The Same to the Same—"1698 Oct 4, London—Your letter gave me much ease of mind concerning your son, though I confess I do not like the bad blood appearing at the second bleeding. It plainly shows that there is bad blood to be fetched away. The head has suffered most in this accident and the physicians say that the letting blood in the foot has the best effect on the head and so likewise has cupping on the shoulders or back, but for the prevention of any future consequence nothing is so good as two issues in the shoulders just by the neck. This draws away all bad humours from the head and is a sure remedy against apoplexy, epilepsy and many of those diseases."

Robert Harley to Sir E Harley—"1700 July 25—I am extremely sorry to hear of your indisposition. I mentioned the doctor being against your bleeding, but he says you would find relief by blisters upon your arms, on the inside about the binding. I have now one on each arm from which I have found great relief."

The Same to the Same—"1700, July 27—Dr Radcliffe desires you will not do anything more to your knees and legs than keep them warm. Blisters on your arms will relieve your breast. For the cough, besides the use of such things as conserve of roses he commends the frequent use of ground ivy leaves made and drunk as tea, sweetened with sugar candy, as also the swallowing a clove of garlic often over night to preserve the stomach against goutish humours."

Dr William Stratford, of Christ Church, Oxford to Edward (afterwards Lord) Harley—"1724 Oct 14—Yesterday I had the honour to hear from my Lady Oxford, with an account of her having been confined for a week to her chamber, and that she was going to Lady Paulet. Her Ladyship mentions not to me what her illness was, but if it was the cholic I am certain there is no other safe certain remedy for it but the Bath waters. Radcliffe [Dr John] who would allow the Bath good for nothing else, owned it was a specific for the cholic."

The Same to the Same—"1725 Oct 21—I hope the little one will have no gripes that are dangerous. I would only hint that our friend Radcliffe was for giving young babes as little as possible. He frankly owned he knew not what to do with them, and was for leaving Nature, if it were possible, to do its own work."

"QUI ME ALIT ME EXSTINGUIT"

To the Editor of THE LANCET

SIR,—The war is compelling us to manufacture our own drugs for ourselves. It may perhaps teach us to rely a little more on our native abilities and output in medical science. The British student, isolated from the Austro-German schools may at last be induced in greater numbers to employ his own faculties in original research, instead of quoting foreign authorities and humbly swallowing the schematic dubieties of Frankfort and Vienna. The notion that these schools are better than our own is certainly fostered by the self satisfaction of the Germanic brain, which noises abroad its own contributions to science while ignoring or belittling those of Britain and France. Yet the young graduate will be no worse off by remaining in London or Edinburgh and learning to respect his own nation, not as such but for the sheer weight and splendour of its scientific achievements. He should then acquire self trust and the power to think and work independently. And for encouragement let him invoke such august shades as those of Newton and Faraday, of Harvey and Hunter, of Syme, Young Graves, Lister, and Darwin.

I am, Sir, yours faithfully

Liverpool

EDMUND HUGHES

THE ROYAL NAVAL DIVISION

WE have been asked by Lieutenant D Bywater R N V R Acting Adjutant of the Royal Naval Division Public School Battalion, to draw the attention of our readers to this battalion which is being raised from among public school and university men between the ages of 18 and 35 for service during the period of the war. The strength of the corps will be 1000 and it is strictly limited to men who are included in the above definition. Medical men and medical students, in view of the special need for their present and future professional services are very wisely discouraged by the military authorities from serving as combatants, but they can use their influence with others of their own class who are eligible to join such a corps *d'élite* as this Public School Battalion. Applications should be made to the Royal Naval Division, 6, 7, and 8, Old Bond street, London, W

SIDLAW SANATORIUM—Resident Medical Officer Salary £125 per annum.

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months Salary at rate of £120 per annum with rooms board and washing

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY—Junior House Surgeon Salary £115 per annum, with residence board and washing

SOUTH SHIELDS UNION HARTON POOR LAW INSTITUTION—Assistant Medical Officer Salary £200 per annum

STIRLING DISTRICT ASYLUM Larbert N B—Female Third Assistant Medical Officer Salary £140 per annum with board &c

STROUD GENERAL HOSPITAL—House Surgeon Salary £120 per annum with board, lodging and washing

TRURO ROYAL CORNWALL INFIRMARY—House Surgeon unmarried. Salary £150 per annum with rooms board and washing

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon unmarried. Salary £100 per annum with board residence &c

WAKEFIELD CLAYTON HOSPITAL—Senior House Surgeon Salary £160 per annum with board, lodging and laundry

WAKEFIELD WEST RIDING ASYLUM.—Assistant Medical Officer Salary £250 per annum with apartments board washing and attendance Also Locum Tenens Assistant Medical Officer Salary as arranged with apartments board, &c

WALSALL AND DISTRICT HOSPITAL—Junior House Surgeon and Anæsthetist Salary £110 per annum with board, residence, and laundry

WARRINGTON LANCASHIRE COUNTY ASYLUM Winwick—Locum Tenens Medical Officer unmarried Salary 6 guineas per week with apartments board attendance and washing

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon unmarried Salary £150 and £120 per annum respectively with residence board and laundry

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS AND EPILEPSY 73 Welbeck street W—Resident House Physician for six months Salary at rate of £100 per annum

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford E—Junior House Surgeon Salary at rate of £100 per annum with board residence, and washing

WEST RIDING OF YORKSHIRE CARDIGAN SANATORIUM, near Wakefield—Assistant Medical Officer Salary £250 per annum

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months Salary at rate of £125 per annum, with board rooms and laundry

WORCESTER GENERAL INFIRMARY—Resident Medical Officer Salary £150 per annum with board residence and washing

WORKSOP VICTORIA HOSPITAL AND DISPENSARY—Medical Officer and House Surgeon Salary £150 per annum with rooms coal, light and attendance

THE Chief Inspector of Factories Home Office London S W gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Barnard Castle in the county of Durham.

Births, Marriages, and Deaths.

BIRTHS

BENETT—On Dec 30th 1914 at Trelaske Dallington Northampton Maude Elizabeth, the wife of Captain A M Benett, R.A.M.C of a son

COOKE—On Dec 31st 1914 at Berkshire Villa Ventnor the wife of Reginald T Cooke M R C S Eng L.R C P Lond, of a son

EMRYS-ROBERTS—On Dec 30th 1914 at Romarys Radyr Glamorgan, the wife of Professor Emrys Roberts M D of a son

GAUNTLETT—On Dec 27th 1914 at Oakhill road Putney S W the wife of Lieutenant H Leon Gauntlett, R A.M C, 6th Gloucester Regiment of a son

HOWITT—On Jan 2nd at Chesham street Belgrave-square S W the wife of A B Howitt, M D of a daughter

MANNERS RIDGE.—On Dec 24th 1914 at New River House Enfield Middlesex the wife of the late Edwyn Manners Ridge F R C S Eng, Lieut R N V R Lond., of a son

MARRIAGES

LATHBURY—BURTON—On Dec 30th 1914 very quietly at St Andrew's Eastbourne Arthur E A. Lathbury M R C S L.R C P to Lucy Burton fourth daughter of the late John Burton of Beckenham

PEDLER—RIDEAL.—On Jan 2nd. at All Saints Church Finchley road by the Rev J W Mills assistant priest George Henry Pedler of 235 Knightsbridge to Mary Alice widow of Arthur W Rideal of 54 Finchley road At home Knightsbridge Hotel Feb 2nd and 4th from 3 30 to 6 P.M

DEATHS

HEDDY—On Dec 31st 1914 at 29 Warwick road Ealing W Laura Mary the dearly loved wife of Wm Jackson Heddy M R C S Eng late of 46 Redcliffe-gardens S W

KENNEDY—On Dec 28th 1914 at Brigstock road Thornton Heath James Price Kennedy M B Ch.B

LAING—On Dec. 25th 1914 suddenly of heart failure Ernest Alexander Ronald Laing M.R C S L.R C P &c aged 42 years.

LOCKERBIE.—On Jan. 3rd at Nurse Porter's Nursing Home, Carlisle William Lockerbie M.B Ch B of Annan aged 37 years

VAWDREY—On Jan 1st. at Plymouth George Vawdrey M R.C S L R C.P aged 67 years

N.B—A fee of 5s is charged for the insertion of Notices of Births Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents.

EDINBURGH UNIVERSITY AND THE WAR

A VERY interesting souvenir has been issued by the University of Edinburgh It consists of the University's "Roll of Honour," in the form of a booklet containing the names of 16 members of the University who have died "pro patria" of 14 wounded, and of 2 prisoners, together with upwards of 1600 names of teaching staff, clerical staff, technical assistants, servants, and others, graduates and alumni, and present students, now serving their country in various arms and ranks The total number on the roll at present is 1679, but the list is admittedly incomplete The medical profession is naturally well represented In the navy the University provides 85 commissioned officers of whom four have lost their lives in action, while in the army there are 517 officers, 108 serving in the ranks, and 66 auxiliaries "Our Lord Rector" (F M Lord Kitchener) forms an appropriate frontispiece

THE PROBLEM OF SERVICE

To the Editor of THE LANCET

SIR,—How can the ordinary middle aged medical practitioner be of use to his country in the present crisis? If he is willing to give up his practice, would he be acceptable for the R A M C if aged between 40 and 50, and if so, in what capacity or rank? Are commissions granted for special purposes—e g, medical officer to hospital, recruiting, &c—which do not involve leaving home?

I venture to think that some authoritative statement on the whole subject would be welcome to many of us who are anxious to offer such services as we may be capable of

I am, Sir, yours faithfully,
BARKIS

Jan 1st, 1915

*** The above is typical of a great many letters which we have received from readers during the past few months The answer must depend on individual circumstances A medical man of 40 who is strong and active and is not in regular practice might well apply for a commission in the Territorial Medical Service, in which there are still a number of vacancies for medical officers to reserve units As stated in our last issue the War Office is introducing greater flexibility into this branch of service, which should render it more attractive to medical men who wish to serve their country but are prevented from giving entirely unconditional offers of service—ED L

MEDICAL NOTES IN HISTORICAL MANUSCRIPTS

(Continued from p 56)

OUR readers were introduced last week to an interesting series of excerpts possessing a medical bearing and taken from family documents relating to the Harley family, which are now preserved at Welbeck Abbey These excerpts covered a period of some 40 years, commencing from 1633 The series is now extended for a further half century—namely, to 1725

Dr J Covell to Peter Dent—"Constantinople April 4 1684—Here hath been all this summer as hot a plague as hath happened in the memory of man About the middle of August there dyed fifteen hundred a weeke and upwards, of all sorts, Turks, Jews, and Christians I went abroad daily yet durst not venture to see any gardens either at Strombol or Scutary All our nation held very well For my own part I took nothing but a good draught of wormwood wine in the morning, and chewed zeduary as I walked abroad, and every afternoon punch—a liquor well known to sea men—was all our drink, whereof we took a good dose, and amongst other nations—whereof all had some dyed—it is certain that they that drunk hardest escaped best I was not att all afraid, yet I have been in danger a thousand times, sometimes very desperately One could not pass from our house to Galata without meeting the dead carryed out Most that died were poor people whose diet all summer is most upon cowcumbers corpooses—which are a sort of water melon gourd—and such kind of trash, and they dyed like rotten sheep, not one in ten that were smitten escapt What you commonly talk in England of the Turks not shunning the plague I will assure you is true only in the mean people which is the same among both Jews, Greeks and Armenians They value it not half so much as we do the smal pox in England, never shun one another's company only when they die very fast the corps is not accompanied with any or very few besides the priest sometimes not with him. If a great man dies there is as great a funeral

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title-page to Vol. II of 1914 were given in THE LANCET of Dec 26th, 1914

VOLUMES AND CASES.

VOLUMES for the second half of the year 1914 will be ready shortly Bound in cloth, gilt lettered, price 16*s*, carriage extra.

Cases for binding the half year's numbers are now ready Cloth, gilt lettered, price 2*s*, by post 2*s* 3*d*

To be obtained on application to the Manager, accompanied by remittance

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows —

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD	
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TO COLONIAL AND FOREIGN SUBSCRIBERS

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS WILLIAM WOOD AND CO, 51, Fifth Avenue, New York, U S.A.

METEOROLOGICAL READINGS

(*Taken daily at 8.30 a.m. by Steward's Instruments*)

THE LANCET Office, Jan. 6th, 1915

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks
Dec. 31	29	S W	1·05	52	45	38	42	42	
Jan 1	29 160	S	0·35	50	46	38	38	40	Cloudy
2	26·840	S W	0·23	63	47	40	41	42	Cloudy
3	28·820	S E	0·49	48	44	39	39	41	Raining
" 4	29·000	W	0·05	45	44	35	36	36	Sleet
" 5	29·606	S W	0·05	52	47	36	33	38	Foggy
" 6	29·850	S W	..	58	49	38	42	43	Cloudy

The following magazines journals, &c., have been received — Interstate Medical Journal Journal of State Medicine La Clinique Ophtalmologique Journal of the Royal Sanitary Institute, Therapeutic Gazette, Annali di Medicina Navale e Coloniale Public Health Practitioner Medical Journal of South Africa, Homœopathic Record British Dental Journal, New Zealand Medical Journal Biochemical Journal Canadian Medical Association Journal, Archives of the Roentgen Ray Edinburgh Medical Journal Nursing Record, &c.

Communications, Letters, &c., have been received from—

A.—Mr A. A. Allport, Lond. Mr J L. Aymard, Johannesburg Ardath Tobacco Co., Lond. Ashton under Lyne Guardians, Clerk to the; Dr Wilfred Atlee, Lond. Mr Conrad A. Achner Lond. Ambulance Construction Commission Lond. Secretary of; Australian Book Co Lond. Dr W M Aders Zanzibar Captain G K. Aubrey R.A.M.C

B.—Messrs Burroughs Wellcome and Co Lond. Mr F B J Baldwin, Bodicote British Fire Prevention Committee, Lond General Hon. Secretary of Dr J B Berkart Lond. Dr Wm. Bruce Dingwall Bristol Eye Hospital Secretary of Bury Infirmary Secretary of Burton on Trent Corporation Clerk to the Birmingham General Hospital Secretary of Messrs. Butterworth and Co Lond. Dr J L. Bogle Cheltenham Berrow's Worcester Journal Co., Worcester Dr Robert Boxall Bournemouth Messrs. Adam and Charles Black, Lond. Messrs. Boulton and Paul Norwich Messrs A Burbridge and Co Lond; Beckett Hospital, Barnsley Secretary of Mrs Ball Birmingham; Mr C Bage Melbourne Mrs. Blaker Lond. D N Fanlswell Midhurst British Journal of Nursing Lond Assistant Editor of Mr A Brewer Lond Staff Surgeon W Bastian R.N British Thomson Houston Co., Lond

C—Lieutenant-Colonel C M. Constant R.A.M C., Brockenhurst Dr F Pinto Coelho Lisbon Mr J Jackson Clarke Lond. Messrs. Cuthbertson and Son, Annan; Mr Ernest Clarke, Bournemouth Mrs. Carless, Weston super-Mare Messrs. Condy and Mitchell, Lond. Messrs. Cassell and Co., Lond. Messrs. J and A. Churchill Lond. *Clinical Medicine*, Chicago Editor of Messrs. A. Cox and Co Brighton Cancer Hospital, Lond., Secretary of Messrs. Crossley and Co Lond. Dr E M. Clarke, Truro

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I.—International News Co., Lond.

J—Mr E B Jones Lond., Dr B F Jordan King's Norton Mrs. Jefferiss, Chatham Captain F B Jefferiss, R.A.M.C., Jhansi Mr T C Joslin Kaneb Utah.

K.—Dr H. Kerr Newcastle-on Tyne Mr A. O King Lond. King Edward VII Hospital, Cardiff Secretary of Messrs. G Kelly and Co Lond. Mr P E. Kingsford, Lond. King Edward VII. Welsh National Memorial Association, Cardiff, Secretary of Messrs. Knight Frank, and Rutley Lond.

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N—North Devon Infirmary Barnstaple, Secretary of Newcastle-upon Tyne Corporation Clerk to the North Staffordshire Infirmary Stoke-on Trent Secretary of

P—Messrs. Parke Davis, and Co Lond. Pendyffryn Hall Sanatorium, Penmaenmawr Secretary

[*Acknowledgments continued on next page.*

EMERGENCY CLEANING OF INSTRUMENTS

To the Editor of THE LANCET

SIR,—Many years ago I found that the special indiarubber made for the use of typists, which I believe is a mixture of rubber and emery, was also good for cleaning rust spots off scissors, knives, and so forth, and also certain metal parts of the typewriter itself, and I have many times recommended its use, especially in emergency Now and again I see it recommended in popular journals The emery, or whatever it is, is in such a fine state of division that while it cleans well it does not scratch the instrument I had occasion once to recommend it to a surgeon who was going to perform some minor operation, and he was well pleased with it and said that it was a new notion to him

I am, Sir, yours faithfully,

London, January, 1915 TYPIST

THE BRINE BATHS OF BIARRITZ

IN addition to its climatic advantages Biarritz possesses brine springs, and there is a well appointed saline bath establishment situated about 500 yards from the seashore on the road to Bayonne, in the centre of well laid out gardens Every facility is given for treatment, which consists of baths, douches or shower baths, local applications in the form of compresses and irrigations, and massage under water The waters are very strong and contain 307 grammes of salts (chiefly sodium chloride) per litre, or about 11 times the saline strength of sea water The springs occur at Briscous, a few miles distant, whence it is conveyed to the elegant thermal establishment through pipes, the supply equalling 2000 gallons per 24 hours if required The cases which receive benefit are chiefly those in anæmia, however caused, and so forth The surroundings are attractive and the climate is described as, at the same time, bracing and sedative

THE BRITISH PHARMACOPŒIA, 1914

SOME of the wholesale drug houses have issued "Notes" on the new Pharmacopœia Messrs C J Hewlett and Son, Limited, 35 to 42, Charlotte street, London, E C, intimate that they will be glad to send a copy of their useful leaflet on this subject post free to any medical man on request It deals in a concise way with the additions, the notable omissions, and the principal alterations

◆

H R and A H—Something must be allowed for the general circumstances of the war, which, also, specially affected the publication in the direction complained of The publishers have announced their intention of returning to the previous shape The publication of an appendix would be a very expensive proceeding indeed

Miss E Piggott—We cannot trace the quotation and there is no reference to the matter in our Analytical Records

H L Morris and C H W—See page 46 of our last issue

COMMUNICATIONS not noticed in our present issue will receive attention in our next

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

THURSDAY

SECTION OF BALNEOLOGY AND CLIMATOLOGY (Hon. Secretaries—Chas W Buckley J Campbell McClure): at 5.30 P M.

Discussion

The Value of Military Medical Baths (opened by Dr Fortescue Fox)

N B—Members of the MEDICAL and SURGICAL SECTIONS are specially invited to attend and take part in the discussion

FRIDAY

SECTION OF ELECTRO-THERAPEUTICS (Hon Secretaries—S Gilbert Scott E P Cumberbatch): at 8.30 P M

Paper

The Effect of Modern Projectiles on Tissues as Demonstrated by X Rays Lantern slides and skiagrams will be shown

Discussion

(1) Methods for Localisation of Foreign Bodies; (2) The Treatment of Shell Wounds &c, by Ionisation

Members wishing to take part kindly send in their names to Mr S Gilbert Scott, 6 Bentinck-street, W as soon as possible Skiagrams for exhibition to be sent in the day before the meeting

HUNTERIAN SOCIETY Barbers Hall Monkwell-street E C

WEDNESDAY—8 30 P M Council Meeting 9 P M Hunterian Society Lecture:—Mr D J Armour: Surgical Experiences during the Present War

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, Society's Rooms West London Hospital Hammersmith road W

FRIDAY—8 P M Cases of Wounds caused in the War will be shown The following have promised to assist with Cases X Rays &c—Colonel Peterkin Lieutenant-Colonel C Robinson Mr A. Baldwin Mr McAdam Eccles Mr C C Choyce, Mr T Gray

SOUTH WEST LONDON MEDICAL SOCIETY Bolingbroke Hospital, Wandsworth Common S W

WEDNESDAY—9 P M, Mr K Goadby: Diseases of the Gums as they Affect the General Practitioner (Lantern demonstration.)

SOCIETY OF TROPICAL MEDICINE AND HYGIENE 11 Chandos street Cavendish-square, W

FRIDAY—8.30 P M Discussion on Bacillary Dysentery (opened by Dr H S Gettings)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST GRADUATE COLLEGE, West London Hospital, Hammersmith road W

MONDAY—10 A.M., Dr Simson Diseases of Women 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Dr Bernstein: Pathological Demonstration. 2 P M., Medical and Surgical Clinics X Rays Mr D Armour: Operations Dr Pritchard: Bacterial Therapy Department. Mr B Harman and Mr Gibb: Eye Department

TUESDAY—10 A.M., Dr Robinson: Gynæcological Operations. Dr Owen: Demonstration of Cases in Wards 12 noon, Mr T Gray: Demonstration of Fractures, &c 2 P M., Medical and Surgical Clinics X Rays. Mr Baldwin: Operations Dr Davis: Diseases of the Throat, Nose, and Ear Dr Pernet: Diseases of the Skin.

WEDNESDAY—10 A.M., Dr Saunders: Diseases of Children. Dr Davis: Operations of the Throat, Nose, and Ear 11 A.M. Mr Souttar: Demonstration of Minor Operations 12 noon Lecture:—Mr Souttar: Abdominal Diagnosis 2 P.M., Medical and Surgical Clinics X Rays. Mr Pardoe Operations Dr Simson: Diseases of Women. Mr Gibb: Diseases of the Eye.

THURSDAY—9 A.M., Dr Bernstein: Bacterial Therapy Department 10.30 A.M, Dr Simson: Gynæcological Demonstration. 12 noon Lecture:—Dr G Stewart: Neurological Cases 2 P M, Medical and Surgical Clinics X Rays Mr D Armour: Operations Mr B Harman: Diseases of the Eye.

FRIDAY—10 A.M., Dr Robinson: Gynæcological Operations. 10.30 A.M Surgical Registrar: Demonstration of Cases in Wards 12.15 P.M., Lecture:—Dr Bernstein: Applied Pathology 2 P.M., Medical and Surgical Clinics X Rays Mr Baldwin: Operations Dr Davis: Diseases of the Throat, Nose, and Ear Dr Pernet: Diseases of the Skin.

SATURDAY—10 A.M. Dr Saunders: Diseases of Children. Dr Davis: Operations of the Throat, Nose, and Ear Mr B Harman: Eye Operations 12 noon, Lecture:—Mr Souttar Surgical Anatomy of the Abdomen 2 P.M, Medical and Surgical Clinics. X Rays Mr Pardoe: Operations

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn road, W C

TUESDAY AND FRIDAY—3 P M, Lecture:—Dr A. Wylie Diseases of the Larynx

THE THROAT HOSPITAL, Golden-square W

MONDAY—5.15 P M. Special Demonstration of Selected Cases
THURSDAY—5.15 P M. Clinical Lecture

ST JOHN'S HOSPITAL FOR DISEASES OF THE SKIN 49 Leicester square, W C

TUESDAY—6 P M Dr W K Sibley Lupus Vulgaris and Erythematosus

THURSDAY—6 P M. Chesterfield Lecture:—Dr M. Dockrell: Tuberculosis of the Skin and Lupus Erythematosus

CHADWICK PUBLIC LECTURES, Lecture Hall Royal Society of Arts John-street Adelphi W C

FRIDAY—5 15 P M. Dr F M Sandwith War and Disease—I Continental Wars of the Nineteenth Century

For further particulars of the above Lectures, &c, see Advertisement Pages

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

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Remarks

ON THE

ESTIMATION OF PHYSIQUE AND STAMINA FOR SCHOOL PURPOSES[1]

By ALFRED A MUMFORD, B Sc Vict,
M D Lond,
MEDICAL OFFICER, MANCHESTER GRAMMAR SCHOOL

By "physique' we generally imply the attainment of such bodily structure and organisation as enables a person to put forth mechanical energy through the muscular system By "stamina" we generally imply the capacity for sustained vital activity, particularly when endurance has to be sustained against disintegrating influences, whether of strenuous work or of disease. The two qualities, though often closely allied, are by no means identical. Thus the medical examination needed for the study of physique of the British soldier, for candidates for cadetship in the Naval and Mercantile Marine Service, or for enrolment in the municipal Police Force is concerned primarily with the exhibition of physical energy On the other hand, medical examination in the case of candidates for participation in the benefits of a life assurance company, is concerned with stamina or stability It regards capacity for resisting the disintegrating forces of the various diseases and accidents that occur in modern social life—i e, the persistence of life rather than its power is under consideration.

The standards of physique hitherto prevalent have been largely those referring to adult life, or at least the later period of adolescence When we apply such standards to children we are faced with the fact that, even if we succeed in measuring the present powers of children, we are still a long way from being able to estimate the powers latent within, for the forces of growth of the mental and physical powers of the child are both hidden and incalculable and never stand still. This is particularly the case at the early stages of their secondary education. At first sight the problem seems insoluble, but I think further study will suggest where we may get enlightenment, though not entire solution

Standards of bodily growth as standards of physique—Pignet, a French military surgeon about 1900 made some studies of "robustness" of soldiers, and attempted to determine their physical force in terms of a formula which should express the relation between height, chest girth, and weight This formula is known as Pignet s factor, and essentially consists in saying that if from the numeral indicating the height in centimetres there are subtracted the two numerals representing chest girth in centimetres and the weight in kilogrammes, a numeral is obtained which in the absence of organic disease bears constant relation to general bodily vigour

Standards of nutrition are generally of more value for school purposes than standards of growth, at least for the early ages of life, for growth is only one of the results of nutrition Standards of nutrition are particularly necessary when considerable numbers of under nourished children exist in a group which is under review Soup kitchens for the poor preceded the establishment of popular national education in this country and abroad In France school canteens were established as early as 1867 From the time that J R Mayer proved the physiological application of the doctrine of the Conservation of Energy, and the consequent interrelation of bodily nutrition and the manifestation of power, it was inevitable that the consideration of the work expended in all the forms of activity and in growth that occur during school life should be accompanied by attempts to estimate the capacity of the child attending a public elementary school in terms of bodily nutrition, particularly under those conditions in which it was evident that adequate provision for obtaining food did not exist in the home

Standards obtained by grading according to type—A method of grading has been suggested by Mr Cecil Hawkins,[2] mathematical master of Haileybury College, which I have used extensively and find of great value in detecting departures from proper growth. Mr Hawkins has analysed some 40,000 measurements of height, weight, and chest girth of middle class boys which he had collected. He grouped them into their proper ages of 6 months interval from 10 to 18 years He has taken each group and separated it into 20 divisions, so that each division represents 5 per cent of the total measurements for that age There were therefore 5 per cent of all the boys of that age who were of that particular height, weight, and chest girth. Each of these divisions was then named as Grade 1, 2, 3, and so on to 20, so that by looking up the index book you can see whether a boy was among the biggest 5 per cent, the next tall 5 per cent, or the lowest 5 per cent We thus have the opportunity of grading any particular boy among his fellows of that particular age If he is not normal, and his weight does not correspond with his height, his grading in the three qualities will not correspond. He may be among the tall boys for height and not among the heavy boys for weight Moreover, if measurements be taken at successive periods of his life, say every 12 months, we can note whether the boy remains at one particular grade in his height, weight or chest girth, at 12, 13, 14, 15, we can also note whether his weight or his chest girth, which was at one time in proportion to his height, begins to fall off at 16 and 17 This is a common result in boys who are specialising in scholastic work. The great value of this method of individual grading comes out when we desire to estimate the stress of school life during later adolescence At 15, 16, and 17 the indoor life or the restricted food of the scholars begins to tell on bodily physique

Estimates based on medical inspection of children—The estimates or criteria suggested by the experience of medical inspection and examination of adolescent children attending school and hospital tend to separate into two groups —

1. Those which depend on the *rate and degree of bodily development* Among these by far the most important, in my opinion, is the period of eruption of the permanent teeth, particularly the canines, the bicuspids, and the second permanent molars There is considerable degree of variation in the age at which the several organs and systems of the body pass from their childhood to their adolescent stage The eruption of the teeth is the least subject to disturbance, and one may safely say that if all the bicuspids and the second permanent

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[1] An address to the Manchester Medical Society

[2] Physical Examination and Development of Public School Boys. Medical Officers of Schools Association. J and A. Churchill.

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1 Adapted for the exhibition of massive weight The whole physical frame here is very big The large muscles of spine, shoulder, hip and thigh, neck and upper arm are coarse fibred and well developed The movements are frequently slow, but they give one the impression of considerable power This condition may occur both among the dull and the clever boys

2. Adapted both for bodily agility and bodily strength. The bodily frame here is often less massive in build, though large and well knit The muscles of upper arm and shoulder, though not big, are still well developed and full of tone, and are fitted for rapid and effective action. The neck is long and thick and well set on the trunk and the body held very erect The chest, though not necessarily deep, has wide range of action, the difference between inspiration and expiration may be as much as 4 or 5 or more inches Such a boy is a born boxer, swimmer, runner, or athlete, and will develop in any direction he chooses to train his powers

3 The third type needs particular care and supervision during school life if he is ultimately to put forth his full innate powers The larger limb muscles and the bony framework are comparatively feebly developed. The nervous energy, though it may be very considerable in amount, is irregularly distributed, and tends to manifest itself either in some special handicraft or in some special intellectual channel, such as great language facilities, or its near ally, the mathematical faculty, or great imaginative faculties Here we need constantly to distinguish between sustained strength and short lived excitability, for, with rapid expenditure of nervous energy, rapid exhaustion is apt to set in. The sense of fatigue that should precede exhaustion and warn us of its near approach is apt to be absent Owing to the small size of the bodily muscles these children make a poor show when tested by nutritional standards or by standards of bodily physique To understand them properly we need to remember that though their intelligence or their dexterity is well in advance of their fellows, yet other parts of their physical frame are often behind. They are as childish in some directions as they are advanced in others We call them precocious children, and it is tempting to stimulate the growth of their brain instead of waiting for, what is for them even more necessary, the corresponding growth of their bodies Such children are at a further physiological disadvantage Being thin, they radiate heat very quickly, and consequently need a larger amount of food, particularly in the form of fat, than they often get This is a great difficulty among the clever poorer class children, where the higher cost of the hydrocarbons is apt to be considered in the household budget

It is in the direction of proper school treatment of such children that medical inspection of secondary schools often finds its hardest task. When tests of intelligence, of understanding, and of memory of these children are made, it is found that they range high They show keenness in school, and the form master, who only knows them during school hours, is apt to rate their powers of sustained work as high as their ready response Only the watchful parent realises how soon such powers are exhausted and what price is paid for school brightness It is necessary to direct special attention to the time such children go to bed, for their lack of stamina causes their bodily powers to resemble those of children of a younger rather than of the older age They need more sleep than their fellows of similar age Such boys also often retain the emotional qualities of childhood for a longer period than their less mentally endowed companions This matter requires particular consideration when they are to be punished. They are often unbalanced and uncontrolled, and it may be actually backward in accomplishments other than those in which they show precocity Most serious of all, such children retain the infantile susceptibility to bacterial invasions for a longer time than their more robust fellows, and at 10, 12, 13, and even 15 or 16, they are still unduly susceptible to the tonsillitis, rheumatism, sore throat, whooping cough, and other germs which their tougher comrades more readily resist Apart from their susceptibility to the tubercle bacillus, which, considering the opportunity for adequate nourishment and care that the middle class boy now possesses, is not often a very grave school danger, we need to consider their susceptibility to the micro organisms of rheumatism, with its endocarditis and chorea For this class of boy I believe that an illness, such as general rheumatism, chorea, &c, may be even more serious than an infection of tubercle

The physique of the modern secondary day school boy—It is sometimes stated that the increased urbanisation of modern life has led to a diminution in physique A complete record has been kept of physical measurements of the boys at the grammar school since 1881 All the measurements for the years 1881 to 1886 have been collected and averages taken. Similarly, the measurements from 1905 to 1910 were taken. Altogether somewhere about 7000 measurements have been utilised. Careful comparison shows that the modern boy is taller, broader chested, and heavier than the boy of a generation ago[4] He also maintains his level in athletic outdoor activities and more than maintains them in University attainments (*Vide* Physique of the Modern Boy, Manchester Statistical Society, December, 1912)

Manchester

FROST-BITE

BY A. W MAYO-ROBSON, C V O, F R C S ENG, D Sc,

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THE advent of severe weather accompanied by frost and snow has added another terror to war in the trenches in the shape of frost bite of the feet, followed in many cases by gangrene and loss of one or more toes and occasionally by more extensive destruction of the feet Experience in this country of the class of cases under consideration has hitherto been so limited that many surgeons of large hospital experience and the greater number of nurses have up to the present never seen or treated cases of gangrene due to exposure to cold.

In ordinary frost bite the action of cold leads to death of the tissues by shutting off the arterial blood supply, but as the obstruction of the blood supply usually occurs slowly, venous stasis marks the early stages, so that the extremities—the parts usually affected—assume a slaty blue colour, become numb, and are quite cold to the touch. Not only according to the degree of cold and the length of time the damaged parts are subjected to it, but also according to the treatment adopted to restore the circulation in the early stages, will be the degree and extent of the damage to the extremities The effects of frost bite may be molars are well displayed by the age of 11½ to 12 years the child is well ahead in his physical development, and if some of them are delayed beyond 13 years of age, we should look out for signs of delayed development in other organs.

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[4] See tables published in annual report of medical officer to the grammar school Manchester 1910

Standards of cardiac efficiency stated in terms of cardiac abnormality detected by ordinary physical examination of the chest are quite inadequate for school purposes and often misleading. The established methods of physical examination of the chest give us, it is true, certain information as to the existence of previous disabling disease. This information is, however, often misleading, and standards of cardiac efficiency based solely on it are often deceptive. This is particularly the case in auscultatory phenomena. Knowledge based on this does not sufficiently put us on our guard against the temporary cardiac and circulatory debility following acute febrile conditions such as influenza and tonsillitis. It does not tell us of damage done to the vasomotor apparatus by such diseases as diphtheria, nor does it guide us much in deciding upon the degree of efficiency of the heart muscle to withstand strenuous exertion. Dr Clement Dukes long ago (Second International Congress on School Hygiene) wrote "No physician can certify that the boy can run, although he may be able to say that he cannot."[3]

The principal school activities which call for cardiac efficiency are (1) Gymnastic exercise, including Swedish exercise, apparatus work, (2) outdoor games and sports, running, jumping, and general school games, cricket, lacrosse, football, &c., and (3) swimming.

Swedish exercises, as generally practised in schools, involve very little strain on the circulation, though they are capable of being carried to a considerable degree of severity under special conditions, but such excess is not a general rule. The exercises centre round respiratory and free limb movements. It may be said that almost any boy who is fit to attend school is also fit to attend the usual Swedish exercises, and yet medical certificates are constantly sent to school debarring boys from "all gymnastic work," which includes or is mainly composed of Swedish drill, to the great detriment of many who would be benefited by moderate exercise.

The strain that swimming exerts on the circulation is somewhat different, for there are here three facts to be considered. 1. The effort put forth by the good swimmer is much less violent and less rapidly exhausting than the effort put forth in ordinary racing and sports. This is owing to the buoyancy of the water, though in the case of a poor swimmer there is such excessive and useless expenditure of energy that the exercise may be violently acute. 2. There is a much greater demand upon heat production owing to the rapid radiation and conduction of heat from the body that occurs in the liquid as distinct from the atmospheric medium. Consequently the spare frame suffers more than the frame with better endowment of subcutaneous adipose tissue. 3. The natural reflex contraction of arteries and capillaries in response to the lowered temperature of the water causes the arterial blood pressure to rise, and in many persons causes the fingers to go white and numb. There is no real disadvantage if the immersion is only short, and if the vascular constriction gives way rapidly when vigorous bodily movement outside the water is encouraged. If it does not give way speedily, bathing should be prohibited. Under any circumstances, where it occurs the use of the cold bath should be very much restricted.

Estimation of physique and stamina by examination of the respiratory apparatus.—The changes which occur during adolescence in the respiratory apparatus are equally well marked. The chest, which was circular in infancy, becomes slightly oval in childhood. It is difficult accurately to estimate the chest girth of a child under 8 or 9 years old, unless exceptionally well developed. The narrowness of the lateral diameter of the chest causes the shoulder blades to protrude so that the chest circumference varies with the position of the arms. The chest becomes still more markedly oval during adolescence. In the case of vigorous children, the ribs are held well forward and free play is noticeable between the sternum and the costal cartilage, so that at each full inspiration the anterior part of the ribs tends actually to leave the sternum behind. As the movements take place freely and fully in all directions the bases of the thorax participate, so that on a lateral inspection of the bare chest we notice a vigorous lifting up and pushing forward of the whole sternum, instead of an antero posterior flattening of an imperfectly expanded chest, whether this is associated with defective respiratory muscular power or with lymphatic enlargements causing obstruction to the entrance of air in the upper respiratory tract. In examining the chest of the young adolescent, then, we need to note the difference between a deep and a shallow thorax, and to note the degree of bending backwards of the upper or bending forwards of the lower portion of the spine that so often accompanies the rounded shoulders of those whose respiratory range is very limited.

Estimate of physique and stamina based on the condition of the musculature of neck and spine.—In regard to scoliosis in adolescent school life the significance of the milder forms is by no means clear. Many of them are physiological and are due to unequal development of the two sides of the body. Such require general outdoor existence. A certain limited amount of spinal weakness is due to pure fatigue in children who are of defective muscular power. Its occurrence during school life is generally ascribed to bad posture during school hours. In such cases I think it is wiser to turn attention first to school curriculum even before scrutinising minutely the school furniture, and to see whether the natural body balance cannot be restored by greater attention to physical development and change of occupation and position rather than by consideration of desks, seats, &c. Still more potent as a cause of minor spinal curvature and defective neuro muscular control is the circulation of toxic products of disease, rheumatism being especially a frequent cause both of minor spinal curvature and flat foot. It is quite rare to see these cases without an antecedent history of rheumatism, chorea, or tonsillitis.

Estimates of physique and stamina based on consideration of the general muscular build.—It is essential to have clear ideas of the width of the physiological range that exists in the development of the neuro muscular system in different individuals, quite apart from the pathological results of past disease and ill health. There are practically three natural physiological types of development of the neuro-muscular system.

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[3] See also School Athletics and Boys Races, Wm. Collier. J. and A. Churchill.

Routine Orders, Nov 23rd, 1914, a copy of which is appended

353 FROST BITE, PRECAUTIONS AGAINST

Cold is likely to give rise to frost-bite when the circulation of blood is interfered with or rendered feeble

The feet are likely to be frost-bitten under the following circumstances —

1. When boots and puttees are too tight
2. When the general circulation throughout the body is less active than normal
3. When the socks, boots, and puttees are wet

The best precautions are on the following lines —

1. Boots should not fit tightly, but should be at least a size too large When large boots are worn it is well to wear two pair of socks, but this is dangerous if the boots are small, as it leads to further pressure on the foot. Puttees should never be applied tightly
2. The general circulation can be kept up by keeping the body warm and dry A mackintosh sheet worn over the greatcoat is of assistance where no waterproof is available.
3. A dry pair of socks should be carried in the pockets when available.

Officers should see that dry standing is provided in the trenches whenever possible by means of drainage, raising of the foot-level by fascines of brushwood or straw with boards on top, or by the use of pumps where these are available

RESULTS OF CLINICAL INVESTIGATIONS BASED ON THE METHODS OF ABDERHALDEN

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THE first edition of Abderhalden's book on defensive ferments appeared in April, 1912, while a fourth edition of the same work, very considerably enlarged, was published in April, 1914 An English translation of the third edition was also published in the early part of 1914[1] During this period the separate publications dealing with this subject have exceeded 300 in number[2] These facts indicate very clearly the great interest shown by the medical profession in the problems connected with the ingenious theory evolved by Abderhalden as to the means of defence possessed by the animal organism against the invasion of disharmonious substances Further, they show a marked appreciation of the importance of any possible application of his theoretical views to the practical side of medicine No one has realised more clearly than Abderhalden himself that, once the possibility of a *specific* test was established, it was only a matter of time and perseverance before the application of the test would be extended in all possible directions And when he considered that the methods worked out by himself and used for years in his studies on ferments generally—that is, the dialysation process and the optical method—were capable of demonstrating the existence of specific ferments in the case of pregnancy, he drew from this fact every possible conclusion as to the applicability of the test to the study of malignant tumours as well as to numerous other problems of medicine

The practical value of the test has since been experimented with all over the world, and the cardinal question is still undecided There is still, and probably will be for many years to come, a considerable divergence of opinion as to the possibility of demonstrating the presence of specific ferments in the blood serum, and of making use of such demonstration for diagnostic and other practical purposes Were this possibility once established we should attain the solution of many problems of primary and vital importance It is not, of course, a diagnosis of pregnancy in the first week that is going to bring about a serious alleviation in human suffering, moreover, gynæcologists will readily agree that it is very rarely that they are in doubt as to the differentiating between an ectopic pregnancy and a salpingitis, or between a pregnancy of the first few months and a myoma Of real importance would be the fact that one could make an early diagnosis of malignant tumours, or give a prognosis, after operation in a case of malignant disease, or differentiate between hysteria and epilepsy in doubtful cases

For more than a year I have been examining patients with a view to assuring myself of the possibility of demonstrating specific ferments in the blood serum The annexed table only shows the results of cases examined during the first six months of last year, from which time I have been able to work with an established technique and under properly favourable conditions, in a laboratory specially fitted up for the purpose and supplied with the best apparatus During the first part of the time I had to struggle with many difficulties in trying to avoid the possible errors arising out of the complicated technique

It is with great pleasure that I offer my thanks to Professor Abderhalden for the courtesy he showed me last summer on the two occasions that I visited his institute I am also much indebted to the medical officers of the London Hospital, as well as to Dr J Kennedy Will, superintendent of the Bethnal Green Asylum, for their kindness in allowing me to examine their cases Dr P N Panton, director of the Hale Clinical Laboratory, has repeatedly undertaken the bacteriological control of sterilised water, serum, dialysates, and contents of polariscope tubes, and rendered much help both by his keen interest in the subject and his friendly assistance

On the accuracy necessary in the employment of the technique no one has insisted more strongly than Abderhalden himself, and it has become customary for workers in this field to give a fairly detailed account of each stage of their procedure if they wish to avoid any suspicion of inaccuracy in method Now, in dealing with this aspect of the case it must be remembered that all methods are based on details of two kinds—namely, such as are of primary and universal importance, and such as are secondary or personal only Thus, if we are dealing with the estimation of the opsonic index, it is clear that the exactly equal amount of time given to the incubation of the actual test and of its control respectively is of primary importance, while the exact means employed in spreading the mixture of leucocytes, bacilli, and serum on the slide have only a personal interest So, too, in the Wassermann reaction the preparation and standardisation of the antigen are of the first importance, but whether one uses a capillary tube or a test tube when making a mixture of the necessary constituents will be a matter of personal preference only

In Abderhalden's methods also there are several details of secondary importance I shall not dwell on any of these secondary details, but shall only give an account of such as are obviously primary marked by mere congestion and œdema, analogous to chilblains of the feet, by more acute inflammation with blistering of the involved parts, or by gangrene more or less extensive

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[1] Defensive Ferments of the Animal Organism (John Bale Sons and Danielsson) THE LANCET May 16th 1914 p 1399.

[2] Out of this number only 14 have appeared in the English language chiefly in the American medical journals.

The gangrene resulting from frost bite is associated with venous stasis, it therefore assumes a dark brown and later a blackish colour, which clearly defines it from the living tissues It often happens that parts apparently gangrenous may be only affected superficially, so that a toe may live and become useful an inch or more beyond the line of demarcation of the skin Dark patches on the soles and heels are usually superficial and should be left to nature until separated, when the deeper layers of the skin that remain can be covered with epithelium

In the treatment of frost bite it is of the utmost importance to save as much of the injured extremities as possible, and as it is impossible to say how much of the damaged tissues will survive, immediate or early amputation is absolutely contraindicated In some of the cases admitted to the Third London General Hospital the feet quite up to the ankle were livid in appearance, cold to the touch, and absolutely devoid of sensation three to four days after being frost bitten, yet under treatment complete recovery, or recovery with gangrene limited to only portions of the toes, resulted An important factor in producing tissue death in frost bite is the destructive changes that take place in the blood corpuscles exposed to excessive cold within the engorged veins

It is a well known fact that the frozen parts cannot be subjected to the action of heat in any form without great risk, as too rapid thawing leads to inflammatory exudation and the danger of gangrene from pressure Experience has shown that the best treatment at first is friction with snow or cold water in a cold room, the changes to a warmer atmosphere being gradually brought about Frictions with turpentine and oil or with spirit and soap liniment are useful remedies in the early stage, and after the friction the limbs should be raised on pillows and swathed in cotton wool, which can be held in position by bandages applied loosely so as to avoid any danger of constriction If blisters form, or discoloration of the toes or other parts shows that gangrene is probable, the whole foot should be sterilised by rubbing with oil of turpentine to cleanse the skin or with spirit containing 1 in 500 biniodide of mercury, after which strips of sterilised double cyanide gauze should be applied between the toes and the same gauze made to cover the whole foot, which is then enveloped in sterilised cotton wool Any blisters—which will be found to contain dark blood stained fluid—should be snipped and carefully dried and dressed with the spirit and biniodide lotion Painting the foot with tr iodine would probably be quite as effectual, as an antiseptic, as the spirit and biniodide solution

Every effort should be made to keep the parts dry and sterile, and if gangrene occurs the surgeon should on no account make too great haste to amputate, as the tissues adjoining the line of demarcation become more and more healthy and the line of granulation tissue between the dead and living tissues, if kept aseptic, gives rise to little discharge and can be kept aseptic by a daily dressing with the spirit solution Ultimately, when it is seen what flaps of skin are available, the dry, shrivelled gangrenous parts can be removed and the bones severed at such points as will allow the flaps to be conveniently applied to make a good cover to the stump Where the gangrenous process has only involved the superficial layers of the skin, the separation of the necrosed part should be left to Nature and afterwards skin grafting will be found useful If as the result of neglect or the use of wet dressings the gangrene has assumed the moist variety and the wounds are infected, the spirit dressing will still be useful, and the foot should be well dusted with equal parts of zinc oxide and boric acid, so as to make every effort to convert the moist into dry necrosis, and thus to avoid general septic complications and the danger of the gangrene spreading

In frost bite, especially of the first and second degree, great pain is often felt, but when gangrene supervenes the pain may completely subside The free use of opium or morphia proves beneficial, not only in the relief of pain and by securing sleep, but also by its effect on the circulation My colleague, Captain F H Humphris, has been treating a number of our non gangrenous cases by a daily application of static electricity, which seems to hasten convalescence by giving tone to the vessels and restoring the normal circulation in the feet

Prevention

The very fact that only a small percentage of those exposed to the same conditions of cold suffer from frost bite would seem to show that the condition may be a preventable one, and if that be the case it behoves those who are responsible for the foot and leg gear of our soldiers to give the matter their careful consideration Anything tight about the legs or feet that may impair the proper circulation of the blood—such as tight boots, which act by direct pressure, or too tightly applied puttees, which may possibly act by pressure on the veins returning the blood from the feet—must be injurious and may act as predisposing causes Inadequate covering to the feet in the shape of faulty or worn out boots or worn out or too thin stockings act as direct causes, as wet feet chill quickly If the feet get wet and the men have to stand for several hours in melting snow, which is a freezing mixture, the chances are very much in favour of them suffering from frost bite The danger might possibly be remedied by the wearing of high boots impermeable to wet by all men serving in the trenches It would be interesting to know if the soldiers of other armies wearing long boots and not wearing puttees suffer equally with our men, this could doubtless be readily ascertained and might prove useful

Finally, I would suggest that some instruction should be given to the men serving in the trenches both as to care in attending to the coverings of their feet and as to the avoidance of having anything too tight about their legs that may interfere with the circulation I think it would be also useful if they could have a little instruction in the methods to be employed as first aids in case of frost-bite, for every case might be saved if properly treated in an early stage The importance of the subject cannot be over estimated, as we have lost, and are losing, a very considerable number of our men from this cause, and the fact that a very large percentage of those sent home will be unable to return and will have to be invalided out of the army and to be pensioned for life makes the matter one of the first importance to the country

Since writing the above Sir Alfred Keogh has been so kind as to furnish me with the Army edition of Abderhalden's "Abwehrfermente" was made use of, as well as his separate articles in the periodical medical journals, chiefly the *Münchener Medizinische Wochenschrift* Thus for instance, as will be seen from the table, I began to use only 1 c.c. of serum for each test in the dialysation process as soon as I found that Abderhalden recommended this amount with the object of avoiding the appearance of a positive reaction in the dialysate of the control test. As regards details of technique recommended by other authors I found it useful to employ the process suggested by Oeller and Stephan of preparing the organs by means of the freezing method. The method of freeing the organ from blood by washing out its blood-vessels can be carried out quickly and successfully in the case of lung tissue, but is not of much help in the case of other organs, seeing that one has to spend just as much time afterwards in freeing them by the usual method.

I did not make use of a "preliminary dialysis" (the Vordialyse of Abderhalden) as it does not seem to affect the result very much, seeing that if one uses 1 c.c. of serum the dialysate of the control practically always gives a negative reaction.

In the framing of the table of results the directions given in the fourth edition have been followed. Whenever the dialysate of the control test—serum alone—gave a positive reaction the result was still marked with a –, and the results of the other tests marked accordingly—that is, e g, with a (+) instead of a + in the case where serum alone gave (+) and serum + organ gave – To indicate that the dialysate of serum alone gave a positive reaction the amount of serum used has been figured in brackets This certainly makes the reading of the results easier

Besides the control of serum only, another control was usually put up—namely serum, inactivated at 58° to 60° for half an hour, with the corresponding organ. This test does not appear in the table, as it only once happened that the corresponding dialysate showed a very slight reaction. I also tried on several occasions the use of guinea pig and rabbit serum with the view of ascertaining myself the possibility of intensifying the original reaction by these means Stephan found that the addition of guinea pig serum makes the test much more strongly positive whenever a positive reaction is expected. Occasionally I obtained a slight increase in the intensity of the reaction by adding 0 1 c.c. of rabbit or guinea pig serum to the test, but the difference is not sufficiently marked to attach great importance to this modification Moreover, as I have used the optical method in conjunction with the dialysation process, it has seemed to me advisable to indicate the results obtained by each of these methods on one line, so as to permit of easy comparison.

The different peptones are indicated by letters B = placenta peptone obtained from Höchst A, A_1, A_2 = different placenta peptones prepared by myself C = a peptone prepared from 7 cases of scirrhus of the breast L = lung peptone prepared from normal lung tissue. Li = liver peptone from normal liver tissue S = a sarcoma peptone, from a case of mediastinal sarcoma. W = Witte peptone Si = silk peptone

The table clearly shows that the results of this investigation do not confirm the possibility of demonstrating specific ferments when Abderhalden s directions are followed. The only conclusions we are justified in drawing are as follows 1. The serum of pregnant patients contains proteo and peptolytic ferments which are able to decompose any kind of coagulated albumin or peptone prepared therefrom 2 Whenever proteolytic ferments are found in the serum of patients with malignant tumours or other diseases, they have the property of acting in the same non specific manner 3 The serum of perfectly normal individuals does not contain these ferments, at least in the great majority of cases A negative result when we attempt to demonstrate proteolytic ferments in suspected cases of pregnancy or carcinoma speaks strongly against the existence of these states, and therefore may be of value in practice

After having prepared more than 60 different substrates, and having observed constantly the results of numerous tests, I am strongly of opinion that the varying degrees of intensity in the resulting reactions depend mainly on the physical form in which the substrate is presented to the ferments The more spongy the tissue, as in the case of placenta—that is to say, the more of its surface that can be exposed simultaneously to the action of the ferments—the deeper and the more decisive will be the intensity of the reaction. When, on the other hand, the prepared organ, as in the case of brain tissue, gives us pieces which are neither spongy nor dendritic in appearance, then the reaction is always less intense and more difficult to estimate, particularly so when the pieces are not sufficiently small.

And so it happens that a beginner, who has learned to prepare properly a placenta albumin, will obtain apparently specific reactions by examining only cases of pregnancy, he will get a positive reaction with placenta albumin, a negative one with other substrates—for instance, with carcinoma and with kidney albumins But let him look at the appearance of his substrates and compare them. Only by repeated preparation does one learn to prepare the substrates according to Abderhalden s directions Yet it is impossible, and everyone who has had personal experience in preparing substrates will agree to this, to make the carcinoma albumin appear in the same finely divided state that placenta albumin exhibits to the naked eye Paradoxical as it may sound, the more one follows Abderhalden's directions in the preparation of the substrates the less one is likely to meet with specific reactions A perfect placenta will give a positive reaction not only with a serum rich in ferments, as in the case of general paralysis in the last stages, or of old epileptic insanity with fits following on the top of one another, but also in a case of pulmonary tuberculosis that may fail to react with placenta prepared in a less elaborate way

Besides the placenta peptone put on the market by Höchst, which, as can be seen from the table, has proved to be a far from infallible reagent for testing pregnancy, there are other preparations brought on the market by some people who are apparently in a great hurry to make the best out of Abderhalden's promising scientific work without even taking the trouble of giving to the ' carcinoma extracts,' &c., the proper external appearance that a reagent should have when prepared according to Abderhalden's instructions Abderhalden himself is of opinion that it is premature, while the whole question is in the experimental stage, to put on the market any 'diagnostica ' I think that they can do even more harm to the field of research in question than those profound articles in which authors report on so many cases of pregnancy or tuberculosis examined without taking the trouble to examine even one normal case, or articles where every result of an occasional test is followed by learned deliberations about the rules for diagnosis, prognosis, and treatment of disease to be drawn from it

The future will show how far the investigation of the serum for the presence of proteo and peptolytic ferments will be made use of for the routine work of clinical examination There is no doubt about the great service rendered by Abderhalden to the science of physiology and to medicine by introducing and

Obtaining the serum —The blood has always (unless otherwise stated) been taken from the patient about one hour before the midday meal, and therefore on an empty stomach It was drawn off from the cubital vein by means of a dry needle, to which was attached a short length of rubber tubing, and passed into wide sterile centrifuge tubes fitted with a metal cap and having a capacity of 25 c c After standing for 1½ to 2 hours it was centrifuged for half an hour in a good electric centrifuge, starting at a slow speed and gradually increasing to the desired rate The serum was then poured off and again centrifuged for ten minutes It was then carefully pipetted off, the small disc of red corpuscles at the bottom of the tube being left, still covered with at least 0 5 c c of the serum so as to avoid all risk of drawing up any of the corpuscles The serum so obtained was practically always found, on microscopic and spectroscopic examination, to be quite free from formed elements or from any traces of hæmoglobin, and where such traces were found to occur the fact is noted under the experiment in question When the investigation was first undertaken tubes were used of a capacity of only 10 c.c In these cases it was found that the clot often adhered to the sides of the tube and did not come down to the bottom when centrifuged. Mechanical separation by means of a glass rod had to be resorted to, and hæmolysis sometimes resulted. This is avoided by using wider tubes of 25 c c capacity, and a relatively greater amount of serum can be obtained

Dialysing tubes —The tubes, No 579A, of Schleicher and Schüll, of Düren, were used They were always carefully tested for impermeability to albumin and for even permeability to peptones, and were never used more than three or four times without being re tested Occasionally the tested tubes of Schöps, of Halle, were used, but these were tested again before use Impermeability to albumin was tested by means of the biuret reaction, and later the sulphosalicylic acid test was used as a control to the biuret reaction In the case of the biuret reaction all danger of making a false personal estimate of the colour value was eliminated in the following manner A friend, who knew nothing of the experiment otherwise, was given the numbered test tubes one by one, and his estimate of the colour noted down The tubes were again given to him at random, and the values of his first, second, and even third estimates were compared for each tube When these agreed between themselves one could have no doubt as to the accuracy of his estimate, and if the slightest suspicion of doubt arose the tube in question was rejected

As concerns equal permeability to peptones they were not entirely satisfactory If we take a 0 5 solution of silk-peptone and use 5 c c of this we get a strong reaction of the dialysate with 0 2 c c of ninhydrin, but it must be noted that in this case it is not possible to observe slight differences in the intensity of the colour reaction But by using 2 5 c c of a 0 1 solution of peptone these differences become readily observable, and when this method was employed it was found that the tubes were not equally permeable to the peptone The differences observed were very slight, yet even the same series of tubes on being retested would show a slight difference again as compared with the first testing Thus they could be used only on the condition that no attention were paid to very slight differences of colour, marked differences alone being of any value

Preparation of the organs —Placenta was obtained immediately or shortly after delivery Tumours were obtained from the operating theatre, and only exceptionally from the post mortem room, in which case only fresh portions, showing no débris, were chosen. In all those cases where organs were obtained from the post-mortem room, only those were chosen in which the organs were normal (preferably cases of accident) and in which the post-mortem examination was held within 24 hours of death

When obtained, fibrous tissue, blood vessels, and nerves were cut away, and the remaining portion cut into small pieces or passed through a mincing machine This was then washed under a stream of water on a sieve, while, by continuous squeezing with the fingers and with pestle and mortar, the blood was washed out, at the same time that the small bits of fibrous tissue and blood vessels were carefully extracted Then the tissue was suspended in water and again carefully searched for fibrous tissue and vessels In the case of the placenta this operation was completed within 4 to 5 hours, on a few occasions only was it necessary to leave the organ overnight in water, as it could not be entirely freed from blood by the end of the working day Microscopic examination of the placenta, just before boiling out the dialysable substances, shows that it now consists chiefly of decidual cells, with, of course, a variable amount of fibrous tissue but no corpuscles or leucocytes Suspended in water the pieces appear snow white and spread on wet filter paper compare closely with this in colour—that is to say, they have a slightly greyish tinge A true snow white colour of the boiled organ was only obtainable by the use of the freezing method, the sections being cut to a thickness of 20 to 40 microns

The organ was then boiled out six times, 3 to 5 drops of glacial acetic being added, on first boiling, for each litre of distilled water After each boiling the tissue was squeezed out thoroughly The organs were stored in distilled water with chloroform and toluol and the bottles put away in an ice chest

When these organs were tested by boiling them out with five times the amount of distilled water they were found to be quite free from dialysable substances in nearly every instance, very occasionally they had to be boiled out again. They were also found to be quite satisfactory when examined by the other tests described in the third edition of "Die Abwehrfermente" Somewhat more stringent tests are suggested in the fourth edition, the organs, when taken at random and subjected to these, still showed themselves to be completely free from dialysable substances These latter tests may be illustrated by the following example 3 grm. of the organ are taken with five times the quantity of distilled water and incubated for 24 hours The water is then filtered off, the organ is then boiled for five minutes with the same amount of fresh distilled water, and this is then filtered through the same filter into the first filtrate The combined filtrates are evaporated down to 1 c c, 1 c c of 1 per cent ninhydrin is added and the whole is boiled for one minute No reaction, indicating the presence of dialysable substances, was ever obtained

In the actual experiments the amount of organ used was always the same for each dialysing tube used in the experiment—namely, 0 1 or 0 2 grms

Preparation of peptones —In the preparation of peptones it was found that, after evaporating the neutralised fluid to a thin syrup, and adding methyl alcohol to this and heating it, some of it dissolves and precipitates subsequently with ethyl alcohol, but that a part is not dissolved and remains on the filter paper In his fourth edition of "Die Abwehrfermente" Abderhalden points out that this may be used as well as the part that filters through It dissolves readily in water, and is sometimes greater in bulk than the filtered portion. This part, however was not made use of in this investigation The peptones contained in it are obviously of slightly different constitution to those that pass through the filter, and it seemed desirable to use peptones of as equal constitution as possible Otherwise it would certainly be advantageous not to reject them, since it is difficult to obtain much peptone from an organ Thus in the case of squamous-cell carcinoma 7 patients were required to obtain 50 grms of material, from which barely 3½ grms of peptone could be extracted

The precipitate obtained with ethyl alcohol was dried either over sulphuric acid or over phosphorus pentachloride In the first case the resulting powder was yellowish, in the second it was white In either case a 5 per cent solution of the powder was made up in physiological salt solution, and this agreed with Abderhalden's requirements in giving a rotation of −0 75° on the average, varying from about −0·90 to −0 60

The three field polariscope of Schmidt and Hänsch was employed, with a heating apparatus attached The heating apparatus was not standardised at first, it was subsequently found that there was a difference of 2° C between the reading of the thermometer and the actual temperature round the slots on which the tubes rest during examination This difference however, has been of no importance seeing that the tubes were always removed from the heating chamber immediately after examination, and replaced in the incubator

Some further remarks concerning the technique have still to be made As a guide to this part of the work the third

Table showing Results of Clinical Investigation —(Continued)

No	Dialysation process		Optical method.	Diagnosis
	Amount of serum used	Serum +		
82	1 0 —	Pl — Ts — Ts.s ((+)), Ov s. ((+)) Br —	A_2 — (·01)	Melancholia, female
83	(1 0) —	Pl. — Ts — Ov s ((+)) Br —		Dementia præcox female
84	1·0 —	Pl — Ts — Ts s ((+)) Ov s — Br —		Dementia præcox male
85	1 0 —	Pl + C B +	A_2 — (·03) S ? (·04)	Carcinoma of breast
86	1·0 —	Pl — C B — Pl s —	A_2 ? (·04) S ? (·04)	Rheumatism no pain no temperature at the time of blood taking
87	(1 0) —	Pl ((+)) M ((±)) Ty P ((+)) Ov + (±) Ov s (+) ±		Graves's disease
88	1·0	Pl.h (−) Pl s (±) Tm. (+), Ty P (+) Ts (+)		Sprained semilunar cartilage male
89	(1 0) —	Pl.h — Pl.s — Tm — Ty P — Ts. — Ov h — Ov s —		Graves's disease
90	1·0 —	Pl — C B — C Lv —	B — (·03) Li — (·03)	Pregnancy eighth month primipara, normal
91	1 0 —	Pl — C.B ((±)) C Lv —	A_2 — (·02) Li — (·02)	Pregnancy ninth month primipara normal.
92	1·0 —	Pl. ((+)) C B — C Lv —	A_2 — (·02) Li + (·05)	Injury to knee male, aged 15.
93	1 0 —	Pl ((+)) C B — C S +	A_1 — (·03) A_2 — (·03) C — (·03)	Pregnancy ninth month primipara normal
94	1·0 —	Pl — C B — C S +	A_1 — (·03) A_2 ? (·04) L — (·03)	Pregnancy ninth month
95	1·0 —	Pl. ((+)) C.B — C S —	A ± (·05)	Gastric ulcer male aged 40
96	1·0 —	Pl + C S —	A ? (·04)	Dilated stomach male, aged 39
97	(1 0) —	Pl —		Normal male aged 54
98	(1·0) —	Pl ±	A ± (·06) B — (·05) L ± (·05) Sl — (·02)	Parturition tenth day
99	1 0 —	Pl (+) C B ((±)) Pl.s ±, K —		
100	1·0 —	Pl (−)	A_1 ? (·04) Li — (·05)	Pregnancy seventh month primipara, normal
101	1·0 —	Pl — C B ± Pl s (+) K —	A_1 — (·02)	Pregnancy eighth month primipara normal
102	(1 0) —	Pl ±	A_1 — (·03) Li + (·05)	Normal female aged 30
103	1·0 —	Pl ((±))	A_1 — (·03) W — (·01)	Fractured femur male aged 50
104	1·0 —	Pl (±)	A_1 ? (·04)	Pregnancy fifth month primipara normal
105			A ± (·05)	Pregnancy seventh month primipara normal
106	1 0 —	Pl — C B (+) C S + Lg +±	A_1 + (·05) W + (·05)	Pregnancy normal eighth month primipara
107	1 0 —	Pl (+) C B — C S — Lg (+)		Osteoarthropathie cause ?
108	1·0 —	Pl. (±) C B ± C S — Lg ++	C — (·02) S — (·03)	Normal
109	1·0 —	Pl ±+ C.B (±) C S ± Lg ±++		? Carcinoma of stomach
110				Pregnancy in labour normal primipara.
111	1·0 —	Pl +	B — (·02)	Pregnancy seventh month
112	1 0	Pl +		Pregnancy eighth month
113				Lead poisoning Abortion 24 weeks before examination
114	1·0 —	Pl ±	B ± (0 5)	Pregnancy seventh month normal Serum kept in ice-chest for 24 hours before examination
115	1·0 —	Pl ± C B — S +	B ± (·07)	Pregnancy seventh month normal. Serum kept in ice-chest for 14 days before examination
116	1·0 —	Pl + C B — S ±		Sarcoma of breast.
117	1·0 —	Pl. (+) C B — S (−)		Puerpera, tenth day sapremia.
118	1 0 —	Pl ± C B (+) M. (+)		Hæmorrhoids, female Last menstruation 2 weeks ago
119	(1·0) —	Pl (+)	B — (·03)	Vomiting Acidosis ? Pregnancy Last menstruation 5 weeks ago
120	1·0 —	Pl + C B ± M. +	A_1 + (·05) W — (·05)	Pregnancy seventh month primipara Serum kept in ice-chest 2 days before examination
121	(1·0) —	Pl (±)		Carcinoma cervicis. Serum kept in ice-chest till next day
			A_1 + (·06) W + (·06)	Chronic rheumatism aortic regurgitation wasting Temperature normal 3 weeks

Pl = Placenta Pl.h human placenta Pl.s sheep's placenta B E = Formed elements of blood C B = Carcinoma of breast C.Lv carcinoma of liver C S carcinoma of sigmoid flexure. S = Sarcoma. S M = Sarcoma of mediastinum Lg = Lung Lg M lung miliary tuberculosis Lg s. sheep's lung Br = Brain Lv = Liver St = Emulsion of staphylococcus albus M = Muscle M h human muscle M s sheep's muscle Ts = Testicle Ts s., sheep's testicle Ov = Ovary Ov s sheep's ovary Ty = Thyroid Ty P thyroid parenchymatous Tm = Thymus K = Kidney

continuously working at the improvement of his new methods of research

At present, according to our experience, the less control one uses in examining cases the better results one is likely to get If anyone were to examine 100 cases of pregnancy and as many cases of robust healthy adults with placenta albumin only, the probability is that by proper working he would get an expected result in nearly every case examined and declare that Abderhalden's test is a specific test for pregnancy Let him now use other well prepared substrates say a carcinoma albumin, he will come to the conclusion that the Abderhalden test is not a specific one, but that the serum of a pregnant patient occasionally gives a positive reaction with carcinoma albumin If he will use besides a few other substrates—e g human and sheep's testicles and human muscle—he will find himself still more dubious as to the specificity of the proteolytic ferments in blood serum He will lose all faith in it as things stand now if instead of taking healthy people as controls, he examines patients' serum collected at random in medical and surgical wards

If someone will compare the conclusions that I have come to at the end of a year's experience with Abderhalden's methods of investigation, with my article on the subject in the *London Hospital Gazette*,[2] independently of my own experimental work, he may be surprised at the optimistic tone of the latter But there is nothing surprising in it There is a distinct difference between theory and practice Ehrlich's chain theory preceded the complement deviation test And I am still, as ever, full of admiration for Abderhalden's theoretical views on the action of ferments in the animal organism, and firmly believe that in time one will be able to demonstrate specific ferments in the blood serum[4]

Cambridge-terrace Regent's Park

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[2] London Hospital Gazette xx 8 1914

[4] For a complete bibliography see fourth edition of Abderhalden's Abwehrfermente Verlag von Julius Springer Berlin

Table showing Results of Clinical Investigation

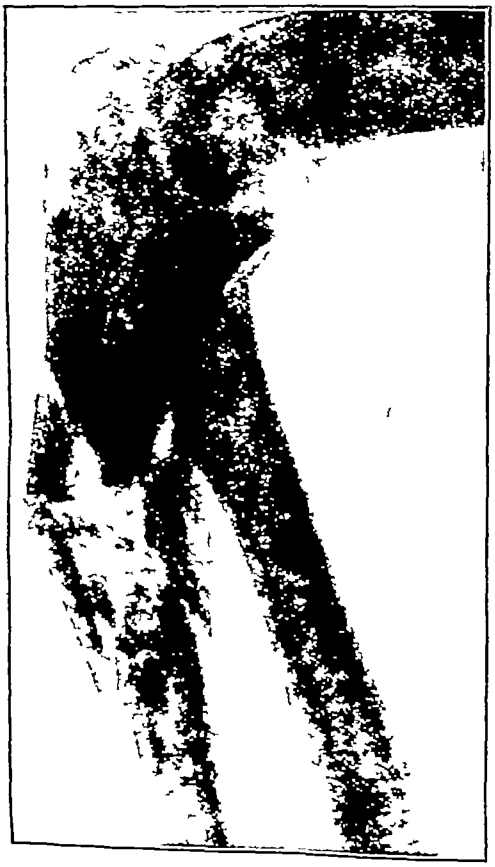
No	Dialysation process		Optical method	Diagnosis
	Amount of serum used	Serum +		
1			B + (05) C + (·06)	Carcinoma of breast in a male
2	1 5 —	Pl. (+) B E — C B —		Pregnancy normal primipara, eighth month Serum 3 days old.
3	(1 5) —	Pl + + C B —	C + (·05)	Puerpera normal third day
4	1 5 —	*Pl + C B —*	A + (05)	Pregnancy normal in labour
5	1 5 —	Pl +	A + (06) C + (09)	Pregnancy normal in labour
6	1 5 —	Pl + C B —		Puerpera third day normal
7	1 5 —	Pl ((+)), C B ((+))	A — (02)	Hæmorrhoids male healthy age 31 before operation
8			A — (03)	Eczema.
9	(1 5) —	Pl ++	A + (·06)	Puerpera normal 24 hours
10	+1 5—	*Pl +, C B +*	A ? (·04) C + (·07)	Carcinoma tongue age 64 Operation 1904 for carcinoma right side of tongue Now carcinomatous ulcer left side of tongue
11	+1 5—	Pl +, C B —	A — (·02) C ? (·04)	Puerpera, 2 hours post partum primipara
12	(1 5) —	Pl + C B —	B + (·05)	Pregnancy normal seventh month
13	+1 5—	Pl ++	B — (0)	Pregnancy normal seventh month primipara
14	1 2—	Pl. +	B + (·05)	Pregnancy normal seventh month
15	(1 5) —	*Pl ++*	A + (09)	Pregnancy normal eighth month, primipara
16	+1 5—	Pl + S M ++	A + (·07) B + (·05) C + (·06)	*Pregnancy normal sixth month*
17			A + (05) B + (·05)	Fractured patella male aged 38
18			A — (·02) B ? (·04) C — (03)	Left inguinal hernia male aged 43 2 days after operation
19			A + ? (·04)	Pregnancy ninth month
20	(1 5) —	Pl + C.B — Lg — B E —	B + (·06) C — (·02)	Pregnancy, normal, multipara ninth month
21	1 0 —	Pl ++	B + (08)	Pregnancy normal primipara, second month
22	1 5	Pl ++, C.B. (+), Lg. +, B E. —	B — (02) C + (·07)	Pregnancy *normal ninth month multipara*
23			A + (·05), B — (02) C ? (04)	Carcinoma of breast.
24	1 0—	*Pl — Br —, Lv —*	A — (·03) B — (·03) C — (01)	? Twisted ovarian cyst ? Tubal pregnancy Patient operated Diagnosis ovarian cyst
25	1 5—	Pl — Lv —	A + (·05) B — (03) C — (02)	Gonorrhœa male
26	1 5—	Pl — St —, Lv —		Sycosis male treated with staphylococcus albus and acne vaccine *Serum hæmolytic.*
27	1 5—	Pl —, St —, Br —	B + (07) C — (·01)	Pregnancy normal seventh month
28			A + (·07)	Pregnancy normal ninth month primipara
29	1 5—	Pl —	B ? (04) C + (·06)	Pregnancy normal eighth month primipara
30	(1 5) —	Pl ++ Lv (+)	A + (·07) C + (·06)	Pregnancy normal sixth month multipara.
31	1 5—	Pl +, Lv + M —	A + (·05) B + (06) C + (·05)	Pregnancy normal seventh month multipara.
32	(1 5) —	Pl —	A — (·03) C — (·03)	Hernia male. Operated 2 days before examination
33	(1 5) —	Pl ((+)) C B —	A + (05) B — (·03)	? Ectopic gestation ? Salpingitis Patient operated next day Diagnosis salpingitis
34	(1 5) —	C B (+) St —	A ? (·04) B — (03)	Carcinoma of breast. Chronic nephritis
35	1·2 —	St —		Patient treated with staphylococcus vaccine
36	1 5 —	Pl. +	A + (06) C + (·05)	Eclampsia.
37	1 5 —	Pl —, C B — Lg M	A + (05), C ? (·04)	Hæmoptysis male aged 52. Cause ? Ultimate diagnosis, cirrhosis of liver
38	(1 5) —	*Pl — Lg M*		*Periostitis of orbit.*
39	1·5 —	Br + Ts (+) Ov +		Dementia præcox male
40	1 5 —	Pl + Br ((+))	A + (·05)	Pregnancy normal eighth month multipara.
41	1 5 —	*Pl + Br —*	A + (05)	Pregnancy normal *ninth month primipara*
42	1 5 —	Br + Ts ++	A + (05) B + (·05)	Epileptic, fit previous night female aged 55
43	1 5 —	Pl ++, C B —, M +	C — (03)	Carcinoma of the head of pancreas jaundice cachexia Diagnosis confirmed by microscopical examination
44	1 5 —	C B , — M — Lv — *C.Lv —	C — (·03)	? Carcinoma abdomen Result, no malignant disease.
45	1 5 —	Pl + C B —	A ? (·04) B — (03)	Parturition, normal 2 weeks
46	1 5 —	*Pl +, M ++ Lv + C Lv +*	B + (·05)	Pregnancy, normal seventh month
47	1 5 —	Pl (+) C.B —	B + (·05) C — (·03)	Salpingitis Oöphorectomy 3 weeks ago
48	1·5 —	Pl ((+))	A ? (·04)	Aneurysm male aged 40
49	1 5 —	Pl ((+))	A + (06) B ? (·04) C ? (·04)	Hydatidiform mole operated ? Malignant Result no chorion epithelioma
50	(1·5) —	Pl + M ++	B + (05) C + (·06	Pregnancy *normal, primipara seventh month*
51	(1 5) –	Pl + Br —	B + (06)	Pregnancy normal primipara, ninth month
52	(1 5) —	Br (+) M + (+) Lv (+)	B + (·06)	General paralysis of the insane male
53	1 5 —	Br — C Lv —	C — (·02)	Mania *chronic*
54	1 5 —	Br + Lv ++		General paralysis of the insane
55	1·5 —	Br (+) Lv (+) M +		Epilepsy, insanity fits on two previous nights
56	1 5 —	Br ((+)) Lv (+) M. ++		Epileptic, insanity last fit 6 weeks ago
57	1 5 —	Br — C Lv —	C — (·02)	Abdominal tumour Diagnosis? Operated ovarian cyst
58	1 5 —	Br — Ts +		Dementia præcox male
59	(1 5) —	*Pl (+) Br (+) C B (+)*	B ? (·04) C + (·06)	Pregnancy normal primipara sixth month
60	1 5 —	Pl + Br — Lv —	B ? (·04) C — (·03)	Pregnancy normal eighth month primipara
61	1 5 —	Pl ++ Br — C B ++	B + (11) C + (·05)	Fractured patella operated 1 week *previous to examination.* Serum hæmolytic
62	1 5 —	Pl ++ Br +	A — (·01) B — (0)	Pregnancy normal sixth month primipara.
63	1 5 —	Pl ++		Pregnancy *normal sixth month primipara*
64	1 0 —	*Pl —*	A — (02)	? Ovarian cyst ? Tubal pregnancy Operated tubal pregnancy Bleeding started 4 weeks previous
65	1 5 —	C B ++ S + Lg —	A — (·03)	*Fibromyositis*
66	1 3 —	C B ((+)) S +		? Sarcoma vertebræ ? Carcinoma Result sarcoma
67	1 5 —	C B — S — Lg —	B — (·02) C — (·02)	Mediastinal sarcoma
68			A — (03) L ? (·04)	* Mediastinal tumour Result sarcoma
69			B + (·06) L ? (04)	Prolapse
70			A_1 — (·02)	Chronic pulmonary *tuberculosis T B present male*
71			B ? (·04) L' — (·03)	Pregnancy normal primipara, sixth month
72			A_1 + (05) B ? (·04)	Pregnancy normal primipara seventh month.
73			A_1 + (·06) B + (·06)	*Pregnancy normal primipara seventh month*
74			W — (·02) A_1 ? (04)	Pemphigus
75	1 0 —	Pl h — Pl.s + M h (+) M.s — Tv — Tm (+) Ts (+)		Tubal pregnancy
76	1·0 —	*Pl + C.B + Br —*	A_2 + (·05) B + (·05)	Pregnancy normal eighth month primipara.
77			A_1 ? (·04) B — (03)	Sprained knee
78	1·0 —	Pl + C B +	A_1 ? (·04) B ? (·04)	? Chorion epithelioma. Result no chorion epithelioma mole
79	1 0 —	Pl.b +++ Pl s + Lg — Lg M + Lg.s —	A_2 ? ·04 B + (·05) L — (·02)	Pregnancy normal primipara seventh month
80	1·0 —	Pl h +++ Pl s + Lg —, Lg M + Lg s. —	A ? ·04 L — ·02	Pulmonary tuberculosis third stage T. hectic.
81	1 0 —	Pl h ++ Pl s + Lg —, Lg M +, Lg s —	A_2 + ·05 B ? ·04 L ? ·04	Toothache

* *Primary carcinoma stomach.*

outwards from the path of the bullet The wounds both of entry and of exit were small and had healed when the patient was received at Hampstead from the Royal Herbert Hospital, Woolwich The patient had absolute ulnar paralysis below the level of the injury

In the course of five weeks the fracture became solidly united, and I then operated on the ulnar nerve, three quarters of an inch of which had been destroyed by the bullet The shortening of the nerve made it necessary to displace its upper part to the front of the internal condyle before the freshened ends could be comfortably brought together and stitched with catgut Sensation began to return a fortnight later

Fig 1.



A typical rifle-bullet fracture of the shaft of the ulna.

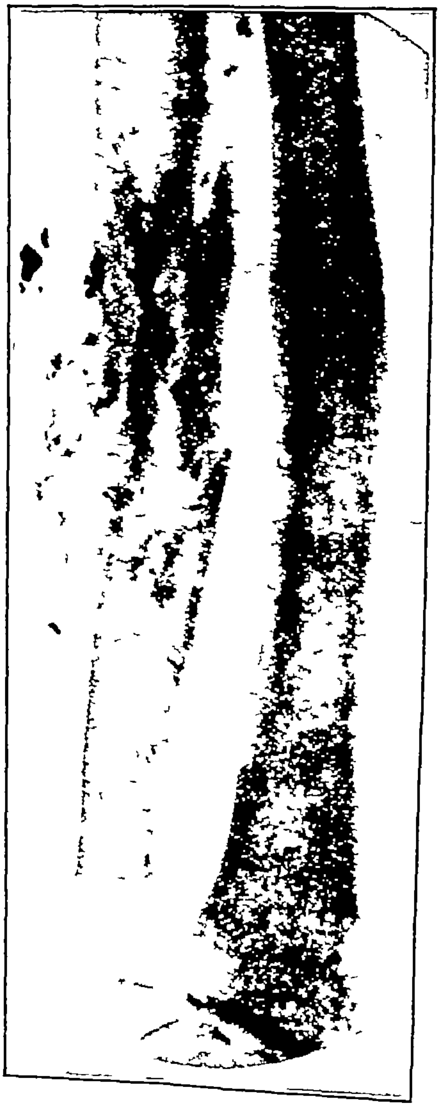
Case 2. *Fracture of the ulna with comminution both of the bone and of the bullet* —In this case there was only one external wound, and it was healed when the patient came into hospital The missile was probably a leaden shrapnel bullet, which is broken into fragments, as shown in Fig 2 Union was slow, but with the aid of regular massage mobility and crepitus, both pronounced at first, gradually diminished, and when the patient was discharged to convalesce the continuity of the bone was all but restored

Case 3 *Fracture of the shaft of the humerus by a shrapnel bullet* —The patient a dragoon, was wounded in the retreat from Mons, and remained in the saddle for some hours after being struck The wound where the bullet entered over the outer and lower part of the deltoid had healed when the patient came into hospital a fortnight after it was received The radiogram showed some traces of metal separated from the bullet in its passage through the bone Union was complete in five weeks and then I operated to remove the bullet which gave the patient some inconvenience It lay in the substance of the serratus and on examination proved to be a leaden sphere about half an inch in diameter Under massage and exercises the range of movement was restored to the normal and the muscular power improved

Case 4 *Fracture of the shaft of the femur by rifle bullet, which could be felt under the skin on the outer aspect of the limb as is shown in the radiogram* (Fig 3) —The wound of entry had healed when the patient, a Belgian, came into the hospital The position of the fragments was even worse than appears in the radiogram, and after four weeks there was no sign of uniting The patient is a somewhat delicate man, and like many others of the wounded or sick soldiers suffered from pyorrhœa. The latter having been energetically treated for a week previously, I dealt with the fracture by open operation The bullet lay in a cavity only slightly larger than itself and lined by granulations blackened by the stain of the metal, the nickel coat of the bullet being intact The fractured surfaces of bone were freely exposed through an antero external incision The fragments were separated by a portion of the crureus muscle, they were freshened, and a little callus was removed

The patient s condition made any long operation unwise, so an encircling loop of stout silver wire was used to hold the fragments together, the loop being itself kept from slipping by a short screw inserted into one fragment The limb was put up on a long splint and a 12 lb extension applied The position was good, there being about half an inch of shortening In this case, owing to the fragments being separated by muscle, there was no chance of union apart from open operation but it was with reluctance that I had resort to operation, because I had previous experience of

Fig 2



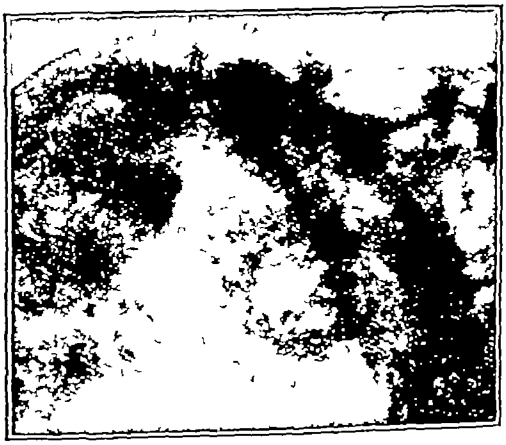
A shrapnel-bullet fracture of the shaft of the ulna.

A CASE OF X RAY DIAGNOSIS OF A CHRONIC CEREBRAL ABSCESS

SECONDARY TO FRONTAL SINUS SUPPURATION

BY WILFRID GLEGG, M D , C M EDIN ,
M R C P EDIN ,
SURGEON TO THE EAR AND THROAT HOSPITAL, BIRMINGHAM
AND
HAROLD BLACK, M B , B CH BELF , M R C P LOND ,
RADIOGRAPHER TO THE QUEEN'S HOSPITAL, BIRMINGHAM

THE patient, a private on the Reserve list of the 2nd Battalion Royal Warwickshire Regiment, was sent to the Ear and Throat Hospital by Mr Beatson Hird on acount of the persistence of discharge from a fistulous opening in the right frontal region, in the lower part of a depressed scar above the inner end of the right eyebrow The history was as follows In April, 1913, the patient attended the eye department at the General Hospital with symptoms of acute inflammation in the right frontal sinus He complained of pain, and in the upper part of the right orbit there was an inflammatory swelling, which was incised by Mr Hird Carious bone was detected in the orbital roof, and through a necrotic area a probe could be passed into the right frontal sinus The patient was sent to the surgical side, where a radical operation was performed on the right frontal sinus, the particulars of which have been supplied by Mr H. H. Sampson, resident surgical officer The right frontal sinus was a shallow one Its entire anterior wall was removed, and also the mucous lining of the sinus, in a state of polypoid degeneration, showing that the cavity had been the seat of chronic disease with a recent acute exacerbation There was no sign of caries on the posterior wall An opening was found through the median partition into the left frontal sinus Drainage into the nose was attempted on the right side, and the edges of the wound were kept apart, but in spite of this the discharge continued externally from the lower part of the wound



Reproduction of skiagram showing site of abscess injected with bismuth paste

At a subsequent operation an area of carious and necrotic bone was found in the centre of the posterior wall of the sinus, and by its removal the dura was exposed Purulent discharge still continued from the wound

In September, 1914, the patient was admitted to the Ear and Throat Hospital for further treatment No evidence of disease was observed within the nasal cavities After determining the upward and inward direction of the fistula it was decided to make use of Beck's bismuth paste to demonstrate, if possible, the source of the discharge For this purpose a small amount of it was injected in a warm fluid state through the fistula and was retained for the most part Radiograms then were made on two occasions in postero anterior and lateral directions, and with some surprise it was seen that the bismuth had collected in the right frontal lobe of the cerebrum (See illustration.) Under an anæsthetic a flap was raised along the lines of the former incision to expose the right frontal bone, where an opening was found about the size of a shilling exposing the dura. The bone edges were smooth and the surrounding bone was healthy in appearance The fistulous track from the lower part of the skin incision led to an opening in the dura surrounded by granulations at the upper edge of the hiatus in the bone, and sinus forceps inserted through it allowed about a drachm of pus to escape Resistance to the passage of the forceps was felt at a distance of 2 inches from the surface After removing bone around the fistula a strip of gauze was inserted into the abscess cavity Through an opening in the median partition between the frontal sinuses several small polypi were removed from the left sinus, and the passage into the nose made wider on that side The right infundibulum had become obliterated The external wound was left open and the discharge of pus continued for four weeks, but ceased when the gauze drain finally was removed and after an application of silver nitrate had been made to the granulations around the opening in the dura. The wound now is closed, and the patient remains in good health

It is interesting to note that the patient's general state gave no indication of the presence of a cerebral abscess, owing, no doubt, to the absence of pressure from retention of the contents The fistula allowed discharge to overflow, but the drainage had been insufficient to permit closure of the abscess cavity until the operation remedied the condition The case illustrates the use of bismuth combined with an X ray examination in localising the site of the abscess before operation, and its value as an aid to diagnosis of an otherwise obscure source of a purulent discharge

Birmingham

A NOTE ON SOME CASES OF GUNSHOT FRACTURE

BY J JACKSON CLARKE, M B LOND , F R C S ENG
SENIOR SURGEON TO THE HAMPSTEAD AND NORTH WEST LONDON HOSPITAL SURGEON TO THE ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.

SINCE shortly after the beginning of the present war beds both at the Hampstead and the Orthopædic Hospitals have been occupied by wounded soldiers Among the many cases of wounds of various kinds a considerable number have involved fracture of one or more bones In studying the fractures we have had valuable help from the radiographers, Dr Stanley Melville at the Orthopædic Hospital and Mr Cyril Thatcher at Hampstead. It seems worth while to put on record a few of the more typical cases

CASE 1 *Fracture of the ulna by rifle bullet* (Fig 1).—As shown in the radiogram the fracture is typical of the damage done to a bone when it is struck vertically by a modern conical bullet travelling at a high velocity, there is a central space, and around it many fragments displaced

PELLAGRA IN ANTIGUA.

BY W M McDONALD, M R C S ENG , L R C P LOND ,
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WEST INDIES

THIRTY TWO cases of pellagra have come under my notice here during 1913, 14 at the lunatic asylum and 18 at the hospital Five of these in the lunatic asylum came from Dominica, 5 from St Kitts, 1 from the Virgin Islands, and the remainder of the cases, 21 in number, have all originated in Antigua There have been 10 deaths from pellagra in the lunatic asylum during the year and 1 death in the hospital Pellagra was first reported in Antigua in 1909, and since then an increased number of cases have been recorded every year It is impossible to say how long the disease may have existed here, as it is a disease that has only of recent years attracted universal attention, and was not therefore looked for or diagnosed here A disease known locally as "rum burn" has long been prevalent here, these cases were most probably cases of pellagra in alcoholic subjects

Pellagra, however, is undoubtedly endemic in Antigua This fact is of vital importance to students of the disease in its bearing on (1) the opinion of the Italian medical schools and other investigators, that pellagra is a food disease caused by the ingestion of bad maize, and (2) the opinion of Sambon and certain American investigators that pellagra is an insect borne disease The bearing of this fact on the study of the disease can best be seen by comparing the theories advanced by the exponents of the two great rival theories We can then see to what extent local conditions conform to either of these theories For this purpose I submit the tables of comparison herewith attached

TABLE I —*Theories of the exponents of the parasitic theory as opposed to the maize theory*

A Sambon s reasons (1910) for believing that it is carried by an insect, most probably by the simulium fly

1 The topographical distribution of pellagra does not coincide with that of maize consumption

2 The disease occurs frequently in persons who have seldom or never partaken of maize as an article of food

3 Preventive measures based on the maize theory have failed

4 There is no foundation for the belief that pellagra broke out in Europe soon after the introduction of maize from America

5 It is not directly contagious

6 It presents a seasonal incidence—viz , spring and autumn

7 Simulium in its imago stage appears to affect the same seasonal incidence

8 Simulium so far as is known, affects the same topographical conditions as pellagra.

9 It is practically restricted to only one class of people—viz the agricultural labourer—owing to greater exposure to infection

10 Simulium has a wide geographical distribution which appears to correspond with that of pellagra

11 Pellagra stations are closely associated with streams of running water

12. That this theory of its being conveyed by simulium explains most admirably the limitation of the disease to agricultural labourers *a limitation which nothing else can explain in a satisfactory manner*

B Thompson McFadden Pellagra Commission, 1913

1 The supposition that the ingestion of good or spoiled maize is the essential cause of pellagra is not supported by our study

2 No specific cause of pellagra has been recognised

3 We are inclined to regard intimate association in the household and the contamination of food with the secretions of pellagrins as possible modes of distribution of the disease

4 We have discovered no evidence incriminating flies of the genus simulium *except their universal distribution throughout the area studied* If it is distributed by a blood sucking insect stomoxys calcitrans would appear to be the most probable carrier

5 Pellagra is in all probability a specific infectious disease communicable from person to person by means at present unknown

TABLE II —*Theories of the exponents of the maize and bad food theories*

A. Italian theories as summarised by Lavinder 1909

1 Pellagra is found as an epidemic disease only in those countries where maize is extensively used as an article of food by the *poorer classes*, although there are vast tracts where maize has been grown and used as a food for many years and yet no pellagra has appeared

2 Countries in which maize is not grown or used for food, even though contiguous to pellagrous sections, are free of pellagra (see Lombroso, Procopin, Babes, Sion and others)

3 A change of food among individuals or groups of *individuals* brings constantly a diminution or disappearance of pellagra

4 History and observation show clearly that the first appearance of pellagra in Europe followed more or less closely the introduction of maize into Europe

B Dudgeon on pellagra in Egypt 1910

1 Pellagra is undoubtedly confined to people whose staple diet is maize It is very uncommon among the rich agricultural class, though it does occur

TABLE III —*Facts from a report on 1420 cases of pellagra in Kentucky, Georgia and South Carolina 1913 by Robert Grimm, Surgeon in the United States Public Service*

1 Percentage of cases among whites, 85 7, among the coloured population, 14 3

2 Of 323 of these cases personally seen and investigated each one gave a history of more or less regular use of corn as a diet

3 Most cases had been subsisting almost entirely on food bought at the stores—viz , canned, salted, preserved foods

4 Most cases were found among renters and croppers who live under conditions of poverty and bad hygiene

5 Six cases of the 323 personally seen occurred in persons in comfortable circumstances

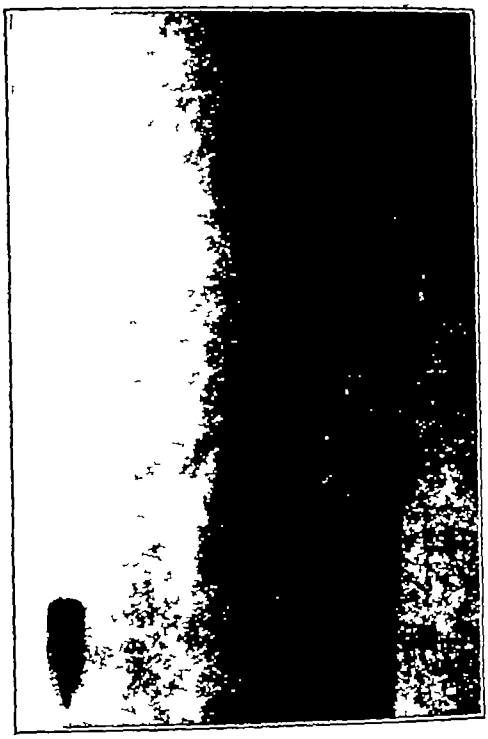
The facts of the existence of pellagra here which have special bearing on these theories are 1 Antigua was visited in 1913 by Dr Sambon, of London and by Mr Jennings, of the American Bureau of Entomology, in the course of their investigations of pellagra Neither of them was able to find any simulium in Antigua 2 There is very little running water to be found in Antigua, and none of the cases reported have any connexion whatever with running water 3 No cases have been reported among the white population, all the cases occurred among the blacks, who generally live in conditions of poverty and bad hygiene 4 All the cases have occurred among the class whose principal diet is cornmeal and salt fish. 5 Cornmeal is also largely partaken of by the white population, among whom no cases of pellagra have occurred, but in their case the cornmeal is taken in conjunction with an otherwise generous and varied diet

The first and second of these facts have a distinctly adverse bearing on the simulium hypothesis (Compare Table I A, 7, 8, 10, 11) The third of these facts may be considered first, as bearing on the stomoxys calcitrans theory (Table I B, 4) This insect is found here, and is most frequently discovered in the neighbourhood of out buildings and failure of union of fractures in subjects of pyorrhœa after open operation and in spite of aseptic healing of the operated parts Five weeks after operation there was an abundant callus, and the limb was put up in plaster of-Paris bandages to enable the patient to get about on crutches

CASE 5 *Fracture by rifle bullet of the right radius* (Figs 4 and 5) —The wound of entry was on the outer aspect of the forearm , that of exit on the front , the latter was as large as a five shilling piece, and from both free suppuration was taking place

I explored the parts and found that the loose fragments shown in the radiogram were imbedded in the wall of a cavity of the size of a pigeon's egg beneath the flexor muscles Having removed these fragments and provided for free drainage, I dealt with the broken bone in a way that in spite of theoretical objections has proved successful in my hands The fragments were drilled and a wire passed through the holes and brought out at the wound and there twisted Figs 4 and 5 show the improved position thus obtained When union has taken place the wire is removed in septic cases, whilst in aseptic conditions, the wire being firmly incorporated in the bone, the ends of the wire are merely cut off flush with the bone Used in this way the wire secures a good position of the fragments, lessens pain, and acts as a drain More elaborate modes of fixation are to be avoided in such cases Five weeks after the operation, all suppuration having ceased and union of the fragments being firm, the wire was removed, and the patient will be little, if any, the worse for his wound

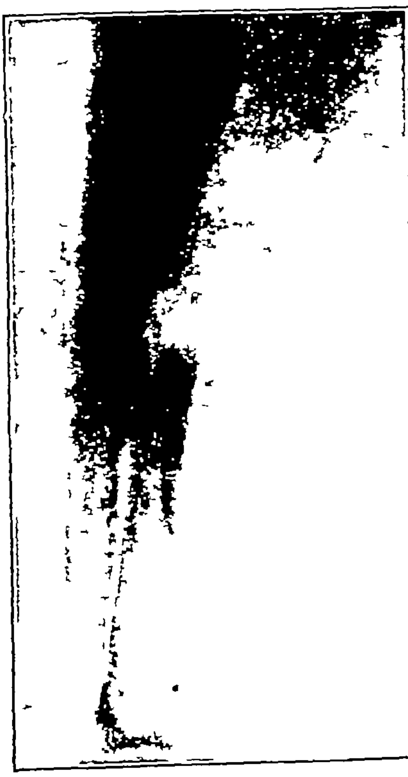
FIG 3



A rifle-bullet fracture of the shaft of the femur the bullet is seen lying close to the surface of the limb

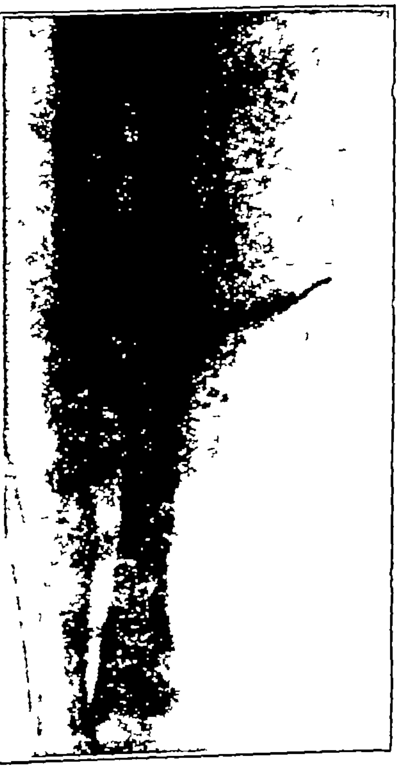
CASE 6 *Transverse fracture through the left humerus just above the epicondyles* —The patient, a sturdy infantryman, was admitted with a stiff elbow, painful and almost of double its normal width Both wounds were healed. There was partial ulnar paralysis 'A radiogram showed several fragments below the line of passage of the bullet, and some of them had been displaced laterally I opened the joint through an incision curved upwards, and this having been reflected to expose the olecranon, the latter was cut through at its base, revealing six separate fragments These I removed, then, having shaped the lower surface of the upper fragment and re attached the olecranon by a wire, the wound was closed and the limb put up on an angular splint The patient has now a useful elbow with about 90 degrees of movement. The ulnar paresis has disappeared

FIG 4



A rifle-bullet fracture of the radius

FIG 5



The same as Fig 4 after temporary wiring the author s method of treating compound fractures of long bones

CASE 7 *Fracture of the upper end of the tibia into the knee-joint* —The patient had been struck on the front of the knee by the brass cap of a shell There was no external wound The joint was distended with fluid and there was deformity of the limb, which was in the state of genu valgum

The joint was opened by a transverse cut, the knee-cap being divided across A teacupful of clot and serum having been removed, it was seen that the inner tuberosity was broken off and the fragment displaced downwards , the posterior crucial ligament was torn through at its femoral attachment. The fragment of bone was forced into place without much difficulty and the patella having been drilled and wired in two places and the synovial membrane and capsule stitched the wound was closed Three weeks later passive lateral movements of the patella were smooth and the patient will probably have a useful and movable knee-joint

In conclusion I should like to acknowledge the great assistance I have received in the above and many kindred cases from Dr G A. H. Barton, anæsthetist, and from Mr J B Truter, house surgeon at Hampstead, and Mr Renfrew White, house surgeon at the Orthopædic Hospital.

Portland place W

necessary supply of complement would be always present We already know that many of the metallic salts act in exactly this manner, and a series of experiments were performed to determine whether the same fact held true for calcium chloride

Experiment—A series of tubes was put up containing in each case 0 5 c.c. of a 1/20 suspension of washed sheep corpuscles in normal saline 0 5 c c of a 1/10 dilution of fresh guinea pig serum, and 0 5 c c. of a dilution of an inactivated hæmolytic serum (rabbit r sheep) containing 4 minimal hæmolytic doses To each tube was added a varying amount of a 10 per cent solution of pure calcium chloride, and finally the contents of each tube were made up to the same total volume by the addition of the requisite amount of normal saline solution The whole series was then incubated at 37° C for one hour At the end of this time the tubes were inspected and those which showed no obvious hæmolysis were centrifugalised and again examined

The results were as follows —

Amount of 10 / calcium chloride added.		Hæmolysis	Amount of 10 / calcium chloride added.		Hæmolysis
0·1 c c	..	Faint trace	0·04 c.c	..	Almost complete
0·09 c c	..	Trace.	0·03 c.c.	.. ..	Complete
0·08 c.c.	...	Very marked	0·02 c.c.	.. ..	"
0·07 c c	....		0·01 c.c		
0·06 c.c	...	"	0·00 c.c	.. ..	
0·05 c.c	..	Almost complete			

The supernatant fluid was then pipetted off from the two tubes showing only a faint tinge of hæmolysis To the deposited red cells were added in one case 1 c c of saline and 0 5 c c of the diluted guinea pig serum, to the other 1 5 c c of saline The tubes were well shaken and again incubated for 1 hour at 37° C At the end of this time the tube to which complement had been added showed complete hæmolysis, the tube which had received only saline showed none This experiment was repeated with varying dilutions of calcium chloride, always with the same result

These results show that calcium chloride falls into line with other metallic salts, in so far as it has no action on either the red cells or the hæmolytic antibody, nor does it prevent the combination of these two elements in the concentrations here employed For the reasons mentioned above, therefore, we should expect that its antihæmolytic action would be less in evidence *in vivo* than *in vitro*

We next proceeded to put the question to experimental proof, employing in all cases rabbits as the subjects of experiment and a hæmolytic serum which was obtained by the repeated intraperitoneal injection of washed rabbit corpuscles into guinea pigs The serum was inactivated by heating for 30 minutes at 55° C, and then stored on ice until used

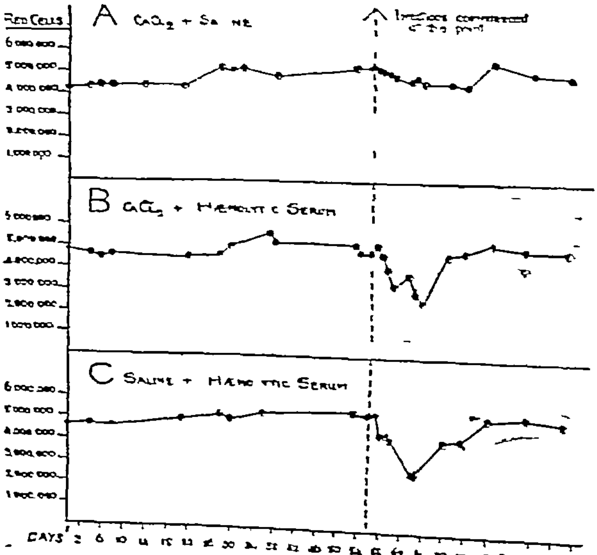
We would point out here that the experience obtained by a large number of consecutive red cell counts, carried out on individual rabbits, has convinced us that the variations in the results obtained from day to day are much more considerable than in the case of a similar series of counts carried out in the human subject The method employed was to take up 5 c mm of blood in a graduated pipette and transfer it to 995 c mm of normal saline containing 1 per cent of sodium citrate and a trace of formalin The count was made in an ordinary Thoma Zeiss counting chamber The blood was obtained by puncturing one of the smaller ear veins and in each case two exactly similar dilutions were prepared and counts made from each the results being averaged Even when these precautions were taken considerable differences between daily counts were observed, and for this reason every animal employed was kept for some weeks under constant conditions, and then several successive counts were made, so that a reliable standard could be obtained for observing subsequent variations The injections were, in almost all cases, given into the marginal vein of the same ear which had been punctured in making the previous counts The other ear was employed in the subsequent observations Blood was collected for counting from each rabbit immediately before making the inoculation.

Experiment—Three rabbits, "A," "B" and "C," were taken. To "A" was administered a series of intravenous injections of a 10 per cent solution of calcium chloride, followed after an interval of ten minutes by the intravenous injection of a certain amount of normal saline "B" was treated in the same way, except that the normal saline was replaced by an equal quantity of the hæmolytic serum. In the case of "C," saline was substituted for the calcium chloride solution, the hæmolytic serum being injected as in the case of "B." The actual injections were carried out as follows —

Day of experiment	"A"		"B"		C	
	10 / calcium chloride	Normal saline	10 / calcium chloride	Hæmolytic serum	Normal saline	Hæmolytic serum
1st ..	1 c.c	0 2 c.c.	1 c c.	0·2 c.c	1 c.c.	0·2 c.c
2nd ..		0 5 c.c		0·5 c c.		0·5 c.c
3rd		"		"	"	"
4th	"		"	"	"	"
5th				"		"
6th ..			"			"
8th		"				"

The results are clearly shown in Chart I

CHART I



From this experiment we see that a relatively large dose of calcium chloride administered intravenously does not serve to inhibit the action of a hæmolytic serum injected by the same route ten minutes later Evidence confirmatory of these results was obtained in two further series of experiments In the first series a preliminary *in vitro* experiment was made and the exact quantity of calcium chloride necessary completely to inhibit hæmolysis by 0 1 c c. of the immune guinea pig serum in the presence of a relatively large excess of complement (fresh rabbit serum) was determined stables which are the places frequented by the blacks and not frequented by the whites (Compare also Table I A, 9, 12) This fact is also of very great importance, in view of the fact that Grimm, in investigating 1426 cases of pellagra among whites and blacks both living under bad economic conditions, found that 85 7 per cent of the cases occurred among whites, and this in a community in which he states the negroes equal or probably outnumber the whites He further states that in several districts he was told by physicians that they had met with several cases of pellagra among whites, but had never seen a case among the blacks His facts justify him therefore in drawing the conclusion that among blacks and whites living under the same conditions whites are more susceptible to the disease

In the light of this fact it is all the more remarkable that all the cases in Antigua occur among the blacks and none among the whites This might be accounted for by the fact that blacks are more exposed to being bitten by the stomoxys, or equally by the fact that the whites live under far better economic conditions than the blacks This fact is also of importance as bearing on the food theory, and in this connexion it must be considered in conjunction with facts 4 and 5 Fact 4 taken by itself would appear to bear out the maize theory, and is in accord with Lavinder's statement (Table II A, 1) and with Dudgeon's experience in Egypt (Table II B, 1) Taken in conjunction, however, with fact 5, its importance as a factor in favour of the maize theory is greatly minimised, and when we consider that pellagra is found among the blacks who live on cornmeal + a generally inadequate and improper diet, and pellagra is not found among the whites in Antigua who are really more susceptible to it, and eat cornmeal + an adequate and varied diet, it will be seen that the facts of its occurrence here, while not incompatible with the theory that it is conveyed by the stomoxys calcitrans, are most in accord with the theory that the causative agent in pellagra is not so much the ingestion of spoiled maize as the deficiency of some essential item of diet, in a word, that it is caused not by bad food but by deficient food This theory is in accord with many of the arguments stated in all three tables—Tables I A, 1, 2, 3, 4, 5, 9, 12, B, 7, Table II A, 1, 3, B, 1, Table III, 2, 3, 4 With regard to the infective nature of pellagra, I have not been able to trace any connexion between any of the cases which have come under my observation

Antigua

LIVINGSTONE COLLEGE —"Livingstone College Year Book," which usually makes its appearance in the summer, has this year been published in the present month, and contains a report of the work of the session 1913–14 This is the last report of the work of the College under the principalship of Dr C F Harford, who has now given place to Dr Loftus E Wigram, and the extracts received from old students of the College afford testimony of the need for such an institution and of the affection in which the late Principal and his wife are held by those who have passed through the College these numbering 548 in 21 years, the period of the existence of the College The teaching is intended to help missionaries to take care of their own health and to give them sufficient medical knowledge to deal with simple cases when qualified medical aid is not at hand The "Livingstone College Year Book, 1915" has a very good reproduction of a photograph of Dr Harford as a frontispiece, and can be obtained from the College, Leyton, E, price 6d

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THE EFFECT OF CALCIUM CHLORIDE ON HÆMOLYSIS OCCURRING "IN VIVO"

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(*From the Bacteriological Department of Charing Cross Hospital*)

IT has long been known that certain metallic salts, and especially the salts of the metals of the alkaline earth series, exert *in vitro* an inhibitory action on the lysis of red blood corpuscles by normal and immune hæmolytic sera This phenomenon was first demonstrated by Nolf,[1] and the subsequent observations of Markl,[2] Ehrlich and Sachs,[3] Vincent and Dopter,[4] Sutherland and McKay,[5] and others have all tended to confirm his results The inquiry was taken a step further by Markl,[2] who showed that in the case of the acid phosphate of sodium and certain other salts the absence of hæmolysis resulted from the failure of the complement to combine with the red cell antibody complex These results were confirmed by Ehrlich and Sachs,[3] though these authors do not accept the whole of Markl's explanation

As a result of the antihæmolytic action which they display in test tube experiments, the salts of calcium have been put forward as valuable therapeutic agents in cases in which hæmolysis is an important factor, notably in blackwater fever The treatment of this condition by calcium chloride has been urged especially by Vincent[6] and by Sutherland and McKay[5] The former asserts that, in addition to its inhibitory action against various hæmolytic sera, this salt is also antihæmolytic in the presence of the salts of quinine, to which has been ascribed by some a leading *rôle in* the production of hæmoglobinuric fever in malarial patients MacGilchrist,[7] however, has been unable to confirm these results

Since the assumption of the therapeutic value of the salts of calcium in conditions which involve hæmolysis is based almost entirely on test tube experiments, and since we have plentiful examples of the difficulties which arise in applying *in vitro* findings to the solution of problems which involve similar processes occurring in the living subject, it would seem to be of interest to determine whether the antihæmolytic action of calcium chloride is as potent in the animal body as it is in the test tube. An opinion on this point possessing a considerable degree of probability may be formed from a consideration of the way in which this salt acts If the result of its presence in a hæmolytic mixture is merely to prevent the fixation of complement by the *red cell antibody complex*, or to inhibit the action of the former without permanently affecting either the red cells or the hæmolytic antibody, then it would seem highly improbable that any useful therapeutic result could be obtained For unless the concentration of the salt could be maintained at a sufficiently high level at the site of the hæmolytic process, and as long as the hæmolytic agent was in operation, the onset of hæmolysis would be only slightly delayed, since neither the animal's red cells nor the hæmolytic antibody would be in any way modified, and the calcium chloride on red cells, which were subjected in the animal body to the action of a specific hæmolysin Indeed, any differences in the parallel experiments were in the nature of excessive lysis in the cases of those animals which were treated with this salt

It may be argued that the administration of the salt was too infrequent to admit of the steady maintenance of a sufficient concentration in the tissues and blood stream This objection will not hold if we remember the relatively enormous doses of the drug employed, corresponding to about 16 grm given intravenously to the human subject, a dose, moreover, which approached closely the lethal limit, as is shown by the death of a control animal immediately following the second injection in the last experiment, and by the fact that rabbit "B" in this series became greatly distressed after each injection of the salt We know also from the work of Mendel and Benedict,[9] Boggs,[10] and others, that the excretion of calcium is comparatively slow, and we may hence be certain that in the last experiment the concentration of the salt in the tissues was maintained at a level beyond that which could be obtained in the therapeutic administration of the drug to man

Conclusions—The experiments here described afford no evidence of any protective influence being exerted by calcium chloride on the red cells of animals subjected to the action of a specific hæmolytic serum, though this salt serves to inhibit the lysis of the same cells by the same serum in test tube experiments Conclusions as to the therapeutic value of this and similar salts based on *in vitro* experiments must therefore be held to be invalid

Bibliography—1 Nolf (1900) Annales de l Institut Pasteur xiv 636 2 Markl (1902) Zeitschrift für Hygiene xxxix 3 Ehrlich and Sachs (1902) Studies in Immunity (Ehrlich) 4 Vincent and Dopter (1905) Comptes Rendus de la Société de Biologie, lix 635 5 Sutherland and McKay (1910): Biochemical Journal 6 Vincent (1905) Comptes Rendus de la Société de Biologie lix 635 7 MacGilchrist (1913) The Indian Journal of Medical Research i 119 8 Muir and McNee (1909) Journal of Pathology and Bacteriology xvi 410 9 Mendel and Benedict (1909) American Journal of Physiology xxx 23 10 Boggs (1908) Johns Hopkins Hospital Bulletin xix 201

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF OBSTETRICS AND GYNÆCOLOGY

Exhibition of Cases and Specimens —Sarcoma of Cervix and of Broad Ligament —Cancer of Cervix —Hysterectomy for Ante partum Hæmorrhage

A MEETING of this section was held on Dec 3rd 1914, Dr W S A GRIFFITH the President, being in the chair

Mr CLIFFORD WHITE showed (1) an Ovarian Tumour which had been infected with tubercle, and (2) a case of Interstitial Tuberculous Salpingitis in which tubercle bacilli were found in a small intra mural abscess

Dr H MACNAUGHTON-JONES demonstrated a Myomatous Uterus containing large numbers of intra mural and submucous growths The tumour was removed from a patient aged 47 and it weighed 1 lb 1 oz The nuclei varied in size from that of a small egg to a pea There were three larger intra uterine growths two in the fundal cavity and a cervical polypus Altogether in this comparatively small sized tumour there were from 30 to 40 growths subserous, in the cavity and in the wall The uterine surface was studded over with them and its wall was a mass of nuclei. It was noteworthy that the patient sought advice rather for other symptoms than pelvic ones Only for the past year had she suffered from menorrhagia

Dr TREVOR B DAVIES recorded two cases—(1) Sarcoma of the Cervix Uteri and (2) Sarcoma of the Broad Ligament The first patient, a single woman aged 29, was under the care of Mr T G Stevens There had been vaginal bleeding for three weeks The menstrual periods were quite regular every 28 days, lasting from four to seven days Examination per vaginam revealed a soft, smooth, rounded, bleeding tumour growing from the anterior lip of the cervix and filling the upper part of the vagina The uterine body was normal in size and position A hysterectomy was performed, the vagina being divided well below the growth The pathological report stated that the tumour was roughly spherical and covered by a smooth necrotic surface, and in the recent state it measured 2 inches in diameter Microscopically the appearances were those of a spindle celled sarcoma The stroma was scanty and the blood vessels had very thin walls The second patient was aged 51, married, and had had two children, menopause 1¼ years ago Complaint Pain in the right side of the lower abdomen running through to the back In March 1910, Mr D Drew removed an inflamed appendix. Examination showed the appendix scar to be tender and the right kidney freely mobile Per vaginam To the right of the cervix lay a hard fixed mass the size of a large walnut, which bulged down into the vaginal roof The uterus was normal in size and position and quite separate from the mass At operation a hard swelling was found between the layers of the right broad ligament It was shelled out and the broad ligament closed In less than three weeks another fixed mass was felt in the same position The tumour was about the size of a Tangerine orange, with a small mass the size of a large cherry projecting from its upper part The tumour was pale and fairly firm, its surface somewhat nodular In section the surface was pale, there were no hæmorrhages and no vessels were seen Microscopically, the growth was a typical spindle celled sarcoma composed of large spindle cells arranged in bundles without any fibrous stroma, but with numerous thin-walled blood vessels

Dr C HUBERT ROBERTS showed a specimen of Pyometra and Cancer of the Cervix removed from a patient, aged 62, who had had seven children and two abortions, menopause 17 years ago History of severe hæmorrhage three months before admission, and gushes of putrid fluid accompanied by severe colicky pains The cervix revealed no ulceration nor new growth, uterine body enlarged, soft and mobile During the hysterectomy the vagina ruptured and foul material escaped into the pelvis The lower part of the abdominal wound became infected, but the patient subsequently did well The specimen showed a tubular solid growth of the whole of the cervix, which extended from the portio vaginalis to the os internum, and was densely hard The cavity of the uterus was distended with purulent debris The growth was a squamous celled epithelioma

Dr CUTHBERT LOCKYER showed a case of Double Ureter which simulated a parovarian cyst of the right broad ligament The specimen was obtained from a patient aged 63, in whom Dr Amand Routh had noticed an enlarged and tender right kidney for two years previously Pyonephrosis had been suspected There was coli bacilluria, for which many injections of autogenous vaccine had been given without improvement A hard, tender solid lump was to be felt in the left posterior quadrant of the pelvis In March, 1914, the patient began to lose blood from the uterus As the menopause occurred 20 years previously, this latter symptom raised the question of malignancy starting in the body of the uterus At the operation the hard body to the left of the uterus proved to be an *isolated* calcareous myoma adherent to the rectum and to the back of the left broad ligament, its shape suggested that it originally had a pedunculated attachment to the uterus Above this independent growth but quite separate and distinct, lay a solid tumour of the ovary, which proved to be malignant. The uterus and tumours were removed The right broad ligament contained a cystic swelling of the size of an orange, which proved to be a dilated ureter twisted upon itself This hydro-ureter was removed, the corresponding kidney was left *in situ* The contents of the ureter were found after operation to be two calculi (blocking the lower twisted portion) and foul stagnant urine Six weeks later a perinephric abscess was opened, since when the kidney had given no trouble The cause of the uterine hæmorrhage was two myomatous polypi and endometrial hyperplasia The uterus was not malignant

Experiment —Each tube contained 0 5 c c of a 5 per cent suspension of washed rabbit corpuscles in normal saline, and 0 1 c c of the inactivated hæmolytic serum (guinea pig v rabbit) A 10 per cent solution of calcium chloride in distilled water was then added in the amount indicated in the table, and sufficient saline was added to equalise the total volume in each tube Finally, 0 5 c.c of fresh undiluted rabbit serum was added to each tube to serve as complement Incubation was carried out for one hour at 37° C with the following results —

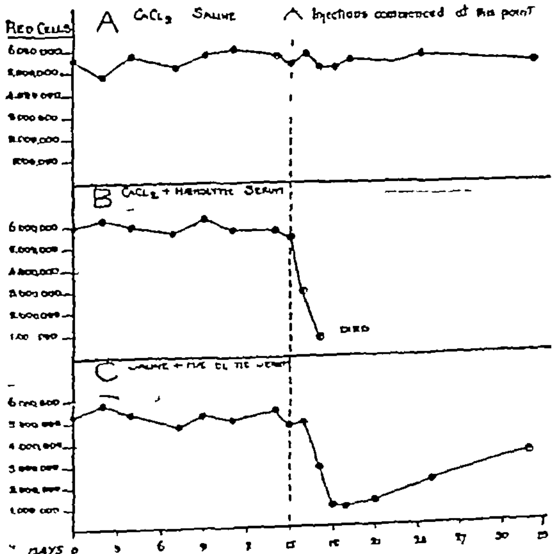
Amount of 10% calcium chloride added	Hæmolysis in 1 hour at 37° C
0 c c	Complete
0·025 ,	,,
0 05 ,,	,,
0·075 ,,	,
0 1 ,,	Almost complete
0 15 c c	Slight.
0 2 ,,	None
0 25 ,	,,
0 5 ,	,,
0·75 ,	,,
1 ,	,

Thus, 0 02 grm of calcium chloride served completely to inhibit the hæmolysis caused by 0 1 c c of this immune serum acting on rabbits' red cells in the presence of a relative excess of rabbits' complement

Now it is clear that the ratio between the amount of the calcium chloride and the amount of hæmolytic serum is the only one which we can keep constant in passing from *in vitro* to *in vivo* conditions, since the total bulk of red cells in the animal's body and the total available complement at any given time are beyond our control We know indeed from the study of Muir and McNee[8] that a serum hæmolytic for rabbits' red cells produces, when injected into this animal, a degree of blood destruction incomparably greater than one would be led to expect from a measurement of its activity in the test tube A mixture was prepared containing hæmolytic serum and calcium chloride in such proportions that no hæmolysis would occur *in vitro, and this mixture* was administered intravenously

Experiment —Three rabbits, "A," "B," and "C," were taken "A" received 2 c c of normal saline and 1 c c of a 40 per cent solution of calcium chloride "B" received 2 c c of hæmolytic serum and 1 c c of 40 per cent calcium chloride solution "C" received 2 c c of the same serum and 1 c c of normal saline All injections were given intravenously, and the two constituents were mixed in the syringe immediately before inoculation in each case Chart II shows clearly the course of events As before counts taken before as well as after the inoculations are included, and the vertical line shows the point at which these were given

CHART II

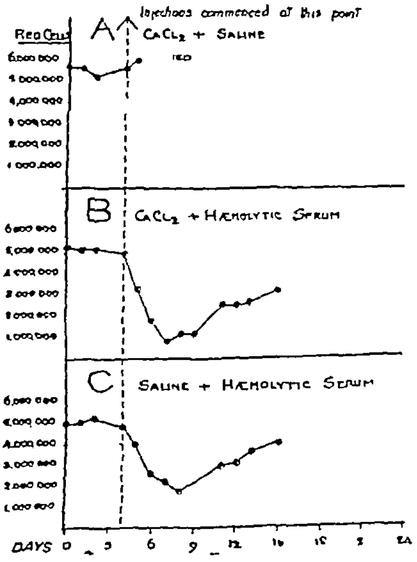


This experiment demonstrates conclusively that a mixture of hæmolytic serum and calcium chloride which produces no lysis in the test tube is actively lytic when introduced into the general circulation Indeed, any difference which is present between the two animals which *received the serum is in favour* of that one which did not receive the calcium salt *Too much stress should not be laid on the death of* rabbit "B" in this experiment, since rabbit "C" also became acutely ill and at one time appeared moribund The control animal showed some *symptoms of distress immediately after receiving* the calcium chloride injection, but quickly *recovered and remained in apparently normal* health

A final series of experiments was made in which the initial steps were identical with the above, but *the animal which received serum and calcium* chloride and that which received saline and *calcium chloride* were each *given further daily* injections of the same amount of calcium chloride *solution,* while the rabbit which was originally *given serum and saline received further daily injections of the same amount of saline solution.*

Experiment —Three rabbits, "A," "B," and "C," were taken "A" received a mixture of 2 c c saline and 1 c.c 40 per cent calcium chloride solution, and thereafter a daily injection of 1 c c 40 per cent calcium chloride until death "B" received a mixture of 2 c c of hæmolytic serum and 1 c c of 40 per cent calcium chloride solution, and thereafter *a daily injection of 1 c c 40 per cent calcium chloride* solution until the termination of experiment, except on the sixth day after the first injection, when no calcium chloride was given "C" received a mixture of 2 c c of the same hæmolytic serum and 1 c c of normal saline solution, and thereafter 1 c c of normal saline until the termination of the experiment, except on the *sixth day after the first* injection

CHART III



As before all injections were given intravenously, except that the sixth and subsequent inoculations of calcium chloride solutions into rabbit "B" were given intramuscularly on account of the fact that a large œdematous swelling had formed in the neighbourhood of the marginal ear vein used for the previous intravenous injections A similar change in the site of injection was at the same time made in the case of rabbit "C" in order to keep the results comparable The results are charted in the same way as for the preceding experiments (See Chart III)

The results obtained throughout were thus entirely *concordant* No evidence whatever was obtained of any protective action exerted by operation had been done 21 times, with three deaths. In those who survived there had been a very marked improvement.—Mr. HENRY STOKES discussed the question of sacrificing or saving the great omentum. He thought Mr. Blayney was to be complimented on the low mortality rate in these cases.—Dr. E. M. MAXWELL said she thought that the subject would become more important as time went on and methods became more exact. She suggested that the primary focus of many things would be discovered, such as inflammations of the eye. She referred to one of the cases mentioned in the paper. A patient aged 38 met with an accident to his eye; the day following she extracted a piece of iron and he underwent a normal convalescence, but at the end of a year he returned with acute iritis of the right eye. The patient informed her that during that year he was receiving treatment for constipation and dyspepsia, and about this time Mr. Blayney resected a portion of the colon, and within five days the visual power was recovered and within two months of the operation vision was as good as it had been before.—Dr. CROFTON said the operation was a very severe one and obviously, even in the most skilled hands, was attended by a very high mortality. The cases that had recovered were undoubtedly much improved and taught important lessons. Lane had shown the importance of the intestine, especially the large one, as a source of infection, but if it were possible to get the gastro-intestinal tract working without these operations it would be desirable to do so.—Sir JOHN LENTAIGNE said if the value of this procedure was to be understood and the best means planned for treating these cases the causation of the trouble ought to be known. The ideas generally held about it were very vague. He thought a perfect elucidation had been given by Professor Combe, of Lausanne, who had written two books on the subject laying down in the plainest possible way, from his point of view, the pathology and treatment of these conditions. According to Combe the essence of the trouble in all these cases was the absorption of poisons from the large intestine produced by the decomposition of nitrogenous portions of food. This bacterial decomposition of food occurred in every one, but in the normal individual there were safeguards by which it was checked, and it was only when these barriers broke down that ill health ensued. There were many other conditions which were produced by absorption of these poisons, and all of them at some time or other were amenable to medical treatment. Great improvement could be brought about by diet, but nevertheless many cases came to the surgeon, sometimes owing to an acute attack and sometimes because they objected to restriction in diet or were too poor to be able to get suitable dieting or to face the long and tedious, and more or less uncertain, medical treatment, and therefore had to be treated by a surgeon quickly. It was therefore necessary that the best treatment should be ascertained. What the surgeon saw when he opened the abdomen was probably the result of a very slow process which had gone on for years. As to the operation, Sir John Lentaigne considered that the best plan where the surgeon must interfere was to get a free emptying of the bowel and so relieve the stasis. He was entirely in agreement with Lane as to complete removal of the colon, but it was a very dangerous operation, and unless the technique was perfect the patient was very subject to sepsis. Mr. Blayney's operation, although it removed the worst part of the sink in which the putrefaction was going on, left sufficient of the large intestine to cause further trouble. He looked upon Mr. Blayney's patients as likely to be improved but not cured.—Mr. BLAYNEY in reply largely agreed with the remarks of Sir John Lentaigne as to the cause of the condition. The operation suggested by him was intended only for cases that could not be treated medicinally, and its object was to restore as far as possible the normal condition.

ULSTER MEDICAL SOCIETY.—At a meeting of this society held on Jan. 7th in the Medical Institute, Belfast (Dr. J. S. Morrow, the President, in the chair), Dr. [illegible] read a paper on Diagnosis in Phthisis. Dr. [illegible] read Notes of a Case of Acute Intestinal Obstruction Caused by a Dermoid Cyst of the Ovary, and Dr. [illegible] Robb opened a discussion on the Present Outbreak of Scarlet Fever in Belfast.—In opening the discussion [illegible]

Reviews and Notices of Books.

On Pharmacotherapy and Preventive Inoculation applied to Pneumonia in the African Native, with a Discourse on the Logical Methods which ought to be Employed in the Evaluation of Therapeutic Agents.
By Sir ALMROTH E. WRIGHT, M.D. Dub., F.R.S. London: Constable and Co. 1914. Pp. 124. Price 4s. 6d. net.

THE lengthy title of this little book somewhat recalls the titles of the pamphlets which were at one time so much favoured by learned men, and the contents of its first part correspond to some extent with such a comparison, being largely logical and polemical in character. The main thesis of this first part is the question of the value of æthylhydrocuprein hydrochlorate in the treatment of pneumonia, and certain experiments are set forth which were directed towards ascertaining the action of this substance on pneumococci in the presence of serum. Unfortunately, the results obtained in human patients are disappointing, and the drug has some tendency to affect the optic nerve and cause blindness, it is in Wright's phraseology "optico neurotropic." The rest of the first part of the book is devoted to a discussion of the methods by which we arrive at truth in scientific medical investigation, and these are, according to the author, two—viz., the experiental and the statistical. The latter is praised and practised by Professor Karl Pearson, who has thereby arrived at conclusions unfavourable to the value of the method of estimating the opsonic index of the serum devised by Wright. This may perhaps explain to some extent the latter's apparent preference for the so-called experiental method, which is a process of induction by the individual observer based on his own experience, the value of the conclusions reached depending on the character of the observer and on his carrying out proper methods of research with due control experiments. This is a little reminiscent of Aristotle's method of defining the virtues, each of which occupies a middle point between two vices, and this middle point is fixed "by reason and by the judgment of the practical man." It would seem that the practical man of one country—say, Germany—may differ from that of another—for instance, one of our own countrymen—as to the exact point where vice ends and virtue begins, and however immaterial this may be in the moral field it is inconvenient in science. "Authority" will always have weight, but decision by authority hardly constitutes a valid scientific method. At all events, the seeker for knowledge will be faced by the difficulty of determining who are the competent, and therefore authoritative, persons whose conclusions he can accept.

The second part of the book is devoted to the question of the use of vaccines in the prophylaxis and treatment of pneumonia, the subjects of observation being the native labourers in a South African mine. It seems that such natives are more susceptible to pneumococcal infection than are Europeans; that a considerable dose of vaccine—1000 millions or so—may have some prophylactic efficacy, but only for a brief period of time, and that while the administration of a vaccine during the incubative period of pneumonia may abort the attack, the use of this method in cases of the developed disease is of uncertain value. Many other interesting points are incidentally recorded, Dr **HERBERT SPENCER** described a case of Extensive Cancer of the Cervix with Pyosalpinx, well seven years after Wertheim's hysterectomy The patient was aged 28 She had been examined by an obstetric physician, who advised her to go into a cancer ward as no operation could be done The cervix was occupied by a large ulcerated growth as big as a small apple, which distended the vagina The uterus was fixed by thickening in the left broad ligament and the left sacro uterine ligament, the thickening was not nodular Operation was performed at University College Hospital on Feb 16th, 1907 The cervical growth was first curetted and cauterised, and several protruding masses were cut off with scissors A solution of formalin (10 per cent) was then applied The operation was rendered difficult owing to the presence of bilateral pus tubes, which were adherent to the pelvis and rectum The separation of the left ureter was also difficult No glands were removed A small abdominal drain was used Urine escaped by the abdominal drainage tube for a few days and afterwards by the vagina The patient recovered and left for Canada, where a vesical fistula was found and closed by Dr Marlow, of Toronto Dr Spencer examined the patient every year for four years after operation and found no recurrence In a letter dated March 24th, 1914, the patient reported herself as in the best of health Dr Spencer did not think Wertheim's operation was as good as vaginal hysterectomy with the cautery for early cases of squamous carcinoma of the portio , but for extensive growths and for adeno carcinoma it was much better

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Mr **D KENNEDY** exhibited a portion of Resected Intestine showing Congenital Absence of Cæcum and Appendix, with Atrophied Ascending Colon removed from a girl aged 20 Four years ago she had a subcostal abscess on the right side, which seemed to be shut off from the abdominal cavity The opinion formed was that it was a localised tuberculous abscess, and on opening it she made a good recovery Two years afterwards she developed a fæcal fistula, which was operated on about three weeks ago The abdomen was opened away from the fistula and a resection done, followed by lateral anastomosis The portion of the large intestine anastomosed was about the middle of the transverse colon The opinion of the pathologist who examined the specimen was that it was a congenital malformation, and that the atrophied ascending colon was the result of inflammatory trouble, probably of tuberculous origin Some rearrangement of the muscle fibres practically proved the condition to be congenital —Sir **JOHN LENTAIGNE** thought the origin of the trouble had been inflammatory in character, as many such cases were reported. He suggested that it had probably originated in or about the appendix. One of the reasons why he did not think this case was congenital was the fact that the girl had been well for 16 years He thought that if she had suffered from a congenital derangement to the extent shown in the specimen involving such a tight stricture she would have showed symptoms earlier —Dr **W M CROFTON** regretted that it was not known whether the abscess in the first instance was due to tubercle or other micro-organisms He suggested that the patient might have been saved a very severe operation if at the time the cause of the original abscess had been ascertained, and she was inoculated against it —Mr **KENNEDY**, in reply, said he did not look upon the atrophied ascending colon as congenital He only attributed the cæcum and absence of appendix to congenital defect As to the suggestion of saving the girl from operation, he thought it was beyond his power to render this abnormal intestine normal by any dose of vaccine The ileo cæcal valve was also abnormally narrow and would not permit a pencil to pass

Mr **A J MCA BLAYNEY** showed a number of small Stones removed from inside the capsule of the prostate There was a history of pain and frequency of micturition, and blood was said to have passed An attempt at cystoscopy had been made in America On a cystoscopic examination being made a tumour could be seen The patient stated that urine occasionally came through the rectum Per rectum a mass of the shape of the prostate could be felt somewhat like a stone The history, which extended back over ten years, was against malignancy A diagnosis of prostatic calculi was made and perineal operation was done, when the stones were removed from the prostatic urethra —Sir **JOHN LENTAIGNE** said the case was of importance on account of the occasional difficulty in diagnosis between malignant disease and this condition —Mr **C A BALL** said he had a somewhat similar specimen given him some years ago but the number of calculi and their size were larger, and the diagnosis was made by rectal examination as crepitus could be detected

Mr **BLAYNEY** related his experiences of an operation recommended by Patterson for the relief of Intestinal Stasis This operation consists of the removal of the cæcum ascending and part of the transverse colon The cases in which the operation was performed had as a rule suffered from marked ptosis of those parts of the intestine The operation had been done 21 times, with three deaths In those who survived there had been a very marked improvement —Mr HENRY STOKES discussed the question of sacrificing or saving the great omentum He thought Mr Blayney was to be complimented on the low mortality rate in these cases —Dr E M MAXWELL said she thought that the subject would become more important as time went on and methods became more exact She suggested that the primary focus of many things would be discovered, such as inflammations of the eye *She referred to one of the cases mentioned in* the paper A patient, aged 38, met with an accident to his eye, the day following she extracted a piece of iron, and he underwent a normal convalescence, but at the end of a year he returned with acute iritis of the right eye The patient informed her that during that year he was receiving treatment for constipation and dyspepsia, and about this time Mr Blayney resected a portion of the colon, and within five days the visual power was recovered, and within two months of the operation vision was as good as it had been before —Dr CROFTON said the operation was a very severe one and obviously, even in the most skilled hands, was attended by a very high mortality The cases that had recovered were undoubtedly much improved and taught important lessons Lane had shown the importance of the intestine, especially the large one, as a source of infection, but if it were possible to get the gastro-intestinal tract working without these operations it would be desirable to do so —Sir JOHN LENTAIGNE said if the value of this procedure was to be understood and the best means planned for treating these cases the causation of the trouble ought to be known The ideas generally held about it were very vague He thought a perfect elucidation had been given by Professor Combe, of Lausanne who had written two books on the subject, laying down in the plainest possible way, from his point of view the pathology and treatment of these conditions According to Combe the essence of the trouble in all these cases was the absorption of poisons from the large intestine produced by the decomposition of nitrogenous portions of food This bacterial decomposition of food occurred in every one, but in the normal individual there were safeguards by which it was checked and it was only when these barriers broke down that ill health ensued There were many other conditions which were produced by absorption of these poisons, and all of them at some time or other were amenable to medical treatment Great improvement could be brought about by diet but nevertheless many cases came to the surgeon sometimes owing to an acute attack and sometimes because they objected to restriction in diet or were too poor to be able to get suitable dieting or to face the long and tedious and more or less uncertain, medical treatment, and therefore had to be treated by a surgeon quickly It was therefore necessary that the best treatment should be ascertained What the surgeon saw when he opened the abdomen was probably the result of a very slow process which had gone on for years As to the operation Sir John Lentaigne considered that the best plan where the surgeon must interfere was to get a free emptying of the bowel and so relieve the stasis He was entirely in agreement with Lane as to complete removal of the colon but it was a very dangerous operation, and unless the technique was perfect the patient was very subject to sepsis Mr Blayney's operation, although it removed the worst part of the sink in which the putrefaction was going on left sufficient of the large intestine to cause further trouble He looked upon Mr Blayney's patients as likely to be improved but not cured —Mr BLAYNEY, in reply largely agreed with the remarks of Sir John Lentaigne as to the cause of the condition. The operation suggested by him was intended only for cases that could not be treated medicinally, and its object was to restore as far as possible the normal condition

ULSTER MEDICAL SOCIETY —At a meeting of the Society held on Jan 7th in the Medical Institute Belfast (Dr J S Morrow the President in the chair), Dr [illegible] read a paper on Diagnosis in Phthisis Dr [illegible] read Notes of a Case of Acute Intestinal Obstruction Caused by a Dermoid Cyst of the Ovary and Dr A Gardner Robb opened a discussion on the Present Outbreak of Scarlet Fever in Belfast —Interesting dis c[illegible] the reading of these communications

Reviews and Notices of Books.

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Handbook of Obstetrics for Students and Junior Practitioners in India

By KEDARNATH DAS, M D, Teacher of Midwifery, Campbell Medical School, Obstetrician and Gynæcologist, Campbell Hospital, Calcutta. With 376 illustrations Calcutta Butterworth and Co 1914 Pp 612 Price 14*s* net

STUDENTS in India are to be congratulated on having at their disposal such an excellent text book as this The book is complete, accurate, and clearly written, and is evidently the work of a good teacher and practitioner In his recommendation to conduct a labour with as few vaginal examinations as possible the author is very sound, and his suggestion of estimating the progress of the head, after it has descended too deeply into the pelvis to be felt from above, by pressure through the perineum, is worth bearing in mind by the student We would suggest the great value of abdominal pressure in cases in which the birth of the body is delayed after the delivery of the head, it is free from the dangers which attend both traction on the head or the introduction of the finger into the axilla The plan followed by Dr Das, of leaving the breasts entirely alone when the mother is not to nurse her child is a sound one, and it deserves to be more widely practised than it is at the present time

The section on eclampsia is particularly good, and the author's statistics show very clearly how relatively frequent this disease is among natives of India The observation that in Bengalese only 5 5 to 5 8 grammes of urea are excreted per diem, as against 23 to 32 grammes in Europeans is a very interesting one The treatment of eclampsia is fully discussed, and the uselessness of the routine transfusion of saline fluid and the advantages of a solution of sugar, if the molecular concentration of the blood is raised, are pointed out At the same time it must be remembered that by most authorities the molecular concentration of the blood is held to be diminished and not increased In his account of hydatidiform mole the author does not mention the valuable observations of Briggs on the fact that the relative increase in the size of the uterus may be absent and that it may be even smaller than usual

The influence of Whitridge Williams's teaching is evident throughout the book, and Dr Das follows him in his neglect of the induction of premature labour as a means of treating cases of the medium degree of pelvic contraction, a view with which most obstetricians in this country would not agree In our opinion and in the best practice this operation is successful, and although it is true that the immediate fœtal mortality is high, yet the death rate during the first year of life is not much, if any, higher than that of children born at full term The methods of the Dublin school are not quite correctly represented in describing the treatment of accidental hæmorrhage According to Hastings Tweedy it is not necessary that "the ovum should be intact"—that is, the membranes unruptured—and he employs plugging the vagina successfully even after rupture of the membranes.

The book ends with a series of extremely valuable hints on obstetric surgery for the use of students These are marked by sound common sense and a clear recognition of the points upon which in teaching emphasis should be laid We repeat that this is a good book, and we congratulate the author on his success

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A Manual of Minor Surgery and Bandaging (Heath Pollard) for the Use of House Surgeons, Dressers and Junior Practitioners

By H MORRISTON DAVIES M D, M C Cantab, F R C S Eng, Senior Assistant Surgeon in charge of beds and out patients University College Hospital, &c London J and A. Churchill 1914 Pp 467 Price 7*s* 6*d* net

Heath's 'Bandaging" was known to many generations of medical students in all parts of the world, the book before us is a reincarnation of that widely used work, and yet it retains enough of its original points to enable anyone who knew it before to identify it, even in its new form The general plan has not been changed, but several alterations have been made The chapter on poisons has been omitted, as the subject hardly comes within the scope of a surgical work, while the chapter on case taking has been replaced by one in which the general principles of the methods of examining a patient are laid down The chapter on anæsthetics has been revised by Dr Dudley Buxton and Dr Felix Rood, and the newer methods have been described Some indication of the many changes made may be gathered from the fact that nearly a hundred new illustrations have been added We are sure that this edition will meet with the welcome accorded to previous issues of the work

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The Probation System

By CECIL LEESON Social Study Higher Diploma, Birmingham University, with an introduction by J H MUIRHEAD LL D, Professor of Mental and Moral Philosophy, Birmingham University London P S King and Son 1914 Pp 191 Price 3*s* 6*d* net

AN interesting result of the establishment of universities in the more important centres of English industrial life has been to stimulate in a remarkable degree the scientific investigation of the various social problems connected with modern urban conditions This has been shown in definite form by the organisation in several of the provincial schools of special departments of social study, to which sociological literature is already indebted for contributions considerable both in amount and quality Mr Cecil Leeson's monograph on the probation system is a creditable example of the work which is being done which we have not space to mention in a brief review. An appendix dealing with recent observations by others on the use of "optochin" (æthyl hydrocuprein hydrochloride) in pneumonia suggests that the danger of this remedy is less than was previously supposed, and that it is worthy of further trial on human patients.

The book is interesting and stimulating, as is most of its author's work.

Abwehrfermente.

Von EMIL ABDERHALDEN, Direktor der Physiologischen Instituts der Universität zu Halle a.S. Vierte bedeutend erweiterte Auflage, mit 55 Textfiguren und vier Tafeln. Berlin: Julius Springer. 1914. Pp. 404. Price 12 marks.

IT was only on May 16th last that we had occasion to review the third enlarged edition of this work on the "Defensive Ferments of the Animal Organism," as translated by Dr. J. O. Gavronsky and Mr. W. F. Lanchester. The first (1912) and second (1913) editions in the German text were reviewed in THE LANCET of Jan. 4th, 1913, and Nov. 8th, 1913. Now we have a fourth enlarged edition. These editions appear with almost bewildering activity. The third German edition is not before us, but we have compared the fourth German edition with the English translation of the third German edition. Substantially the text of the latest edition up to a certain point is much the same as the third. There are here and there omissions and addenda in the general text. In this edition the list of contents has been split up, so as to show more fully in detail the subjects dealt with, while in the text itself indications are given which enable the reader to see at a glance the subject under discussion, and the text itself is adapted in paragraph form accordingly. The author is far from thinking that he has attained finality in his researches; in fact, according to his statement in the preface, it is still impossible to give a final decision as to the practical value for the pathologists of the methods which he has employed.

Of the three additional plates the first one is coloured and shows the plumage of the bullfinch, which it appears has a testicle on one side and an ovary on the other. These animals "have on one side male and on the other female plumage, each being delineated accurately, and without any transition, along the middle line of the body." This subject is introduced as "a particularly fine example of the specific action of gland secretions upon cells of specific structure." The second plate is meant to show the method and result of the "ninhydrin" test and the biuret reaction, while the third shows the results obtained when a coloured substrate is acted on by the proteolytic ferments substrate present in serum.

In addition to what appears in the English edition, an account is given of the following questions and problems, some of which are new and which on account of their special importance are treated separately (pp. 139-204)—e.g., the employment of dialysation for determining blood free substrates in blood serum, the proof of dysharmonious substances by means of biological methods, "specificity" of the defensive ferments, the origin of the proteolytic ferments of blood plasma, the "inactivating" of dysharmonious ferments and their "reactivating" adsorption of dysharmonic ferments by the substrate, the application of the dialysis and optical methods in clinical problems and a criticism of the same, the carrying out of physiological and clinical experiments, and other cognate subjects. The chapter on methods has been added to and has been made more practical by the introduction of illustrations to show some of the more complex technical processes employed. The literature is brought approximately up to date, but there is no index. As if to bring the very latest results to the attention of the reader there is an addendum of a few pages.

As, according to the author, it will take many years of investigation to work out the problems herein presented, even this striking contribution to a weighty yet obscure problem can be regarded only as an instalment. We wish the author a successful continuance after the war is over in his persevering endeavours to illuminate a subject of great practical importance. An article in THE LANCET this week by Dr. Gavronsky, giving the results of clinical investigations based on Abderhalden's methods, will be read with interest, and will certainly tend to raise confidence in Abderhalden's work.

Cunningham's Manual of Practical Anatomy.

Revised and edited by ARTHUR ROBINSON, Professor of Anatomy in the University of Edinburgh. Sixth edition. Vol. II., Thorax, Head and Neck. With 267 illustrations in the text and 11 plates. London, Edinburgh, and Glasgow: Henry Frowde and Hodder and Stoughton. 1914. Pp. 636. Price 10s. 6d. net.

NEW editions of the "Manual" come fast, and this fact is in itself some guarantee that the subject matter is up to date. In this sixth edition the alterations are more considerable than a mere revision of the text, and we would especially call attention to the increased prominence given to radiographs of normal living bodies. The section dealing with the brain has been considerably altered, and many new and helpful illustrations have been added to this portion of the book. It is needless to say that the nomenclature of the Basle agreement—here called, with doubtful justification, "international" terminology—is retained in this, its real British godparent. We notice the incorporation of most that is new in the teaching of anatomy since the appearance of the last issue, and we congratulate the editor upon the perpetual virility of this widely used dissecting manual.

National Health Insurance through Approved Societies. Being a Practical Legal Treatise Incorporating the Operative Orders and Regulations.

By W. ADDINGTON WILLIS, LL.B. Lond., of the Inner Temple, Barrister-at-law. London: Published for the University of London Press by Hodder and Stoughton. 1914. Pp. xxx + 494. Price 10s. 6d. net.

THE title page summarises the objects for which this handy sized volume has been compiled, while the name of its author is a guarantee of lawyer-like qualities. Principally concerned, as it is, with the Insurance Act in relation to Approved Societies, it is likely to be found useful also by many who, in the exercise of their professions or officially, have to do with the practical carrying out of national insurance, and medical men, who as a rule have no time to gather information by hunting through statutes and regulations, will find Mr. Willis's methodical arrangements and lucid summaries of considerable assistance. Of course, experiments confirm the statement that the vagi both in the neck and in their branches contain not only secretory but also inhibitory fibres to the pancreas Secondary and inhibitory fibres are found equally in all branches of the vagus to the pancreas The secretion of pancreatic juice excited by the administration of secretin can also be inhibited by stimulation of the vagus Atropine in doses sufficient to paralyse the secretory fibres of the vagus does not paralyse the inhibitory ones —The Relation of Length to Tension Development and Heat Production on Contraction in Muscle, by C L Evans and A V Hill This communication is of interest to physiologists It has reference to isometric contraction —On the Ovarian Factor Concerned in the Recurrence of the Œstrous Cycle, by F H A Marshall and J G Runciman The authors have investigated the problem as to what part of the ovary is responsible or mainly responsible for the recurrence of the procestrum and œstrus in the dog in which the cycle is very regular, and in typical cases extends over about six months The animals were operated on about three weeks before a new heat period was due The ovaries were exposed, at least nine enlarged Graafian follicles were pricked The animals rapidly recovered, and three weeks later manifested what seemed the normal phenomena of heat The animals were killed a week later and the ovaries examined microscopically The experiments show that the occurrence of "heat' in dogs does not depend upon the presence of mature (or nearly mature) Graafian follicles in the ovaries, nor upon corpora lutea, so that some other ovarian element or combination of elements is the cause The ovarian interstitial cells are possibly concerned in the process, but cyclical changes in the condition of these cells have not so far been observed in the dog s ovaries The view that the ripening of the Graafian follicles and the onset of menstruation or heat stand to one another in the relations of cause to effect must be abandoned —Fatty Metabolism in the Liver III Fatty Acid Infiltration of the Liver during Pregnancy and Lactation, by R. Coope and V H Mottram In rabbits dieted for a month a decided increase in the fat of the liver was found to occur at, or about the time of parturition so that this fatty infiltration of the liver is a physiological and not a pathological process —The Afferent Fibres of the Abdominal Vagus in the Rabbit and Cat by K O Neuman — Some Results of Excision of the Adrenal Glands by T R Elliott The observations were made on the cat, an animal which invariably dies after excision of its glands The author s purpose was to analyse the manner of this death, and especially to see whether the end comes with a general failure of the nerve and muscle machinery of the sympathetic nervous system inasmuch as the medulla of the gland is so closely related with that system of nerves After removal of both glands death usually takes place on the second day Removal of one adrenal gland in a cat does not obviously affect the animal s health nor does it when in addition the splanchnic nerves on the opposite side are cut It causes usually some hypertrophy of the remaining adrenal and of accessory adrenals more especially, if not almost entirely of the cortical tissue Subsequent removal of the remaining gland practically always causes death but death does not occur so quickly as when the two glands are removed at one operation In the moribund cat the blood pressure is low and there is nearly complete paralysis of vasomotor and cardio-accelerator nerves (all other nerves reacting in an appropriately normal manner) The paralysis is due to a change in the unstriated muscle since pituitary extract and barium chloride have little or no effect while adrenalin still causes a rise of blood pressure and a quickening of the heart beat The paralysis of the vasomotor nerves is not due to shock The paralysis is due to the absence of adrenal secretion Some evidence is given that the cortical adrenal cells influence sex characters —The Relation between Successive Responses of the Ventricle to Electric Stimuli and Ventricular Fibrillation by A G Levy The general direction of the observations is to support the view suggested by Mines that a circulating rhythm underlies the conditions known as ventricular fibrillation —The Respiratory Exchanges of the Heart in the Diabetic Animal by E H Starling and C Lovatt Evans Many researches on diabetes have shown that the respiratory quotient (R Q) in intact diabetic animals is low compared with that of the normal animal and similar results have been obtained on surviving excised organs The author s observations were made on the heart-lung preparation of the dog It was found that the average R Q for the normal dog's heart is 0 85 The heart uses 3 2 c c oxygen per gramme per hour when doing moderate work, and about 1 6 mg of carbohydrate per gramme per hour when the animal is fed on a mixed diet The lung tissue per gramme of heart uses not more than 0 5 mg of sugar per hour as calculated from the gaseous exchanges The R Q of the diabetic heart in pancreatic diabetes is about 0 71, due partly to the inability of diabetic tissue to utilise carbohydrate, though there are perhaps other factors The average oxygen usage of the diabetic heart is 3 1 c c per gramme per hour, from which it is inferred that the energy requirement of the diabetic tissue is the same as that of the normal one — The Estimation of Non protein Nitrogen and Urea Nitrogen in Blood, by Charles G L. Wolf This communication is of interest to biological chemists, and hangs in connexion with the following communication The Metabolism of the Salivary Gland I, The Nitrogen Metabolism of the Resting Gland, by Charles G L Wolf and Joseph Barcroft This, like the previous paper will be specially interesting to biological chemists, and is an attempt to investigate the nitrogenous metabolism of the submaxillary gland by direct methods, a sharp distinction being drawn between (1) protein and (2) non protein nitrogen

Archives of the Roentgen Ray —The December number opens with a valedictory note from the editor Mr W Deane Butcher who for reasons connected with his health finds it necessary "to abandon a task which for many years has been for him a labour of love." Every radiologist and probably many others will receive this announcement with the greatest regret coupled with the hope that Mr Butcher may be spared for many years yet to watch the progress of the science he has done so much to foster and encourage Only those who have had the privilege of coöperating with him have any idea of the immense amount of work he put into the *Archives* and not the least important part was his regular attendance at congresses at home and abroad, where his kind and friendly disposition and his scientific enthusiasm made him one of the most respected and popular members present This last number of the *Archives* to be issued under Mr Butcher s direction well maintains the high standard set by him from the time he first took charge The excellent series of articles on Diathermy is continued by Dr E P Cumberbatch This series, when completed, might well be published in book form as the subject is one that is commanding increasing attention Most medical journals have something to say about bullet wounds at the present time and we have here a method of localising bullets by Dr F Hernaman-Johnson, with a letter on the same subject by Mr C Thurstan Holland Dr Arthur F Hertz contributes a paper on the X Ray Diagnosis of Gastro-Intestinal Conditions, with special reference to Appendicitis, in which he points out that in quite 50 per cent of cases the appendix can be seen if carefully looked for, and many important conditions accurately diagnosed Dr J MacIntyre, of Glasgow discusses the comparative value of X rays and radium in the treatment of malignant growths—a question that is rapidly coming to the front With the very powerful apparatus now available and the use of screens to shut off the rays that were so prone to set up X ray dermatitis massive doses are now possible that were undreamt of a few years ago, with results that are eminently satisfactory —In the present issue (January, 1915) of the same journal we have the first number to appear under the new editorship, which is now of a three-fold character Dr Robert Knox, radiologist to King s College Hospital Dr E P Cumberbatch of the Electrical Department at St Bartholomew s Hospital, and Dr Sydney Russ physicist to the Middlesex Hospital have now taken over the charge of the *Archives*, a selection that augurs well for the future We note with pleasure that the name of the late editor appears among the list of the collaborators Some important experiments bearing on the question of X ray filtration and dosage are contributed by Dr J H Sequeira A paper dealing with bullet wounds by Dr A J Cleveland describes a modification of the Mackenzie Davidson method of localisation, while Mr Gilbert S Scott shows two plates illustrating some effects of the modern bullet The notes and abstracts as well as the other special features of this valuable journal, are very complete and useful under these influences It deals with a reformatory method which has come very much into favour in this country and in America as a result of the general recognition that the old-fashioned panacea of imprisonment is usually ineffective, if not positively mischievous, as a means of correcting criminal tendencies, and that recourse should be had to so extreme and *dangerous a remedy only* when every other way has been tried and found inadequate Under the probation system offenders, instead of being sent to gaol, are conditionally released *under the friendly* super vision of a skilled social worker, known as a probation officer The system has been widely applied in the United States since 1878, both to juvenile and to adult offenders, and it received full legislative sanction in England by the Probation of Offenders Act, 1907 Mr Leeson gives a clear and concise account of the principles of the method, and discusses its *merits and defects in an eminently* temperate and reasonable spirit It is satisfactory to note that he fully recognises the importance of skilled inquiry into the mental condition of persons whom it is proposed to put under probation It is a method which is obviously useless in the case of mental defectives, and many of the failures which have exposed it to hostile criticism have been due *to the error of applying it to weak minded* delinquents for whom life long control is the only rational mode of treatment Mr Leeson's book is altogether a very creditable piece of work, and may be commended to the attention of readers who desire to learn something of one of the most promising developments in preventive criminology

MISCELLANEOUS VOLUMES

Our Miscellaneous column this week fully lives up to its name, *covering as it does popular* philosophy, travel, war, and linguistics

In the form of a dialogue, one of the speakers being a charming woman "once a swimming reptile," as she is informed, Mr H De Vere Stacpoole in *The New Optimism* (London John Lane 1914 Pp 42 Price 3*s* 6*d* net), epitomises the story of evolution, with the object of showing that the world has a meaning and life an aim that side by side with the building up of forms there is a building up of character and a "*progression towards the benign*" Whether or not we accept the conclusions which the book presents to us, "The New *Optimism" is intellectually stimulating*

A Woman in China (London T Werner Laurie, Limited Pp 890 Price 15*s*) by Mary Gaunt, a great traveller, is written in the bright, breezy, discursive style that characterised her book "Alone in West Africa' It gives a picture of China and things Chinese under the modern conditions of the new republic which will be of interest not only to those to whom far Cathay is quite unknown, but also to those whose *previous conceptions* are based on a *personal* experience of some decades ago It contains little of any special *medical interest, though in* Chapter XIV the amateur medical services of the devoted missionary (not a medical man) and his wife at Jehol aided by a German girl who was a certificated midwife are briefly depicted with a sympathetic touch The book is elaborately illustrated by the author s own photographs, 130 in number which greatly enhance its interest

Chinese Self Taught by the Natural Method, with Phonetic Pronunciation (Thimm s System) by John Darroch Litt D (London E Marlborough and Co 1914 Pp 153 Price wrapper 4*s*, cloth 5*s*) is designed to serve the double purpose of a text book for students officers, civil servants, missionaries and such like, and a handbook for tourists travellers and other temporary visitors to China with the exception, perhaps of the southern ports and Hong Kong Canton, Amoy, and Foochow where *no spoken* phrase from the book is likely to be understood Each of these places has a totally *different* dialect *from* its neighbours and this book professes to set out only the Mandarin or official language " which, *it is claimed*, is spoken by seven eighths of the population, with, of course local variations It is up to date, as we *observe that the* Red Cross Society is phonetically represented as "Hung shirr dz hway," and the Chinese *ideograph for it seems* to a western eye to look like a lamp post shedding its beams, followed by a dumb bell, a St George s cross, an old open umbrella with a skewer through the handle, and a little gable ended cottage We notice that the doctor (army) is "ee sung ' but in another place he is called "bo siz " and he is probably a civilian as he comes next to the fisherman and farmer, but then the physician is also "ee sung,' and the *surgeon is* "wi ko ee sung " The dentist is ' yah ee sung ' and turning to the 'human body" list *we see that "ya chirr"* are teeth The mouth is "kou " and the ideograph is nothing but a simple square The heart is "sin " and a servant is a "yung run," and there are other indications in the *vocabulary suggesting* that it might be possible for a man to teach himself some sort of Chinese, though we imagine his knowledge would not take him far — Another book of the same series is *French Self Taught by the Natural Method with Phonetic Pronunciation (Thimm s System)*, by J Lafitte (London E Marlborough and Co 1914 Pp 148 Price, paper 1*s*, cloth, 1*s* 6*d*) a second edition of which is now out We have expressed *our opinion* in reviewing the first edition on the in our opinion, invincible *difficulties inherent in any* "phonetic" attempts to convey accurately pronunciation by the eye, but at the present juncture, when all that is required by many is to make themselves intelligible the book may prove of service, instruction by word of mouth being often impracticable.

The Nightside of Japan (London T Werner Laurie Limited 1914 Pp 233 Price 7*s* 6*d* net), by T Fujimoto, is a quaint description by a Japanese *for Europeans of* native life and customs in modern Japan Theatres, hotels, railway travelling, *public* baths, *the temples the Geisha* girls the Yoshiwara and various types of Japanese are graphically described Noticeable features from a point more nearly concerning the medical man are the sections on bathing and massage In Japan massage is quite an occupation for the blind There is a piquant attractiveness in the quaint English of the author, and we think the publishers acted wisely in refraining from having the manuscript corrected by a literary man, who would probably have dissipated the peculiar atmosphere of the book

Fighting in Flanders (London William Heinemann 1914 Pp 231 Price 3*s* 6*d* net), by Mr R Alexander Powell, is a vivid and graphic narrative of what the author *saw* in the area of war from its beginning up to the *fall of Antwerp* It is told with a racy humour, expanding in *places* into broad farce such as one has become familiar with at the hands of the American journalist, then again contracting with all the tenseness of tragedy as the deeper tones are sounded As one reads the narrative it becomes easy to understand the conversion of the author—an American, as he describes himself who went to Belgium with an open mind, knowing the English, the French, the Belgians and the Germans equally well and having friends in and *happy* memories of each of the four nations—into a "pro Belgian " The numerous photographs by Mr *Donald Thompson add greatly to the* interest of the book

JOURNALS AND MAGAZINES

The Journal of Physiology Edited by J N Langley, Sc.D F R S Vol XLIX Nos 1 and 2. Cambridge University Press 1914 Price 7*s*—The Influence of the Vagus on Pancreatic Secretion by G von Anrep In 1888 Pawlow asserted the existence in the vagi of *secretory* fibres for the pancreas and later in the splanchnics, and fibres in the vagus which diminish or abolish *secretion* With the discovery of secretin in 1902 some began to doubt the accuracy of Pawlow s observations, while the Popielski *school held that all the phenomena* are to be explained by a nervous mechanism The author in Pawlow s laboratory *has reinvestigated the subject* in dogs anæsthetised with chloroform and ether as morphia injuriously affects the vagus fibres *The spinal* cord must be completely and quickly cut and the bulb must not be crushed Vagus stimulation yields no secretion when the spinal cord is undivided Why this is so is not known Tracheotomy was performed the œsophagus tied in the neck, a cannula placed in the duct, and the vagi exposed as they run along the œsophagus, so that they *could* be stimulated either in the neck or in the chest. The

THE LANCET.

LONDON SATURDAY, JANUARY 16 1915

The Coördinated Study of Gunshot Fractures

THE conditions of the present war are quite unprecedented Not only is the number of our men actually fighting at one time greater than it has ever been before, but there is a correspondingly large proportion of the medical men of the country engaged in attending upon the wounded Again, the fields of battle are many of them so close that an effort can be made to send the wounded back to this country quickly Yet even the nearest battle field is so far off that such transport, involving, as it does, the placing of the wounded on and removing them from ships, is fraught with both great difficulty and danger. In order to utilise as far as possible the services of medical practitioners at home there have been formed large general military hospitals in the British Isles, and to these the wounded are being sent either directly or after a longer or shorter period of treatment in one of the base hospitals in France The scheme of organisatión has been described in our columns, and is familiar to all our readers, who will see that a wounded man may have to go to a field hospital, a stationary hospital, a base hospital, a general hospital, and subsidiary hospital in the course of his journey to recovery, or may skip any link in the chain in accordance with circumstances personal to himself or arising out of the exigencies of warfare

The system is probably the best that can be devised in all the circumstances, it is the outcome of much thought and practical experience and is working well on the whole and splendidly in some directions But in order that it may produce the best results it is desirable that a very close understanding should exist between those responsible for treatment of the patient in his various stages, so that a right course of therapeutics if started, should be *maintained*, and any emendations decided upon should have the best chance of success These remarks apply with especial force to the treatment of severe gunshot fractures With regard to these the march of surgery has been in advance of all practical military experience When last we were engaged in war on a large scale near home, the rule applied that all severe gunshot injuries of the limbs with open fractures of the bones must be amputated at once, for then the results of primary amputation were far superior to those of secondary amputation. It is now the ambition of modern surgery to save the majority of these limbs, and this ambition is happily fulfilled in many cases But unfortunately in the attempts at conservatism lives are lost and limbs are saved in a useless condition through the endeavour to secure more perfect results than those of immediate amputation Things were much simpler in the old days A shattered limb was amputated on the field or at the base, and if the patient recovered there was little or nothing further to be done for him on his return home During the Napoleonic wars our countryside was dotted with our luckless defenders, who, one armed or one legged, were too often compelled to look to charity for their subsistence We shall not see this sad and discreditable spectacle again, but now, with the problems of treatment and the machinery for their solution far more complex, new difficulties arise It is the responsibility of modern surgery to meet these difficulties thoroughly and scientifically Take, for example, the case of a man with an open comminuted fracture of the femur, the injury received in a muddy trench. First he has to be dressed on the field or in the field ambulance, then he has to be transferred to a place of safety, the leg for the time being immobilised At last—and the amount of delay must depend upon the general conditions of the fighting in the area—he reaches the base hospital, where his case can for the first time be fully treated The wounds, fairly certain to be septic, demand immediate attention They are opened up and a number of fragments of bone are found lying in their depths Ought these to be removed or to be conserved as far as possible? No general rule of treatment has so far been formulated This question is answered very differently by different surgeons, although the conditions must in the majority of instances be similar In the less severe type of case sepsis may not be so virulent, nor the bone so much splintered But here the following doubts arise Is it wise to leave the bones alone? Is it better to allow the soft parts to remain lax and the bone ends overlapping? Or should extension be applied from the first? If the fracture is clearly exposed in the wound some surgeons may prefer to fix the fragments, by nails, screws, wires, or plates Indeed, to every one of these questions there are different answers, and accordingly different practices Some surgeons remove all loose bone fragments, others leave them in place, others only remove those fragments which are devoid of attachments and others again, it is said, take out fragments, wash and replace them Some adopt continuous extension of the limb from the outset Some do this in a straight position whilst others maintain the semi flexion of the joints

THE FLOODS AND PUBLIC HEALTH

(FROM OUR SPECIAL SANITARY COMMISSIONER)

THE floods affecting, not only the Thames valley, but many other parts of the country will tax the resourcefulness of our sanitary authorities to the utmost The dampness caused by the water that invades dwelling houses is, of course, unwholesome, but the specific contamination due to the filth floating in the water may be more dangerous In spite of great sanitary progress, no system of drainage has been devised that can protect dwellings from sewage if the floods reach a sufficiently high level The water in the sewers, of course, can only carry the sewage away when the outfall is at a lower level than the sewers, save where the conditions warrant elaborate pumping or exhaustion schemes On the water rising at the outfall it penetrates the sewers, and the first thing that happens is the forcing back of a large volume of sewer air If the sewers are not well ventilated at frequent intervals the sewer air pressed backwards by the rising flood will break the seal of the domestic drains and invade the dwelling rooms of the houses The actual toxicity of sewer air is not now in question—anyhow, no one wants it in the house If the water rises higher still the sewage itself overflows from the street and yard gullies or sewer mouths If there are closets in the basement of the houses the sewage will come out of them into the house If the closets in the house are above the level reached by the flood there will of course be no overflow from the closet, but the lower portions of the soil pipe connecting with the sewer in the street may not be strong enough to resist the unusual pressure The drain pipe may then burst, and then the sewage may be distributed alike upon the streets and inside the houses

The Floods and the Sewage Disposal Works

Even where the flood is not so extensive as to produce an extreme effect it is very likely to invade the sewage disposal works for these must be at a very low level, and this means frequently proximity to a water course This is not a matter which need unduly frighten us It has been calculated that the sewage from a total population of one and a quarter million people, living in the Thames valley, ultimately reaches the Thames above the intake of the London water supply Yet few, if any, cities enjoy so pure and safe a water supply as London The sewage in the Thames valley is carefully treated and purified before it is allowed to flow into the Thames, while the London water supply is kept safe by the efficient methods of storage and filtration employed

The chief concern in London, of course, is the protection of the water supply from the floods In 1894 after severe floods, there was a considerable amount of typhoid fever in London But since that date the water supply, especially the storage of the water has been greatly improved The water reservoirs are now of such vast dimensions that the water may remain standing for a very long time before it is drawn off for use This prolonged settling process, apart from filtering, greatly facilitates purification There is no reason to fear in London that the flood waters will be mixed with the drinking water The storage is so enormous that the intake of Thames water can be stopped for a while London is drinking Thames water now which was collected before the floods It is to be hoped the stored supply is sufficient to meet all wants till the floods are over but the rainfall has been a very exceptional one and the floods have prevailed for some time When the great reservoir was built at Staines complaints were made that its embankments were so lofty that they blocked out the view and spoilt the scenery of the surrounding country Now that the floods are carrying away the contents of privies and distributing broadcast the filth from neighbouring sewage works we may be thankful that these embankments are too lofty for the floods to flow over them and contaminate the store of drinking water for London

When a flood invades sewage works it swamps the filter beds and scatters the untreated sewage in all directions After the floods have subsided the neighbouring fields are found to be covered with a thick and odoriferous layer of sewage sludge The whole system of sewage disposal has become inoperative, and the only hope is that the immense volume of water produced by the flood will suffice to purify the foul matter it carries away In the swollen river, in streets that have become small rivers, there may be a current, and a sufficiently rapid current, to wash away decomposing matter But inside a house, confined within the four walls of a basement or a cellar there is no current. The water stagnates and deposits filth on the walls and floors as it gradually subsides

The Contamination of Dwellings by Floods

In many flooded districts especially among rural populations, there are no sewers Even in comparatively large provincial places it will often be found that the water carriage system is only applied to the more favoured parts of the town There are still provincial towns of some size where, as well as water closets, there are cesspools, privy middens, or pails The cesspools are emptied by night-soil men once a year or oftener, while the pails are generally removed once a week When a flood occurs in such a place the soil, of course, mixes with the water and floats away from the pails or privies, is carried all over the inundated district, into the houses, and into the wells Thus water and dwellings are contaminated All these risks are now with us over a large area and in some districts are aggravated by the large number of camps for the training of the Territorials and other troops We know how severe the floods have been at Salisbury It is to be hoped that the latrines for the soldiers encamped in the neighbourhood are constructed according to the most approved principles, but even so, no system has been invented that will prevent a flood lifting out the contents of a latrine and scattering it about A reasonable step would be to remove the camp to a district out of reach of the flood—a very practical object-lesson in military training, for when the enemy discovers the right range their shells come more rapidly than a flood Then there is other dangerous matter besides the contents of sewers or cesspits Apart from waste products coming from yards where skins are tanned, tripe prepared, offal dealt with, and many other unpleasant and unwholesome industries carried on, there is the vast accumulation of household refuse, the contents of our dust bins That, again, is scattered in all directions and brought inside our houses by the invading floods

Remedial Measures

From all this there results the obvious necessity of applying very prompt and vigorous measures for cleansing and disinfecting the portions of the houses that have been submerged This, indeed must be extended to all parts of the buildings where the damp has extended, even though it may be some distance above the highest water level To give time for this to be properly done, it is fortunate if the waters subside gradually, as all the dwellings cannot be treated at one and the same moment When the floods are beginning to go down, disinfectants notably chlorinated lime, in suitable quantities should be thrown into the water that remains in the basements or cellars There it should mix with the sludge or mud deposited by the water on the walls and on the floor The mud should be piled up in some open space and sprinkled over with a disinfectant The walls, floor, and ceiling of flooded rooms or cellars will require very careful washing and scrubbing, and finally should be thoroughly whitewashed A flood provides an excellent opportunity for a general clearing Rubbish and lumber that may have accumulated during years in cellars or under staircases and basements is rarely worth saving, and can now be very advantageously destroyed, burnt if possible Bedding if it has been soaked in suspect water, should not be spared unless it be of such very good quality as to warrant incurring the expense of thorough disinfection Such cleaning work requires strict supervision It is questionable whether all the sanitary authorities concerned have at their disposal numerous staffs to ensure that efficient measures will be taken This is an occasion when the county medical officers of health may have to exercise their right of supervision over the smaller district sanitary authorities The cleansing of flooded houses must be well done everywhere and not strictly enforced in one locality and neglected in another plan. The second object of the Fund is the assistance of Belgian doctors and pharmacists who are refugees in this country. A large number of Belgian doctors and pharmacists are with us whose needs are urgent. Some had little or no opportunity to bring any money with them, many can obtain nothing to supplement what they brought with them, and the duration of the war will be such that any supply of money brought over by them from Belgium will be exhausted in most instances before they can return to their country to resume professional work. The Fund, out of subscriptions received and acknowledged in the medical journals, has given assistance already to certain of these refugees. A small subcommittee has been empowered to make grants of money in suitable cases, and for this purpose takes the advice of the President of the Belgian Society of Medicine in London, who personally communicates to the honorary officers of the Fund the details of the cases where assistance is required. Thus in two directions already the comparatively small sum of money as yet raised is being utilised, and in both directions it is clear that more money will be required. We have reason to believe that owing to active coöperation in the United States the difficulties attendant upon sending parcels of drugs into Belgium will be minimised, when at once large stocks of medical material should be obtained and shipped. Moreover, the medical refugees in this country are likely, as time goes on, to require more and more succour. There are, therefore, immediate uses for any money subscribed to the Fund, and real need for many more subscriptions.

But there will be a further employment for such money later. Not only is it certain that more money will be wanted in the two directions where action is already possible, but it must be remembered that it has always been the ideal of the Fund to obtain money for the assistance of Belgian doctors and pharmacists when that gallant country is free from invaders, and is making efforts, with the world-wide assistance which she will obtain, to recover from the horrible plight to which German ambition has reduced her. All nations save three will rush to the aid of Belgium when the time of her rehabilitation comes, and two of her three enemies will, it is our confident belief, be compelled to subscribe to the same object. It is the hope of the committee of the Belgian Doctors and Pharmacists Relief Fund to gather together a substantial sum of money, and to coöperate with similar bodies throughout the rest of the civilised world in an international movement. This is the second use to which subscriptions will be put.

LITERARY INTELLIGENCE.—Messrs. Cassell and Co., Limited, announce for immediate publication the fifth edition of Luff and Candy's Manual of Chemistry, revised and enlarged by Mr. Candy. Much of the additional [illegible] refers to the theory of ionisation and some of its [illegible]. The section on volumetric analysis has now been extended to include the volumetric aqueous solutions of the [illegible] Pharmacopœia.

Annotations.

"Ne quid nimis."

THE REGULATION OF THE HEART BEAT.

THE "heart-lung preparation" of Knowlton and Starling has now obtained a permanent place in physiological research. By means of it the mechanical performance of the mammalian heart can be accurately studied, and clearer ideas of its capacity for work and its power of adapting its work to the mechanical conditions imposed upon it obtained. The latest experiments of Patterson, Piper, and Starling show that it is difficult to imagine a more perfectly regulated machine than the heart.[1] Leaving aside such regulatory factors as the influence of possible chemical factors and nerves in the intact body, it is plain that the heart-lung preparation is free from all nervous control, so that the question arises whether we can refer to one or a few elementary qualities of the muscular tissue the whole behaviour of the heart "under stress or light work, when efficient or failing, when stimulated or depressed by drug or nerve." This is the interesting problem which has occupied the attention of the above-named observers for the last two years. Their results are most interesting, as well as of great practical importance. The behaviour of the heart must be the sum of the behaviour of its constituent muscle fibres. It is interesting to compare its inner activity with that of skeletal muscle. In a skeletal muscle it is found that the longer the muscle the greater is the amount of chemical energy, heat production, and tension set up when the muscle passes from the resting to the active condition—results which also obtain in cardiac muscle, making allowance for the different arrangement of the heart fibres, and the fact that the heart contracts rapidly and rhythmically, so that both the tension and length of its fibres alter continuously during diastole from one beat to the next. E. H. Weber originally stated that a skeletal muscle during contraction changes into a body with other elastic properties, or, as recently expressed by A. V. Hill, excitation causes a setting up of a new state in muscle. At and after this moment the muscle is simply a new elastic body of changed elastic properties and possessing potential energy which can be turned into work if we desire, but which otherwise will degenerate in a few hundredths of a second into heat. Neither the length nor the tension of the heart fibres can be measured directly, but on the length of the fibres depends the capacity or volume of the heart, while the tension of the muscle fibres determines the intracardiac pressure. Professor Starling and his colleagues therefore adopted methods to determine these factors during rest and activity of the heart. It is found that the "law of the heart" is the same as that of skeletal muscle. The mechanical energy set free on passage from the resting to the contracted state depends on the area of "chemically active surfaces"—i.e., on the length of the muscle fibres. They claim that this simple formula "serves to explain the whole behaviour of the isolated mammalian heart—its movements, powers of adaptation to varying demands made upon it, its

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[1] Journal of Physiology, [illegible] xlviii, [illegible] THE LANCET, Nov. 7th, [illegible] p. [illegible]

We do not here advocate one method of treatment rather than another, and in any particular case he would be a rash person who should attempt to dogmatise, but we would point out that of all these various practices some must be right and others wrong when applied over a long series of cases having many qualities in common. It ought not to be merely a question of personal opinion or of text book rule, for we may say that no opinion and no text book can speak with authority under the peculiar circumstances of the present war. It is clear that we must be prepared to regard ourselves, as a nation, as only at the beginning of the war, and it ought to be possible at this early stage to collect a body of evidence about all these points which should in the main serve as a guide for practice in the immediate future. Take two only of the debated questions. First, ought fragments of bone to be removed from open septic comminuted fractures? We think the usual answer is in the affirmative, but patients arrive in this country with great gaps in the continuity of the large bones, which will have to be made good by difficult and tedious bone grafting at a later date, if indeed anything can be done, when very great loss has occurred. If, on the other hand, the bone fragments might safely have been left and it could be shown by a series of cases that they afterwards unite to reconstitute the broken shaft, then all workers would be in a position to benefit by this fact. Secondly, ought the fragments to be fixed by plates and screws in a septic wound? If this can be done with impunity then there is a great gain in time, saving of pain, and facility of transport. But this bold and unorthodox plating may produce disastrous results, under which the patient arrives at the general hospital with his leg firm and straight, but subsequently the whole length of the plated bone necroses and leaves a huge gap. What is to be said in such circumstances, and who is to say it? One surgeon takes out the bone fragments and another is left to deal with the flail like limb. One surgeon screws on plates and another has to make the best of the resulting destruction of bone. At the end of the war no doubt we shall be supplied with masses of statistics justifying different procedures, and some may think that this recorded experience should be awaited, saying that the present is not the time to write but to act. But the end of the war will be too late for thousands of maimed soldiers. Surely it is desirable and possible to institute some system of coöperative effort, first in the registration of facts, and then in the carrying out of principles, so that surgeons at the field hospitals, base hospitals, and general hospitals shall be able to unite in carrying out a well approved system. Any practice in an early stage which gives bad final results could be noted and checked, and the discovery of any new treatment or appliance should quickly be placed at the disposal of all.

Our Belgian Colleagues

WE publish this week a circular which has gone out in many directions to medical practitioners explaining the objects of the Belgian Doctors and Pharmacists' Relief Fund, which is being raised to organise assistance, in money and in kind, for Belgian medical men and pharmacists, both those remaining in Belgium and those who are refugees in this country. The information in the circular has all been published in different issues of the *British Medical Journal* and THE LANCET, but the time has now arrived when a consecutive story may be told with advantage, for it is difficult for anyone who is not actually concerned in the details of a movement to follow its progress from week to week. We want our readers to understand clearly both what the promoters of the Fund have before them as objects, and in what directions they have so far been able to work, for upon such understanding further support will follow.

It may be pointed out that the aims of the Fund are twofold, and that the uses to which it is proposed to put any money collected are also twofold. The terrible position of the country of Belgium—submitting, save in one tiny strip of territory, to the occupation of the Germans—has dictated both the objects of the Fund and the methods of its distribution. First, with regard to the objects, Belgian doctors and pharmacists who are remaining in their own country—and these comprise, of course, the great majority of both professions—are in the midst of a population in the most dire need of their ministrations, but to a great extent they are unable to play their professional parts. They must look on while the people die, especially the children, to whom the Belgians look to replace in due time the gaps in their depleted numbers. The devastation of war has left both medical men and pharmacists largely without money, often without houses, and, as we learn from authoritative sources, quite without any of the material with which to render actual therapeutic assistance. These pharmacists and doctors are alike in recognising that in most instances their unfortunate countrymen cannot be expected to pay fees, but even were fees obtainable the tragic situation would be the same, for medical assistance is usually of little worth in the absence of drugs, dressings, and instruments. Thus the earliest object of the Fund was to try to establish communication with the Belgian doctors and pharmacists in Belgium so that they might be supplied with drugs and instruments. How far this will be possible with any regularity or in any bulk cannot be said, but the Executive Committee of the Fund, having obtained the invaluable sympathy of the American Ambassador in London with the endeavour to create a channel of supply, is now acting through the International Commission for Relief in Belgium, and hopes soon to be able to transmit medical material to Belgian doctors and pharmacists upon some regular amount of this water must reach the reservoirs The well known purifying process of sedimentation by storage would obviously occupy a much longer time for completion in order to bring the water to a sufficiently pure state for drinking purposes It is to be hoped, however, that the increased vigilance which would seem imperative at a time when a great flow of storm water occurs, with its heavy charge of impurities drawn from the land, will be exercised by our authorities. It will be interesting in any case to watch the future official reports upon the purity of the supply based upon the examination of samples synchronising with the flooding period The precautions alluded to apply equally of course, to other parts of the country which derive their water supplies from rivers, for the excessive rainfall was general

MEDICAL RECIPROCITY WITH BELGIUM

BY an Order in Council published in the *London Gazette* of Jan. 8th it is enacted that, "whereas the Kingdom of Belgium affords in his Majesty's opinion to the registered medical practitioners of the United Kingdom such privileges of practising in Belgium as to his Majesty seems just, during the continuance of the present war, now, therefore, his Majesty doth hereby, by and with the advice of his Privy Council, order, direct, and declare that the Second Part of the Medical Act, 1886, shall be deemed, from the date of this Order, to apply to the Kingdom of Belgium, until it is otherwise ordered ' Part II of the Medical Act of 1886 deals with the admission to the Medical Register of colonial and foreign practitioners holding medical diplomas recognised by the General Medical Council "as furnishing a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery The new and welcome Order in Council authorises the General Medical Council to recognise for the time being medical diplomas of approved Belgian universities and thus to admit Belgian practitioners to the Foreign Section of the Register, with freedom to practise in the United Kingdom The Executive Committee of the General Medical Council will take the necessary steps to give early effect to this enactment

BAKING CHRONIC ULCERS OF THE LEG

IN the *New York Medical Journal* of Dec. 19th last Dr H D Sonnenschein has reported good results from the treatment of chronic ulcers of the leg by ' baking the part in an electric dry air oven at a temperature of 250 to 300 F for 20 to 30 minutes three times a week Sluggish granulations become healthy and active healing is astonishingly rapid and pain disappears after two or three treatments The following are examples A man, aged 63 years, had an ulcer of the size of the palm of the hand on the tibial surface of the left leg The urine contained sugar In diabetic and nephritic cases the patients can endure only low degrees of heat and are very susceptible to burns Therefore the oven is heated to a lower temperature than usual In this case 120 to 130 was adopted and the ulcer completely healed In another case a barman aged 42 years had an ulcer on the plantar surface of the foot following an injury received 14 years before It was 1½ inches square and three eighths of an inch deep and the edges were very hard There was no history of syphilis and the Wassermann reaction was negative The ulcer had not been treated for 12 years, and the patient sought advice in consequence of the pain, which was unbearable The ulcer was "baked" three times a week, cleansed with peroxide of hydrogen, and dressed with scarlet red ointment. Complete healing took place and the pain disappeared In a third case a man, aged 45 years, had an ulcer on the small toe of the left foot which extended for about an inch along the border of the foot Both feet were cyanotic and painful. In spite of the poor nutrition of the part the ulcer healed and the cyanosis and pain diminished under "baking" and the application of scarlet red ointment. Dr Sonnenschein considers that the method acts by induction of hyperæmia, which has been found very successful in the treatment of refractory chronic ulcers Among the means which have been adopted to induce hyperæmia are the application of Esmarch's bandage and the old but efficacious plan of immersing the part in a pail of very hot water We may point out that, as stated in an annotation in THE LANCET of June 14th, 1913 (p 1684), heat applied in another manner—a douche of hot air—has been used with success by French surgeons in the treatment of torpid ulcers In 1911 M Vignat recommended it, and at a meeting of the Societe Medicale des Hopitaux of Paris on May 16th 1911, M Mosny and M. Pruvost reported a case of sloughing bedsore in a patient in a bad condition after an attack of phlebitis and bronchopneumonia which rapidly healed under this treatment

THE CORPUS STRIATUM

SOME of the obscurity which has hitherto enshrouded our knowledge of the large mass of basal grey matter which is known as the corpus striatum appears at length to be dissolving away In spite of the fact that electrical stimulation of this region of the brain fails to elicit any definite motor response, yet evidence of lenticular degeneration can be clinically revealed by a syndrome of symptoms now fairly clearly recognisable in which motor disturbances, spasm and tremor, form prominent features Dr S A Kinnier Wilson, who has brought this 'lenticular syndrome" into prominence,[1] now records in *Brain* (1914, xxxvi., 427) the results of certain experimental lesions placed in this basal mass and discusses the significance of these observations Electrical stimulation of the lenticular nucleus failed to induce any motor effect, thus confirming the results of most other observers Electrolytic destruction, however, of definite portions of this nucleus was carried out on monkeys which after a period of three weeks, were destroyed and the degenerated areas carefully examined The results showed, in the first place that the corpus striatum is independent of the cerebral cortex, it is also not connected directly with the spinal cord Connexions are more intimate however with the optic thalamus and regio subthalamica, including the red nucleus and this fibre system links especially with the globus pallidus portion of the corpus striatum It is clear that this body is an behaviour in fatigue and under the influence of its nerves or chemical agencies, such as acid ions or adrenalin." A study of the heart shows that it is able to put out a constant amount of blood with very wide variations in the arterial pressure provided only that the venous inflow is constant. Indeed, if the inflow into the right ventricle is maintained constant, the output from the left ventricle is unaltered by the resistance presented by altered arterial blood pressure, by changed rate of beat. On the other hand, within wide limits the heart is able to increase its output in direct proportion to the inflow. A study of the respiratory exchanges of the heart shows that the metabolism of the heart increases or diminishes in proportion to the mechanical demands made upon it. The adaptation is complete, the chemical sources of energy are drawn upon in proportion to the heart's requirements. The heart, like any other living tissue, requires opportunity for recuperation. This it obtains normally by putting in its period of rest immediately after each period of activity. If a high degree of work for long periods is demanded of it it shows fatigue, which may go on to failure. As the three latest observers point out, this occurs when the dilatation, which is the mechanical result of unchanging inflow and failing outflow and is the automatic means of regulating outflow to inflow, proceeds to such an extent that the tension of the muscle fibres becomes increasingly inadequate in producing rise of intra-cardiac pressure. The mechanical disadvantage at which in the dilated heart the skein of muscle fibres must act finally smashes up the system and the circulation comes to an end.

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[1] THE LANCET April 2[illegible], 1912, p 11[illegible]5

EPIDEMIC OUTBREAKS IN RUSSIAN FACTORIES

IN March and April of 1914 severe mysterious epidemics broke out in many Russian factories, most of which are in Petrograd. The evidence now forthcoming as to the origin of these epidemics is analysed in *Norsk Magazin for Laegevidenskaben* for October by Professor Harbitz, who, though he does not claim to have solved all the difficulties, argues that the main causes were chronic ill health and hysterical phenomena, which spread from patient to patient. The first outbreak occurred in a large Russian American rubber factory, which turns out millions of goloshes. The workers sit by hundreds at long tables in a large room, and their task consists of fitting the separate pieces together. The adhesive material used contains gutta percha and resins dissolved in benzine, the vapour of which constantly fills the room. It is a curious fact that though the factory has been in activity for 54 years symptoms of poisoning had not hitherto occurred, at any rate in the form of an epidemic. On the morning of March 25th one woman after another suddenly developed headache, giddiness, lassitude, collapse, and loss of consciousness. Nausea, vomiting, and convulsions were also observed. About 50 women were thus affected, a panic ensued, and a rush was made from the factory. Most of the patients rapidly recovered, but a few were confined to hospital for several days with headache and giddiness. On March 26th 102 similar cases occurred in another room of the same factory. The floor was strewn with writhing, unconscious women, and some men who rushed in to help also collapsed. An inspection of the room by medical men and the staff of the factory revealed nothing amiss. Next day the first room was opened again, but the women had scarcely begun work before a new outbreak occurred, 60 new cases being observed. All work was now stopped throughout the factory, but on March 28th, when the employees arrived to receive their weekly wages, several new cases occurred. On March 30th, when the factory was re opened, there were several new cases, but the symptoms were slighter. The employees now refused to work till several precautions had been taken. The whole factory was accordingly closed, and about 17,000 persons were out of work. The employees insisted that they had been poisoned by the adhesive material, the benzine of which had recently been changed. But this, according to the employers, was the purest benzine from Baku. They also remarked that the symptoms were practically confined to the women, although several men worked with them, and that, though the same solution was used in every room, the epidemics broke out now only in this room, now only in that. Medical men who investigated these outbreaks traced them to benzine poisoning, with which the symptoms tallied. They suggested that the cumulative effect of this drug had culminated in several persons at about the same time, and had affected women in particular on account of their weak constitution and physiological characteristics. Many neurologists, however, followed Professor Bechterew's lead in regarding these outbreaks as hysterical. Admitting that chronic poisoning might be at the bottom of these outbreaks, they maintained that their epidemic nature was due to auto suggestion and psychic infection. The upholders of the benzine hypothesis pointed to the occurrence of similar outbreaks in rubber factories in Riga. But their arguments were shaken when several similar outbreaks occurred in factories in which benzine was not used. Three tobacco factories were successively involved, and nicotine poisoning was consequently suspected till similar outbreaks occurred in factories devoted to such widely different commodities as chocolate, clothing, machinery, wool, and jute. To what extent these outbreaks were the expression of an agitation for better sanitary conditions it is impossible to say, but Professor Harbitz considers that they were mainly due to faulty sanitation and to chronic ill health, to which in some cases benzine may have contributed. The epidemic character of the outbreaks was, in his opinion, largely determined by psychic factors.

FLOODS AND POLLUTION

THE remarkable figures given by Lord Desborough at a meeting of the Thames Conservancy Board in regard to the extent of rainfall over the Thames basin for nine weeks ended on Jan. 5th last must mean an increased strain on the purifying machinery of the Metropolitan Water Board. In another column we publish a communication dealing generally with the increased demand upon the capacity of our sewerage system and its relation to public health. In the Thames basin the fall of rain was equal, we are told, to 3015 million tons, or 682,507 million gallons of water over the 3812 square miles of the area. It may be presumed that part, at any rate, of this flood water would be impounded in the storage reservoirs in order to keep up the domestic supply, and that in spite of the mass of impurities which it must sweep from agricultural land a good formed the subjects of coroners inquiries The first case was that of a young woman employed at an aeroplane factory at Rochester, who died from toxic jaundice with uræmic symptoms, the inquest was held on Jan. 5th The second case was that of a girl, aged 19 an employee at Vickers s works at Crayford, and at the inquest on Jan 8th the medical evidence showed that death occurred with symptoms of intense jaundice the result of toxic degeneration of the liver In each case the jury brought in a verdict of death from poisoning by tetrachlorethane vapour used in the aeroplane "dope" We understand that the Home Office are taking energetic measures to prevent the occurrence of any further accidents from this cause, but in view of the fact that tetrachlorethane and similar substances are being used in various parts of the country not only at aircraft works but in other industries—such as the manufacture of various preparations of cellulose—we think it advisable to draw public attention to the dangers involved in the employment of this very toxic chemical

A METHOD OF STAINING PARASITIC AMŒBÆ.

THE difficulty of satisfactorily staining the amœbæ of dysentery and allied forms is in practice considerable, so that any method which can be relied on to give good results is of interest The following directions are given in a recent communication by Mr Alexander Marshall,[1] of the Wellcome Tropical Research Laboratories at Khartoum Smears are made from dysenteric stools and transferred rapidly, while still wet to Schaudinn s fluid They are then washed in alcohol of different strengths and finally in distilled water, after which they are stained in Delafield s hæmatoxylin for 20 minutes They are next washed in tap water and stained with carbol fuchsin as for tubercle bacilli, after which they are again washed with water and finally differentiated with Sprengel s solution of picric acid, consisting of equal parts of absolute alcohol and of saturated watery solution of the acid This is applied for three to five minutes, during which time the reagent is changed three or four times The stained films are then dehydrated in absolute alcohol cleared in xylol and mounted in Canada balsam Thus treated, the nuclei of the parasites are stained a purplish black, while the cytoplasm is a pale translucent yellow colour Red blood corpuscles are also stained yellow The method is described as easy, rapid and certain in its results, and is certainly well worth trial by those called upon to make this investigation

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[1] Reprint from the Laboratory Journal September 19[illegible]

NATIONAL ASSOCIATION FOR THE PREVENTION OF INFANT MORTALITY AND FOR THE WELFARE OF INFANCY —This association whose chairman is Sir Thomas Barlow has arranged for an advanced course of lectures on infant care for voluntary health workers mothers nurses &c. to be held at the Royal Society of Medicine 1 Wimpole street W on Mondays at 5 30 P.M from Feb 1st 1915 onward In addition to the lectures arrangements can be made for the attendance of every student at a four- [illegible] at selected infant welfare centres. For tickets and all further particulars application should be made to Miss Halford Secretary National Association for the Prevention of Infant Mortality 4 Tavistock square London W.C.

THE CLAIMS OF BRITISH SPAS

(*Concluded from Dec. 5th 1914, p* [illegible])

VIII.—WOODHALL SPA.

DEVELOPMENTS of real importance from a balneological point of view commenced at Woodhall Spa Lincolnshire, in 1887, since which time the place has advanced considerably The spa was brought prominently before the notice of the medical profession in 1909, when a large party of medical men from London and the provinces visited the place in response to an invitation of the directors of the Woodhall Spa Company to come and see for themselves the facilities for bath treatment offered at an increasingly popular health seeking station It is only three hours' journey from London, and is situated amongst most attractive surroundings of a rich moorland country with charming woodland scenes in which pine and birch trees chiefly figure The place has a restful air, and is well suited to the temperament of those persons who are likely to derive benefit from the therapeutic waters of the bromo iodine wells

The principal chemical feature of the Woodhall Spa water is the presence of both the bromide and iodide of potassium in distinctly important quantity, the former occurring to the extent of 3 51 grains per gallon and the latter to 0 53 grain per gallon The total saline matters present amount to 1562 48 grains per gallon, of which 1406 grains are due to common salt according to Professor T E Thorpe's analysis

Taken internally in small quantities this water is said to produce a sedative and tonic effect upon gastric and intestinal mucous membranes which is useful in some gastric and dyspeptic conditions In larger quantities the gastric activity is increased and chronic catarrhal conditions are benefited, while the functions of the pancreas and liver are stimulated and altogether a healthier state of nutrition ensues This alterative action of the waters is particularly observed in cases of rheumatism, gout, arthritis enlarged glands, and inflammatory exudations In full doses the water is mildly but distinctly purgative while effecting a marked diuretic action These waters, unlike so many natural waters which contain merely indifferent mineral constituents, show a composition upon which the explanation of their therapeutic action may reasonably be based The presence of bromide and iodide of potassium, for example, may be associated with definite therapeutic results, especially when they are accompanied by chloride of sodium In this matter the waters of Woodhall Spa are unique as no other mineral water in this country is known to contain such important quantities of the elements iodine and bromine

The external application of the water is provided for in many ways, a course of hot mineral baths being a routine of great assistance in cases of rheumatism and neuritis As an adjunct a hot spray is employed Local applications are given in the form of sprays and douches to joints, vapour inhalations and douches to the internal cavities of the nose and throat Compresses for application to painful joints have their basis in a specially concentrated mineral water which is further used in the form of douche or spray when a marked local reaction is desirable

The programme of social arrangements at Woodhall Spa is attractive but unobtrusive autonomous centre Its function is exercised independently of the cerebral cortex, but is motor in type, and is exercised in an *efferent or caudal* direction Developmentally, it appears that in the lower forms of vertebrate life the corpus striatum exercises a more dominant motor control than it can exert in the higher forms, although such control cannot attain the complexity and range afforded by the elaboration at a later phase of the cortical brain or neopallium The final function of the corpus striatum appears to be something of a "steadying" influence upon pyramidal innervation exerted through the strio rubro spinal tract How this effect is brought about is suggested to be by virtue of what Sherrington terms the 'final common path" The idea conveyed by this definition is that an end neuron effect, of motor type for instance, depends for its manner of action upon the particular stimulus applied to its arborisations at its proximal end, which stimulus, however, may be of varying nature, and may also reach the end neuron along different converging channels The type of final stimulus is itself determined by the coördinate relationships between the possible sources Amongst such channels are recognised cortical and cerebellar influences, for example, in addition, the corpus striatum is claimed to be capable of exerting an effect Clinically it is suggested that absence of striate control induces tremor, well exemplified in cases of progressive lenticular degeneration One question remains to be answered Why is it that in the experiments performed tremor did not result? The reason suggested is that possibly the wide variation in functional capacity of the lenticular nucleus in different species, a variation worthy, apparently, of particular comment, forbids the anticipation that results gained in experiments upon the ape need necessarily be identically reproduced in man

TRAUMATIC RUPTURE OF THE HEALTHY AORTA

IN the *Journal of the American Medical Association* of Nov 28th, 1914, Dr G G Copeland has reported a case in which death was due to a very unusual cause—traumatic rupture of a healthy aorta A labourer, aged about 40 years, was struck by a large mass of falling earth, which gave him a glancing blow on the back and knocked him down A few seconds later he was picked up dead Dr Copeland examined the body a few hours after death There was a large scalp wound on the fore head down to the bone, which was not fractured On the body were several small bruises, especially over the right loin, and the pelvis seemed to be fractured The face and mouth were blanched, suggesting internal hæmorrhage Nearly 10 ounces of blood were found in the peritoneal cavity The liver was badly torn and the right kidney was torn, but the capsule was intact The pelvis was fractured near the symphysis pubis, but the bladder was intact The peritoneal surface of the intestines and many of the blood vessels supplying them were torn With these lesions the abdominal cavity should have been full of blood The whole condition was explained when the thorax was opened The left pleural cavity contained 38 ounces of fluid blood Opening into this cavity were the gaping ends of the descending aorta, which was cut across as cleanly as if a knife had been used The ends were separated an inch at the widest part and half an inch at the narrowest The rupture was at right angles to the length of the vessel, which was quite healthy The intima was smooth and showed no plaques or dilatations The heart was firmly contracted and empty and was perfectly normal The distance from the aortic valves to the tear was 3½ inches The right lung was adherent to the chest wall throughout It was solid and non crepitant and its condition suggested the stage of red hepatisation of pneumonia The lower lobe of the left lung contained much coagulated blood Dr Copeland is unable to explain how the rupture was produced There were no external signs of the cause of death He suggests that the rupture of the aorta may have been due to a force of the nature of contrecoup

THE PROGNOSTIC VALUE OF SCHMIDT'S TEST IN SUMMER DIARRHŒA

DR J Sidney Pearson, of Perth, Western Australia, commenting on the value of the Schmidt test on the fæces in the *Medical Journal of Australia* (1914, vol i, p 491), considers it of considerable value from a prognostic point of view His data for such a conclusion are based upon 2000 cases, though from the text it is not clear whether all were tested or whether such tests were limited to the 400 cases to which he more particularly refers The test depends upon determining the presence or absence of altered or unaltered bile in the fæces, and is carried out in this way A teaspoonful of fæcal material is placed in a wide test tube, a little sterile water added, and well stirred with a glass rod The tube is then filled to four or six times the volume with a saturated solution of corrosive sublimate, the mixture well shaken, and allowed to stand for 12 hours By this time fæces if normal become coloured bright red If unchanged bile pigments are present the colour becomes green If no colour change occurs bile is absent, and the reaction is termed negative In summer diarrhœa it is found to be generally negative, with improvement a positive reaction occurs, a green or red colour appearing The point especially emphasised is that no single case ended fatally in which the Schmidt test continued positive or after treatment became positive Further, Dr Pearson never managed to cure a case in which the Schmidt test continued negative In a final series of 200 tabulated hospital cases the results were —

Discharged with Schmidt's test	Negative	77
	Positive	87
	Changing to positive	9
Died with Schmidt's test	Negative	27
		200

Some pathological data recorded by the writer show that changes in the gall bladder, absence of bile in the intestines, are found in these zymotic enteritis cases He also notes that the bright green stools are not due to unchanged bile, but to a chromogenic organism, frequently the bacillus pyocyaneus

POISONING BY TETRACHLORIDE OF ETHANE

IN our issue of Dec 26th, 1914, we reported at some length the proceedings at an inquest upon a man who died at Hendon from the poisonous effects of the vapour of tetrachlorethane contained in a 'dope' for varnishing aeroplanes Since then two further deaths from the same cause have ıer smaller towns Of the 66 uncertified causes of death, were registered in Birmingham, 13 in Liverpool, 5 each South Shields and Gateshead 3 each in Southend-on Sea d Sheffield, and 2 each in Stoke-on Trent, Bootle, Roch le, and Tynemouth

HEALTH OF SCOTCH TOWNS

ın the 16 largest Scotch towns with an aggregate popula n es imated at 2,344 400 persons at the middle of this year 5 births and 1100 deaths were registered during the week ded Saturday, Jan 9th The annual rate of mortality in ese towns, which had increased from 17 7 to 20 5 per 1000 the four preceding weeks, further rose to 24·5 per 1000 the week under notice During the 13 weeks of last arter the mean annual death rate in these towns averaged 8 against a corresponding rate of 14 9 per 1000 the large English towns The annual death rate last ek ranged from 12 5 in Motherwell, 14·0 in Ayr and 7 in Perth, to 26 3 in Glasgow, 28 2 in Aberdeen, and 30 0 Dundee

The 1100 deaths from all causes were 201 in excess of the mber in the previous week and included 117 which were erred to the principal epidemic diseases against 77 and 93 the two preceding weeks Of these 117 deaths, 55 resulted m whooping-cough 21 from diphtheria 17 from infantile rrhœal diseases, 13 from scarlet fever, 7 from measles, and rom enteric fever but not one from small pox. The mean nual death rate from these diseases was equal to 2 6, ainst 1 4 per 1000 in the large English towns. The deaths ributed to whooping-cough which had been 35 28 d 44 in the three preceding weeks, further rose to 55 last ek, of which 38 occurred in Glasgow, 8 in Dundee, 4 in eenock, and 2 in Clydebank The deaths referred to diph eria which had been 9 16 and 14 in the three eceding weeks rose to 21, and included 7 each in asgow and Edinburgh and 5 in Aberdeen The fatal ses of diarrhœa and enteritis (among infants under 2 years) ich had been 15, 12 and 11 in the three preceding weeks, se to 17 last week, 5 deaths each were recorded in asgow and Dundee and 3 in Edinburgh The deaths ributed to scarlet fever which had been 17 15 and 17 in e three preceding weeks fell to 13 last week, and included n Glasgow The 7 deaths referred to measles were 4 in cess of the weekly average during last quarter, and com ised 6 in Dundee and 1 in Aberdeen Of the 4 fatal cases of teric fever 2 belonged to Glasgow and 1 each to Edinburgh d Paisley

The deaths referred to diseases of the respiratory system, ich had increased from 154 to 210 in the four preceding eks, further rose to 235 in the week under notice, 32 aths resulted from different forms of violence, against 35 d 42 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland with an aggregate pula ion estimated at 1,212,350 persons at the middle of is year 649 births and 615 deaths were registered during e week ended Saturday Jan 9th The annual rate of ortality in these towns which had been 21 8 17·0 and 8 per 1000 in the three preceding weeks fell to 26·5 per 00 in the week under notice During the 13 weeks of st quarter the mean annual death rate in these towns eraged 18 8 against corresponding rates of 14 9 and 16 8 r 1000 in the English and Scotch towns respectively The nual death rate last week was equal to 36·5 in Dublin ainst 20 1 in London and 26 3 in Glasgow, 21·0 in Belfast 1 in Cork 13 9 in Londonderry 33 8 in Limerick and 8 in Waterford while in the 21 smaller towns the mean ath rate was 20 5 per 1000

The 615 deaths from all causes were 23 fewer than the mber in the previous week and included 33 which were erred to the principal epidemic diseases against 32 and 42 the two preceding weeks Of these 33 deaths 11 resulted m whooping cough 11 from infantile diarrhœal diseases rom measles 5 from diphtheria, 3 from

The deaths referred to diseases of the respiratory system, which had been 105, 96 and 162 in the three preceding weeks, fell to 139 in the week under notice Of the 615 deaths from all causes, 182, or 30 per cent, occurred in public institutions, and 6 resulted from different forms of violence The causes of 30, or 4·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest in the English towns the proportion of uncertified causes did not exceed 1 0 per cent

THE SERVICES

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned has been entered as Surgeon for temporary service in His Majesty's Fleet —Robert Sharp Lawson

The undermentioned have been granted commissions as Surgeons for temporary service in His Majesty's Fleet, and have been appointed to the *Pembroke*, additional, for Chatham Hospital —James Edward McCausland and Frank Reginald Featherstone

ROYAL ARMY MEDICAL CORPS.

Fred D Bird to be temporary Lieutenant-Colonel (dated Dec 3rd, 1914)

To be temporary Captains —Dated Dec. 16th, 1914 Robert Sewers Berry Dated Dec 21st, 1914 Edwin Arthur Peters and Arthur Robert Owst. Dated Dec 23rd, 1914 John Davies

Temporary Captain Frederick F Bond resigns his commission (dated Jan 9th)

To be temporary Lieutenants —Dated Dec 5th, 1914 Alfred Cecil Edwards Dated Dec 7th, 1914 Bertram Mayhew Bone, William James Gifford Gayton, and Hans Fleming Dated Dec 8th, 1914 James Alexander Hendry John Daniel Harmer, Carl Joseph Barrett Buchheim Frank Anthony Cooke, Arthur John Ormsby Wigmore, and James Aubrey Ireland Dated Dec. 10th, 1914 Victor Vesselovsky and Wilfrid Henry Waller Attlee Dated Dec 11th, 1914 David Hutcheon Paul Dated Dec 14th, 1914 Martin Hallam and Stephen Nockolds Dated Dec 15th 1914 George Barrowclough Horrocks and Herbert Park Shackleton Dated Dec 16th, 1914 David Henry Griffiths, David William Jones, Gwilym Llewelyn Pierce William Frederick Gibson John Allan, John Henry Herbert Pearson, and George Edward Genge-Andrews Dated Dec 18th 1914 George Ramsey Phillips Frank Hendry Rae Philip Hugh Rawson George Richardson, and William George Thompson Dated Dec 19th 1914 Harold Cane Godding and William Richard Spencer Watkins Dated Dec. 20th 1914 Alexander Emil Albert Burkhard. Dated Dec 21st 1914 William Miller Thomas John Burton Robert Percy McDonnell Harry Godfrey Massy Miles, Arthur George Grant Plumley Kenneth Dobing Bean, Philip John Ambrose Seccombe, William Stewart Dickie, Joseph Graham Edward William Lawrence, Harry Spencer Hall, George Pirie Geoffrey Bower Richardson, Kenneth Goodall Hearne Percival Butler and Alexander Campbell White Knox Dated Dec 22nd 1914 Donald Olson Riddel and Arthur William Stark Christie

Lieutenant Edward M Woodman relinquishes his temporary commission

Temporary Lieutenant Alfred G Stewart and Temporary Lieutenant Philip L Davies relinquish their commissions (dated Jan 10th)

SUPPLEMENTARY TO REGULAR UNITS OR CORPS

Royal Army Medical Corps

Lieutenant Robert McCheyne Linnell to be Captain

The undermentioned Lieutenants are confirmed in their rank —Douglas G Evans Charles C Iles Frank Griffith John P Mitchell Donald G J McEntire, Edward C Linton Ennis R Chambers John L Per

IX.—PEEBLES

Peebles, described as "the leading Scottish health resort," has qualities of environment which, coupled with the facilities for a hydropathic course, deserve to be more widely known. It is beautifully situated on the River Tweed, amidst a delightful panorama of hill, valley, and wood It is a peaceful, restful place where "rest cures" do genuinely occur All the accessories which form part and parcel of modern treatment by baths are to be found here on lines comparable with the installations of a spa abroad A particular feature is made of the mud pack or "fango" for the relief of such painful affections as gout, rheumatism, and sciatica The Nauheim and Bourbon Lancy methods of treatment of heart affections are available The historic St Ronan's wells not far from the "hydro" entitle Peebles to the description of a watering place, the waters being brought to the hotel for special bathing purposes They are saline and sulphated

X., XI , XII —THREE WELSH SPAS

There is a wealth of natural mineral waters in Wales, and three spas have commanded medical support

Llandrindod is among the best known inland watering places, and the town has developed rapidly in recent years as a well recognised balneological station Here are common salt and sulphur springs, the latter resembling the waters of Harrogate in containing sulphuretted hydrogen gas The saline waters are employed chiefly in catarrhal dyspepsia and hepatic disorders, while the sulphur waters serve as an adjunct in the treatment of gouty and rheumatic states

At Llangammarch, about 13 miles south of Llandrindod, is a spring containing common salt, calcium chloride, and barium chloride Therapeutically the water is said to be similar in action to that of Kreuznach, and chemically it is, we believe, the only example of a natural mineral water containing so much barium salt It is used in the treatment of chronic heart disorders, functional distress, in Graves's disease, and in rheumatic conditions The action of barium chloride has been compared with that of digitalis The water is employed both internally and externally Its composition seems well adapted for preparing a Nauheim bath The country round is very beautiful, the Eppynt Mountains sheltering the village from the north east Treatment is provided for at the principal hotels, which have recently been greatly developed on lines consistent with the requirements of a large clientèle of patients and visitors

Llanwrtyd some five miles south of Llangammarch, is known chiefly on account of its strong sulphur wells, and the cases treated here are commonly skin disorders, rheumatism and gout There is excellent accommodation, and the bathing installations provide for most lines of treatment

THE BRINE BATHS AT STAFFORD

Dr F Milnes Blumer medical officer of health of Stafford, has pointed out to us that at Stafford there is a brine of a potency equal to that at Droitwich which is utilised in the complete suite of baths opened by the corporation in 1892 Chemical analysis of the brine shows a similar composition in regard to saline strength Of course there are brine wells in other parts of the country, and all are more or less saturated solutions of common salt. In th series of articles we were dealing more partic larly with those places generally recognised health resorts or spas We are glad to note, ho ever, in bringing this series of articles to a clo that at Stafford the brine wells are used f remedial purposes

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN November last the county borough of Plymouth w extended to include Devonport, thus reducing the numb of towns with populations exceeding 50 000 persons at t last Census to 96 In these 96 towns 9434 births and 6 deaths were registered during the week ended Saturd Jan 9th The annual rate of mortality in these tow which had been 16 1, 14 0, and 21 3 per 1000 in the thr preceding weeks, fell in the week under notice to 1 per 1000 of their aggregate population, estimated 18 134,239 persons in the middle of 1914 During the weeks of last quarter the mean annual death rate in the towns averaged 14 9 against a corresponding rate of 15 3 p 1000 in London The annual death rate last week ran from 7 3 in Acton 10·0 in Croydon, 11 6 in Barnsley, 11 Newport (Mon), and 12·0 in Ilford to 26 9 in Northamp 27 1 in Hastings, 28 0 in York, 28 2 in Preston, and 47 9 Gillingham

The 6736 deaths from all causes were 659 fewer than t number in the previous week, and included 487 which we referred to the principal epidemic diseases, against 4 and 575 in the two preceding weeks Of these 487 deat 183 resulted from measles, 93 from whooping-cough from infantile diarrhœal diseases, 77 from diphtheria from scarlet fever, and 15 from enteric fever, but n one from small pox The mean annual death rate fro these diseases was equal to 1 4, against 1 7 per 10 in the previous week. The deaths attributed to measle which had been 210, 175, and 269 in the three p ceding weeks, fell to 183 last week, and caused t highest annual death rates of 1 7 in Bolton and Gateshead, 2 1 in St Helens 2 3 in Wigan and Newcastle-on Tyne, 2 5 in Merthyr Tydfil, 2 7 in Grimsb 4 4 in Plymouth, and 4 8 in Preston The deaths referre to whooping-cough, which had steadily increased from 35 to 80 in the seven preceding weeks, further rose to 93 las week , the highest death rates from this cause were 1 1 Newcastle-on Tyne, 1 3 in Rhondda, 1 4 in Bristol an in Warrington, 1 6 in Willesden, 1 7 in Tynemouth, an 1 9 in Gillingham The fatal cases of diarrhœa and enter (among infants under 2 years), which had been 81, 70 and 86 in the three preceding weeks, slightly fell to 84 last week and included 18 in London, 7 in Birmingham and 5 each in Manchester, Oldham and Sunderland The deaths attributed to diphtheria, which had been 70 66, and 83 in the three preceding weeks, fell to 77 last week, of which 19 were registered in London, 5 in Liverpool 4 in Birmingham, and 3 each in Southampton, Birkenhead Preston, and Sheffield The deaths referred to scarlet fever which had been 34, 30 and 31 in the three preceding weeks rose to 35 last week 6 deaths belonged to London, 4 to Sheffield, 3 to Newcastle-on Tyne, and 2 each to Birmingham and Preston The fatal cases of enteric fever which had been 14 12 and 20 in the three preceding weeks, fell to 15 last week of which 5 occurred in London and 2 in Bolton

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had declined from [illegible] to 4503 in the six preceding weeks had further fallen to 4152 on Saturday last, 320 new cases were admitted during the week, against 451 348, and 435 in the three preceding weeks. These hospitals also contained on Saturday last 1649 cases of diphtheria 65 of measles 60 of enteric fever and 36 of whooping-cough but not one of small pox. The 1738 deaths from all causes in London were 311 fewer than the number in the previous week and corresponded to an annual death rate of 20 1 per 1000. The deaths referred to diseases of the respiratory system which had been 313 270 and 562 in the three preceding weeks fell to 497 in the week under notice, and were 14 below the number recorded in the corresponding week of last year

Of the 6736 deaths from all causes in the 96 towns [illegible] resulted from different forms of violence and 565 were the subject of coroners' inquests while 1757 occurred in publi institutions The causes of 66 or 1·0 per cent. of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Manchester Leeds Bristo West Ham Bradford Hull, Newcastle-on Tyne and in 6 the probe can be manipulated quite easily, the lights turned out, and the movements of the probe watched on the fluorescent screen by the radiographer, who by simply moving his X ray tube to and fro, in the manner described by Mr Shenton in his article, can accurately direct the movements of the probe up, down, or to either side, and can lead the point to the bullet almost at once, when the surgeon will have audible confirmation of the discovery in his telephone receiver It is remarkable how quickly this can be done, a few seconds sufficing for a task that usually occupies many minutes The probe once touching the bullet, it is an easy matter to remove the telephone attachment, cover the probe and incision with a small temporary dressing, which also serves to keep the probe from slipping out, and remove the patient to the theatre, where the surgeon, with such a guide can easily cut down on the bullet, either by enlarging the small incision or in another direction altogether, this latter method obviating any danger of moving the probe while operating The difficulty is to keep the probe from shifting during the moving of the patient to the theatre, and during the ensuing operation, in which case one s trouble is wasted To guard against this we are going a step further and completing the entire operation on the X ray table, when screen examinations can be made at intervals if the case presents any extraordinary difficulties In ordinary cases these are generally unnecessary

My X ray room here with certain small preparations, such as special lighting, is perfectly suitable for operating, and the table, with a polished wood top, lends itself quite well for the purpose Of course, the unpractical and complicated design of many X ray tables makes their use in this way impossible, but any of the wooden topped tables with an efficient tube moving device below can be utilised with some degree of success I am constructing a special table for this purpose, closed in at sides and ends, and giving clear access all round for the surgeon, dressers, and the anæsthetist, also having all movements of tube box, switch, diaphragm and regulating device all controlled by one foot With some such table as this, and a means of darkening the room effectually and rapidly, I can see no reason why all bullet extraction operations, and possibly certain bone operations, should not be carried out with the aid of X rays, facilitating and shortening enormously what is usually a tedious and difficult performance

I am, Sir, yours faithfully,

C F CONSTANT,
Lieutenant R.A M C Radiographer to the Meerut
Indian General Hospital.
Brockenhurst Hampshire Jan. 5th 1915

THE PROPHYLACTIC TREATMENT OF PUERPERAL INFECTION BY DILUTE SULPHURIC ACID

To the Editor of THE LANCET

SIR,—I am entirely indebted for the idea of this mode of treatment to the valuable paper in THE LANCET of March 15th, 1913 by Dr J Reynolds and Dr Russell J Reynolds entitled, "On the Treatment of Carbuncles Boils, Staphylococcic Infections and Certain Streptococcic Infections by the Internal Administration of Large Doses of Dilute Sulphuric Acid B P

I think the medical profession owe a debt of gratitude to Drs Reynolds for the discovery of this valuable therapeutic measure The prophylactic treatment of puerperal infection I advocate is simply an extension of their mode of treatment to another septic condition, or I should say to the *prevention* of a septic condition, for just as I am firmly convinced that the administration of large doses of dilute sulphuric acid has a powerful effect on limiting and aborting such conditions as boils, carbuncles, so I believe the administration of this remedy has a powerful effect in increasing the resisting powers of the tissues to infection, and thus preventing infection if given early enough in such cases as childbirth, where there is a large wound surface, and always a possibility of infection.

After seeing the paper referred to above by Drs Reynolds I commenced using the remedy as described by them for boils, carbuncles, and similar conditions The improvement in most cases was both rapid and remarkable I then decided to use the drug in puerperal cases in which there was any degree of puerperal morbidity, in the hope that it would limit the septic condition, as in the cases of boils, carbuncles, and other infections The clinical results in the few cases tried were satisfactory, the administration of the drug being followed by a reduction of the pulse rate and lowering of the temperature

I then decided to use the drug as a prophylactic measure against infection in all labours in which there had been manipulations or operative interference, commencing the administration immediately after labour and continuing during the puerperium I now use it as a routine treatment in all labours, whether instrumental or not I think the action of the drug is due to the fact that when given in maximum doses it decreases the alkalinity of the blood

I quite agree with Drs Reynolds that the drug is useless unless given in maximum doses I give it in 20 minim doses, with 30 minims of tinc aurantii and water to one ounce, an ounce every four hours in an ounce of water It is difficult to judge by results in the prophylactic treatment of any disease, as there are so many other factors to be taken into consideration, but I believe the drug is worthy of a real trial in the treatment of puerperal infection, and more especially as a prophylactic measure against infection I believe the diminution in the alkalinity of the blood increases the resisting forces of the tissues to infection, but this needs further proof

The one case of puerperal infection I have seen in which the dilute sulphuric acid had no beneficial effect was a case I saw in consultation—acute septicæmia I suggested trying large doses of dilute sulphuric acid it had no effect The patient ultimately died I was told shortly afterwards by a lady friend of the patient that for three or four weeks previous to her confinement the patient had been in the habit of taking three times a day a teaspoonful (heaped up) of sodium bicarbonate moistened with a little water to relieve indigestion and flatulence Might not the large doses of sodium bicarbonate have increased the alkalinity of the blood, and so reduced the resisting powers of the tissues to infection, and might it not have counteracted any beneficial effect the acid might have excited ? These are questions of the utmost importance

I make no apology for bringing forward the subject of the prophylaxis of puerperal infection, it is one of vital importance The mortality from

North Somerset Private John Henry Trentham Polehampton, from the 2nd South Western Mounted Brigade, Field Ambulance, Royal Army Medical Corps, to be Second Lieutenant

Royal Army Medical Corps

Welsh Border Mounted Brigade Field Ambulance Lieutenant Devonshire P H Gardiner, from Attached to Units other than Medical Units, to be Captain (temporary) Walter Stuart Snell to be Lieutenant

1st East Lancashire Field Ambulance Leonard Emilius Harman Ross Barker to be Lieutenant

3rd East Lancashire Field Ambulance James Alexander Tomb to be Lieutenant

1st West Lancashire Field Ambulance Frederick Ryan to be Lieutenant

2nd South Midland Mounted Brigade Field Ambulance Henry George Magrath to be Captain

1st West Riding Field Ambulance Captain James Ewing resigns his commission

1st London (City of London) Sanitary Company Lieutenant Charles J D Gair is seconded

South Midland Casualty Clearing Station To be Lieutenants Laurence Ball and Leonard James Moir

3rd East Anglian Field Ambulance Lieutenant William Brander is seconded Sigismund H Rentzsch to be Lieutenant

1st Scottish General Hospital Officers whose services will be available on mobilisation Captain John R Levack to be Major (temporary)

2nd West Lancashire Field Ambulance To be Lieutenants Herbert Ellis Marsden and Joseph Henry Mather

3rd West Lancashire Field Ambulance To be Lieutenants Gilbert William Rogers and Sandys Jackson Charlesworth Holden

1st Welsh Field Ambulance Edward Blyth Hurst Hughes to be Lieutenant

Notts and Derby Mounted Brigade Field Ambulance To be Lieutenants William Adam Brechin (late Cadet Lance Corporal, Glasgow University Contingent, Senior Division, Officers Training Corps) and Lewis Moysey

2nd East Anglian Field Ambulance Captain William J Caie to be Major (temporary)

3rd West Riding Field Ambulance William Thomas Dakin Mart to be Lieutenant

2nd South Western Mounted Brigade Field Ambulance Joseph Grant-Johnston to be Lieutenant

2nd Eastern General Hospital The undermentioned Captains to be Majors (temporary) Richard Whittington and William H Brailey

4th London General Hospital Charles Eric Wells McDonald to be Lieutenant

Attached to Units other than Medical Units—Captain Thomas Beard to be Major (temporary) Captain James M Kirkness is seconded To be Lieutenants Henry William Case, Lancelot William Sparrow, Charles Adolphus Sampson, John Wilson Moir Jamieson, Henry Charles Coutts Hackney, Thomas Richard Webster Atkins, William Neville Pennant Williams, and Lieutenant Maurice H Barton (from the 2nd North Midland Field Ambulance)

DEATHS IN THE SERVICES

Surgeon General William Henry McNamara, C B, C M G, on Jan 9th, at Ealing in his seventieth year He entered the army in 1867 and served in the Egyptian Expedition of 1882, taking part in the battle of Tel el Kebir (medal with clasp and bronze star) As principal medical officer of the British Brigade he was with the Nile Expedition of 1898 (mentioned in despatches) During the South African War (1899-1902) he became principal medical officer on the lines of communication (twice mentioned in despatches Queen's and King's medals, with clasps) He retired in 1906

Staff Surgeon Horace Harrison Smith, late R N, at Ramsgate, in his ninety first year He joined the naval medical service in 1848, became a staff surgeon in 1856 and retired in 1870, being granted a Greenwich Hospital pension in 1888

KING EDWARD'S HOSPITAL FUND FOR LONDON —A meeting of the General Council of this Fund was held at the offices of the Fund, 7, Walbrook on Jan 11th when the Earl of Bessborough presided The resolutions approved at the meeting of the Governors and General Council held at St James's Palace on Dec 16th were formally adopted and the appointment of the following new members was announced To the General Council Lord Mersey and Sir R Lucas Tooth, and to the Convalescent Homes Committee Mr Kenneth Prescott and Mr W Donaldson Rawlins, K C

Correspondence.

"Audi alteram partem"

THE LOCALISATION AND EXTRACTION OF BULLETS

To the Editor of THE LANCET

SIR,—Mr E W H Shenton's exposition of his extremely practical and common sense method of localising bullets, published in THE LANCET of Jan 2nd, cannot fail to be of great utility in the only too numerous cases of gunshot wounds with which surgeons and radiographers are inundated in these troublous times I have employed Mr Shenton's methods of localisation for some years, mainly in South America, a country where one has more opportunities for the study of gunshot wounds than in Europe—that is to say, in times of peace—and I have always been able to obtain an accurate estimate of the position of the bullet in a very short time But the matter by no means ends with the localisation However accurate the radiographer's report and skin markings may be (I agree with Mr Shenton that photographs are useless in the vast majority of cases), it is often by no means an easy task for the surgeon to remove the bullet or piece of shell easily and expeditiously Exigencies of local injury or anatomical difficulties may prevent the surgeon from making more than a small incision, very possibly in an awkward plane, and furthermore the topography of the part, clear enough in an X ray or clinical examination, may become considerably obscured when the case is on the operating table, covered over with towels and dressings, so that, even with the most accurate X ray localisation, the surgeon has to hunt about considerably before discovering the object sought for This may not be the experience of all surgeons in this class of work, but we have certainly found it so in this hospital in the considerable number of operations for removal of bullets that we have already performed

In consequence, on the suggestion of Captain A H Proctor, I M S, the surgeon to this hospital, we have evolved the following method of coöperation between surgeon and radiographer, which we find simplifies the operation to a great degree, and, what is more important, shortens enormously the time occupied The patient is anæsthetised upon the X ray table, or, if preferred, local anæsthesia can be used A very small skin incision, just large enough to admit the point of a probe, is made near the bullet, already localised by the X rays, at a point selected with due regard to anatomical requirements and the convenience of the radiographer, who will need the probe to be inserted in a direction somewhere near the horizontal A long stout silver probe, fairly sharp at the point, and provided with the well known "telephone" attachment, is inserted in the incision and gently forced through the tissues in the direction of the bullet (It is almost superfluous to say that the probe point should be just sharp enough to worry through the softer tissues, without doing any damage to vessels or nerves Here we are using a stout 9 inch probe, filed to an edge at the eye end) With the probe so introduced the surrounding parts and the surgeon's hands are covered with a sterilised towel, under which

The condition is lower, more degrading, than that of prostitution No doubt a large number of lecturers, coaches, and professors will undergo a financial loss by a falling off in the number of medical students, so will the medical examiners of students for their diplomas No doubt some of the young men who have gone to the war and who would have otherwise entered as medical students will so enter when the war is over The present drop is partly due to the war No doubt it is also a reaction against the sadly over crowded condition of the medical profession We can accept Sir Donald MacAlister s statement that if the falling off in the number of medical students continues there may be a falling off in the number of doctors of 200 to 300 yearly

So great was the dangerously overcrowded state of the medical profession that in 1886 the Medical Council issued a very ominous report, giving a census of medical practitioners in England and Wales That report showed that in 1881 there were 15,022 practitioners registered in England, and in 1886 16,930, showing *a rate of increase* of 2 42 per cent per annum In the former year there was on an average 1 *practitioner* to 1747 persons, while in 1886 the average was 1 to 1662 Therefore the doctors had increased at the rate of 2 42 per cent per annum, while the general population had increased by only 1 40 per cent per annum Why, therefore, should we bemoan the fact that the number is still falling? If there be healthy law in that of supply and demand, why should we when having a falling death rate, a falling sick rate, and a falling birth rate contend that we must have a *rising* increase of doctors? It is generally accepted that we should have on an average about 3500 persons to each practitioner, for it must be recollected that fully one third of the population receive free medical treatment and another third for a little above nothing It is a pity Sir Donald MacAlister did not refer not only to the number of students but also to the number of doctors practising in the United *Kingdom* According to the Medical Directory (not the Medical Register) the following *table* shows the number of doctors practising in each division of the United Kingdom on Jan 1st, 1915 —

		Population
London	6 715	36,070,492
Provincial	18,109	
Wales	1 415	
Scotland	4 070	4,760 904
Ireland	2 971	4,390,219
Total	32 290	

It will thus be seen that there is 1 doctor to 1401 persons of all ages, all incomes, and classes It is also instructive to note that the increase of the number of practitioners for 1914 was 527, for 1614 158 and 1813 260 Therefore the number of practitioners is *going up by* hundreds, while the proportion of doctors to the population has increased by 1 practitioner to 1041 persons In 1886 it was 1 to 1662

If it be contended that there are not *at present* sufficient doctors for war and other purposes I would suggest that such a condition—if it exist—could readily be met At present a number of practitioners are employed to examine children at the elementary schools 317 acting as principal medical officers and 524 as assistant medical officers Supposing the c 841 are required for war purposes it would be quite easy to fill their places by the doctors who practise in the school locality Or again a large number of those who act as resident medical officers to Poor law, voluntary, and municipal free hospitals could be taken for war purposes if their places were temporarily filled by the local practitioners who do not hold hospital posts The *time must come when a full staff of* visiting physicians and surgeons must be appointed to all the large Poor law hospitals, and this is the time to make a beginning I should not think that 5 per cent of the practitioners in the United Kingdom have been called away to join the army and navy, for according to the Medical Directory there were 3366 medical *officers* in *our* navy and army last year Poor law guardians and others must not think there is a "shortage" of doctors simply because they cannot obtain a resident medical officer or a visiting medical officer for £50 to £120 a year The school medical officer, whose duties are very light, obtains a minimum of £250 to £300 per annum from the majority of the educational authorities

I am, Sir, yours faithfully,

Liverpool Jan 11th 1915. ROBERT R RENTOUL

OUR ARMY'S TEETH

To the Editor of THE LANCET

SIR,—The dental expert going to the war with the intention of doing good for poor Tommy's *teeth* is at first confident that it is simply a matter of money, and he *thinks that* if he had a blank cheque from Mr Lloyd George he could put things right, but after three months' toil and vast worry he begins to understand that even with the Bank of England at his back he could not evolve a sound scheme under existing conditions And things are growing worse, for the teeth of those who are coming out now are not even so good as *those of* the earlier arrivals It seems probable that when the New Army has arrived there will be battalions of men to return on account of their teeth. It is no rare sight *to find a* young soldier who has not two back teeth that meet, and dozens of men have to be reported as dentally unfit for service It would be wearisome to state the causes and complications at length, but I inscribed many of their reports with brief remarks which, if strung together in readable form, represent the pith of my experience "Dental caries is avoidable, it is due to dental dirt and nine tenths of it would be obviated if the teeth were brushed *properly* after every meal The British army abandoned its tooth brush during the *Great* Retreat, and it has not been seen since If the Jap' can clean his teeth on the battlefield, so can the English Extra pay should be given for good teeth, and there should be *an* army dental corps to keep them right Allowances to soldiers, their wives and children, in time of peace should cease whilst their teeth are neglected Children should be taught to clean *their teeth after* every meal from the time they cut the first milk tooth '

Statistics are less hateful when quoted in millions, and we are expecting *one or* two million soldiers within the next few months Apart from the edentulous, each *man will require* on the average a filling or two, probably several fillings To *put* it very mildly, there will be several million fillings required and the crucial question is, 'Can it be done here?' I believe it is too big a thing without a mobilisation order Gladly would I see my profession get its order to march Many of the young men would be stationed behind the trenches in order to destroy an exposed pulp or to do a filling or two for a man who was otherwise sound Others puerperal infection is still far too high in spite of all our antiseptic precautions.

We have so far devoted all our attention to the perfection of our antisepsis, but surely the question of increasing the resisting powers of the individual to infection is one of real and practical importance. My own experience is too limited to give a definite opinion as to the exact value of this drug as a prophylactic agent, but from my own observations it certainly is of value in mild cases of puerperal morbidity. All that I ask is that an extended trial may be given the treatment by those who have greater opportunities of studying its effects, and if it is found, as I believe it will be, that the treatment is of real value, the medical profession will owe an increased debt of gratitude to the introducers.—I am, Sir, yours faithfully,

Congleton. J. L. MOIR, M.B., Ch.B. Vict.

A SUGGESTION FOR A NEW "BOWEL PACK."

To the Editor of THE LANCET.

SIR,—In introducing this simple contrivance to the notice of the profession I do so more to meet the difficulties experienced by general surgeons like myself than to offer assistance to those who never find any difficulties in any circumstances. The ordinary "bowel pack" is, I think, open to objections. Indeed, to start with, the packing of protruding bowel with many feet of gauze pads, &c., is to my mind unscientific, takes time, unnecessarily blocks a limited space and in the end does not always attain its object. Something is required completely to shut off the bowels from the area to be operated upon, which does not take up unnecessary space, which can be easily moulded, and will retain its position.

To meet these requirements I coil fine wire between two layers of lint. The fine wire gives a certain amount of weight, and it can be moulded and bent into any shape. These pads can be made by any nurse. A piece of lint the size of the pad required is simply laid flat, then starting from the centre the fuse wire is coiled in oblong fashion, tacked at each corner at first, and down the long sides as the oblong enlarges until the lint is covered, a second piece of lint is then placed over the wire and sewn round. I use pads varying in size from 15 or 18 inches by 10 to 9 by 5. For large size pads I use what is known as 5 amp fuse wire and for smaller ones 3 amp wire. The wire should be one third of an inch apart in the large and one quarter in the small. It is convenient to use the wire coiled upon its original reel. Only one precaution is suggested—namely, to begin and end the wire with a small loop so as to leave no free point. The pad can be thoroughly sterilised by boiling and squeezed out in warm saline before use.

To illustrate the advantage of this pad I will briefly quote a recent case when the contrivance proved very valuable. A lady was sent to me with a large fat abdomen, presenting a central scar. To the left of the scar was a large rounded swelling, diagnosed on several occasions as a ventral hernia. Vaginal examination disclosed a displaced uterus and little more. I made a large oval skin incision and removed the scar, together with a two inch thickness of fat. A good view could then be obtained. The left rectus was thinned and bulged up by some underlying tumour. I next opened the old scar and peritoneum, and at once introduced one of my largest pads with its long axis transversely.

In introducing the pad I had pressed it together, then opened out, and packed well down to the post abdominal wall, then pushed the upper edge well under the anterior wall above the umbilicus. Next I pressed the whole of the pad upwards. The tumour, a right ovarian cyst measuring about 8 inches by 8, presented itself quite free from any bowel. I then freed the cyst, carefully tied it off with tape, clamped and sutured in the usual way. The pad was then removed quite easily without any disturbance of the bowels.

I have found this pad very useful in packing bowel away from large appendix and pyosalpinx abscesses and in various other abdominal operations. The necessity to use only one pad does away with many anxieties and achieves a definite object.—I am, Sir, yours faithfully,

J. L. AYMARD, M.R.C.S., L.R.C.P.

Johannesburg, Dec. 15th, 1914.

THE "SHORTAGE" OF DOCTORS.

To the Editor of THE LANCET.

SIR,—The President of the General Medical Council has stated that the number of medical students now studying is about 1000 less than in 1913. He adds that the prospective diminution of our reserve supply of doctors calls for serious attention.

Sir Donald MacAlister gives no reasons for this falling off. There is little doubt but that the falling off in the number of medical students is due to the medical arrangements under the National Insurance Acts. Before these Acts were passed the newly qualified doctor could look forward to making sixpenny, shilling, and half crown fees from a portion of the public now supplied under the Insurance Acts.

He also finds that these Acts have robbed him of the money he used to make by the supply of medicines, a loss of about £1,360,000 yearly. He finds that his private vaccination is now largely carried out by public vaccinators, that about three fourths of his obstetric practice has been transferred to midwives, that the school board medical officers now examine, and in some places treat, the sick children, that many more patients are going into the Poor-law, voluntary and municipal fever hospitals and into sanatoriums for consumptives, that the birth rate and sick rate are falling, and that prescribing chemists and quacks of all kinds are on the increase.

How can anyone hold that to encourage an increase in the number of medical students would not be a national danger? Doctors are called upon to perform many criminal acts, but if my "poverty but not my will consents" be a valid excuse, then an overplus of doctors is indeed a danger. The existence of so many medical and surgical homes will soon—if it have not already—become a public danger. Some can recall the grave dangers due, years ago, to doctors owning and "running" private asylums. Instead, therefore, of deploring a falling off in the number of medical students we should all rejoice at the fact. It will be a true gain to the public. For if there be anything more damnable in this world than a doctor having to go on his knees to pray to heaven to make his neighbours ill, so that he may provide daily bread for himself, his wife, and children, I should like to know of it.

The Belgian Doctors' and Pharmacists' Relief Fund

THIS FUND is being raised to organise relief for Belgian Doctors and Pharmacists, both those remaining in Belgium and those who are refugees in this country

THE EXECUTIVE COMMITTEE

Chairman—SIR RICKMAN J GODLEE, Bart

Sir THOMAS BARLOW, Bart, *President of the Royal College of Physicians of London*

Sir W WATSON CHEYNE, Bart, *President of the Royal College of Surgeons of England*

Mr MEREDITH TOWNSEND, *Master of the Society of Apothecaries of London*

Sir ALFRED PEARCE GOULD, *Acting Vice Chancellor of the University of London*

Dr FREDERICK TAYLOR, *President of the Royal Society of Medicine*

Dr HERBERT SPENCER, *Obstetric Physician to University College Hospital, London*

Sir FREDERIC EVE *Consulting Surgeon to the London Hospital*

Mr T JENNER VERRALL, *Direct Representative for England on the General Medical Council, and Chairman of Representative Meetings of the British Medical Association*

Dr F M SANDWITH, *Gresham Professor of Medicine*

Mr E T NEATHERCOAT, *Vice President of the Pharmaceutical Society of Great Britain*

Dr ALFRED COX, *Medical Secretary of the British Medical Association*

Dr DAWSON WILLIAMS, *Editor of the "British Medical Journal"*

Dr H A DES VŒUX (*Honorary Treasurer*), 14 Buckingham Gate, London, S W

Dr S SQUIRE SPRIGGE, *Editor of "The Lancet*, 423, Strand, London, W C

Mr W J UGLOW WOOLCOCK, *Secretary and Registrar of the Pharmaceutical Society*, 17, Bloomsbury Square, London, W C

Honorary Secretaries

It is requested that correspondence addressed to the Honorary Secretaries should be marked "Belgian Fund."

Subscriptions should be sent to Dr H A. Des Vœux, and cheques should be made payable to the "Belgian Doctors' and Pharmacists' Relief Fund," and crossed Lloyds Bank, Ltd

THE GENERAL COMMITTEE

This Committee is in process of formation It already includes the following names in addition to those of the Executive Committee —

Sir DONALD MACALISTER K C B, *President of the General Medical Council*

Sir HENRY MORRIS, Bart *Joint Treasurer of the General Medical Council*

Sir JOHN W MOORE

Mr JAMES HODSDON *President of the Royal College of Surgeons of Edinburgh*

Sir LAMBERT H ORMSBY

Dr RICHARD CATON

Dr NORMAN WALKER *Treasurer of the Royal College of Physicians of Edinburgh*

Mr H A LATIMER, *Direct Representative for England on the General Medical Council*

Dr J A MACDONALD, *Chairman of Council, British Medical Association, Direct Representative for England on the General Medical Council*

Sir CLIFFORD ALLBUTT, K C B

Sir THOMAS FRASER

Sir CHARLES BALL, Bart

Professor ROBERT SAUNDBY

Professor WILLIAM RUSSELL

Sir WILLIAM WHITLA

Professor JOHN YULE MACKAY

Professor G ELLIOT SMITH

Professor G SIMS WOODHEAD

Dr J C McVAIL, *Crown Nominee on the General Medical Council*

Professor ARTHUR THOMSON

Sir T LAUDER BRUNTON, Bart

Mr BILTON POLLARD

Professor RUTHERFORD MORISON

Sir ISAMBARD OWEN, *Vice Chancellor of the University of Bristol*

Sir WILLIAM OSLER, Bart

Mr H P SYMONDS

Dr W COLLIER

would be attached to all the hospitals on the way to the base At every large hospital or base there would be an efficient dental department sufficient to attend sick and convalescent men and to repair artificial teeth Only the overflow and bad surgical cases would go to the ultimate base in London The question arises as to how far this system can be adapted to existing conditions The small number of dental officers with the army will be lost amongst one or two million soldiers So nearly everything must go to London for treatment There, of course, they will be distributed amongst all the hospitals, dental departments, and clinics which appoint dental surgeons in town and in the country Many of the men are ready to pay for artificial teeth at about hospital prices, and when a man has bought his own teeth he is inclined to take great care of them

One naturally inquires how the French soldier gets on with his food, and I am told that the French piou piou is no better off than our Tommy in the matter of teeth, but his food is softer and generally consists of soup, meat, and vegetables all cooked together Our men get "stew," but what they really like is a good bit of beef when they can eat it

Under the recommendations that I have made we should get rid of most of the dental caries without treatment beyond inspection, but the fight to insist on dental cleanliness would be long and bitter Unfortunately we cannot say that even the most educated and enlightened people are cleanly in the matter of their teeth Their mouths would not stand inspection, and their tooth brush would not always be beyond criticism in these days of oral sepsis —I am, Sir, yours faithfully,

F NEWLAND PEDLEY, F R C S Eng

British Red Cross Hospital No 2, Rouen Jan 8th 1915

BRUSSELS MEDICAL GRADUATES' ASSOCIATION

BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

To the Editor of THE LANCET

SIR,—Might I be permitted through your columns to thank those who have so kindly contributed to the above Fund The amount received is £112 2*s* 6*d*, and the whole of it has been handed over to Dr H A Des Vœux

I am, Sir, yours faithfully,

MAJOR GREENWOOD,

243 Hackney road, N E, Jan. 10th 1915 Treasurer

• DEGLUTITION IN ACUTE TONSILLITIS

To the Editor of THE LANCET

SIR,—A recent personal painful experience has brought to my knowledge a fact of which I was previously unaware, and which I hope may prove of comfort and service to those who suffer from acute tonsillitis and those who have the care of them An attack of acute tonsillitis chiefly affecting the right side had rendered deglutition whether of liquids or solids a matter almost of impossibility on account of the pain it caused Under such circumstances one naturally inclines to keep all food in the opposite side of the mouth, and so as far as possible from the affected part, and those who have suffered will remember well the pain that occurs when the bolus is delivered into the grip of the pharynx.

Quite accidentally I discovered that the pain on deglutition is very much less if the food be prepared, so to speak, and collected on the affected side, then when the act of deglutition occurs it would seem that it is projected against the opposite side of the pharynx and so misses the acutely tender part What the exact mechanism of this manœuvre is I do not know, but I am able to bear witness of the very great difference it makes to one's comfort when it is adopted Fortunately the inflammatory condition in my own case did not exist long enough to enable me to carry out any number of experiments, but as far as they went they confirmed the initial one This small fact may be known to many, but to those who are unaware of it it may, I hope, prove of service

I am, Sir, yours faithfully,

THOS H KELLOCK.

Upper Wimpole-street, W Jan 6th 1915

THE ETIOLOGY OF POLIOMYELITIS

To the Editor of THE LANCET

SIR,—An interesting fact in Dr George Jubb's paper published in THE LANCET of Jan 9th is the occurrence of cases of poliomyelitis at West Kirby for the third year in succession in the same parish This, I think, is an unusual experience in this country My own experience with poliomyelitis has indicated as frequent coincidences the proximity to an infected cottage of stables or cowsheds, the presence in the house of several specimens of stomoxys calcitrans (the biting stable fly), and not infrequently direct evidence of the child having complained of the flies biting Anderson and Frost have supplied direct experimental evidence of the conveyance of polio myelitis infection by stomoxys from artificially infected monkeys to other monkeys

It would therefore be of much interest to know the relative position of the infected houses in West Kirby and Hoylake to the nearest stables or cow sheds (distances should be given approximately in yards) This information would be of value, but the case for the stomoxys would not be limited to such evidence An important fact mentioned by Dr Jubb is that the Hoylake cases had a common milk supply Further information required here is whether the *same horse* and man carried the milk, because stomoxys having a particular liking for warm horse blood would be carried any distance on a horse, even though occasionally disturbed by tail swishes —I am, Sir, yours faithfully,

J T C NASH,

County Medical Officer of Health

The Shirehouse Norwich Jan 9th 1915

THE MEDICAL SOCIETY OF LONDON

To the Editor of THE LANCET

SIR,—Owing to the war the usual programme for the second half of the session will not be issued, but postcards will be sent to Fellows from time to time giving details of the arrangements made

The meeting arranged for Jan 11th was not held On Jan 25th, at 8 30 P M, arrangements have been made to have an X ray evening, when Dr Ironside Bruce, Sir James Mackenzie Davidson, Dr F H Humphris, Dr Harrison Orton, Dr A Jordan, and others, will demonstrate and exhibit items of interest connected with the war On Feb 8th Sir Victor Horsley, F R S, will open a discussion on Gunshot Wounds of the Head

We are, Sir, yours faithfully,

GEORGE E GASK,

HERBERT FRENCH,

Honorary Secretaries

Chandos street Cavendish square W Jan 12th 1915 the President of University College Dublin the President of the Pharmaceutical Society and many leaders of the medical profession has been formed The Registrar of the Royal College of Physicians (Dr T Percy C Kirkpatrick) and the Secretary to the Council of the Royal College of Surgeons (Dr C M Benson), combine the offices of treasurer and secretary and subscriptions may be sent to either at the Royal College of Physicians Kildare-street, Dublin. A substantial sum of money has been already received

The Master of the Society of Apothecaries of London, in reply to a request published in the medical journals has received at the Apothecaries' Hall, Blackfriars, London E C many surgical instruments for distribution among Belgian practitioners, and these are still being generously presented

The Committee has already done much preliminary work, and its various steps have been reported weekly in *The Lancet* and the *British Medical Journal*, in both of which journals Dr Jacobs's appeal was published on Nov 21st But sight has not been lost of a larger object Sooner or later the rehabilitation of Belgium will be an honourable charge upon the countries saved by her courage No doubt the State will take control of large measures to this end, but there will be room for international action whereby the doctors and pharmacists all the world over can cooperate in aiding their Belgian colleagues to a re-establishment of their professional positions At the right time this Committee will be ready to take its share in such a movement

SUBSCRIPTIONS RECEIVED

The following subscriptions have been received up to Jan 5th, 1915.

THE GENERAL COMMITTEE (*continued*)—

Professor William Thorburn
Dr James Pearse, *Medical Officer of the National Insurance Commission (England)*
Dr Macdowel Cosgrave, *President of the Royal College of Physicians of Ireland*
Dr H Macnaughton-Jones
Professor Alfred Barrs
Sir George Hare Philipson, *Vice Chancellor of the University of Durham*
Dr A H F Barbour, *President of the Royal College of Physicians of Edinburgh*
Professor John Barlow, *President of the Royal Faculty of Physicians and Surgeons, Glasgow*
Professor Conway Dwyer, *President of the Royal College of Surgeons in Ireland*
Sir Anderson Critchett, Bart
Sir W Arbuthnot Lane, Bart
Sir William Milligan
Mr J Lynn Thomas, *Vice Chancellor of the University of Wales*
Dr Dundas Grant
Mr Charters Symonds
Dr Amand Routh
Professor J Theodore Cash
Professor E W Hope
Sir John Byers
Mr Edmund White, *President of the Pharmaceutical Society of Great Britain*
Mr. J H. Cuff
Mr W H Gibson
Mr R L Gifford
Mr A Hagon
Mr P F Rowsell
Mr G E Pearson
Professor T K Monro
Professor Duncan Burgess
Professor Sinclair White
Dr A J Hall
Mr D M Watson, *President of the Pharmaceutical Society of Ireland*
Dr W K Hunter
Mr F P Sargeant
Mr W S Glyn Jones, M P
Mr J C Umney
Mr D Gilmour
Mr J P Gilmour
Mr W L Currie
Mr T Guthrie
Mr J Rutherford Hill
Sir T Barclay
Professor J Marnoch
Professor J M Munro Kerr.

THE OBJECTS OF THE FUND

The Committee was started in reply to an appeal from Belgium, brought by Professor C Jacobs of Brussels, who represented in moving terms the terrible position in which his colleagues and also the pharmacists in that gallant country were involved At the same time, the giving of assistance to the members of the medical and pharmaceutical professions and their families who are refugees among us is clearly a matter of urgency and a worthy object of subscriptions It was recognised at the outset that it would be impossible, while the German occupation lasted, to do more for the doctors and pharmacists in Belgium than to despatch certain packets of medical material with which the misery created by the wholesale destruction of laboratories and pharmacies might be relieved A start has been made in this direction, and packets will be sent regularly when it is known that they can reach their destinations without interference The position of the refugees of the two professions is in many instances utterly sad, and a large amount of money could be usefully expended to meet their immediate needs

The plight of the pharmacists of Belgium is as heartrending as the position of the medical men, and their present needs, as well as their eventual necessities, should appeal with peculiar force to the pharmaceutical community of Great Britain Much has been done already unofficially in the way of organising practical sympathy on behalf of those expatriated pharmacists who have taken refuge in this country, but the problems that are daily arising, together with the claims which will ultimately reveal themselves, can only be met successfully and in a manner worthy of the occasion by systematic cooperation on the lines suggested in this appeal. The President and Vice-President of the Pharmaceutical Society of Great Britain feel that British pharmacists will be proud to share the honour of repaying in part, the enormous debt of gratitude which Great Britain owes to Belgium for its heroic sacrifices

A comprehensive scheme is being organised under which an appeal will be made to all Scottish practitioners A large Committee is being formed from representatives of the Universities, the Royal Colleges of Physicians and Surgeons the Royal Faculty of Glasgow, and the pharmaceutical profession

In Ireland the Royal College of Physicians and the Royal College of Surgeons have already taken action A Committee including the Presidents of the Colleges,

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

DURING the week ending Tuesday, Jan 12th, the subscriptions received to the Fund have been numerous, and a contribution of £112 2s 6d has been sent since through Dr Major Greenwood from the Brussels Medical Graduates Association

The directors of the British Milk Products Company have announced their intention of sending a portion of their takings by the sale of sanaphos for one month from Monday next to the Fund, guaranteeing that the contribution shall be not less than 150 guineas

Among those who have joined the General Committee since the last list of names was published may be mentioned Sir William Milligan, Sir Thomas Barclay, Professor Marnoch, and Professor Munro Kerr

A meeting of the Executive Committee was held on Thursday afternoon, Jan 7th, when the question of opening up communication with Belgium for the purpose of ministering to the wants of the Belgian doctors and pharmacists was discussed in the light of information from the United States In the United States work similar to that which the British Fund is doing has been started An American committee of medical men will operate through the International Commission for Relief in Belgium and will have packages, prepared by instrument makers and pharmaceutical houses of the United States, shipped for distribution in Belgium upon exactly the same method as the British Fund has adopted.

A meeting of the subcommittee empowered for the present to make emergency grants was held on Friday, Jan 8th, when Dr Clement Philippe attended to represent the Belgian Medical Society in London and placed before the subcommittee the details of various cases The grants were made A representative of Messrs Harrods, Limited, was present, and a guarantee was given to that firm for the supply of clothes of an agreed class to Belgian doctors whose names were submitted by Dr Philippe

A circular explaining the objects of the Fund, which has been widely distributed to the medical profession, will be found on page 153, and a leading article deals further with the matter this week

The subscriptions which have been received up to Tuesday evening last by Dr Des Vœux, in addition to £2654 previously acknowledged, and not including the subscriptions received in Dublin, are as follows —

	£	s	d.
Royal College of Surgeons of England ...	52	10	0
Dr W E de Horne	3	3	0
Dr J Mitchell Wilson ...	1	1	0
Dr P J Frere	5	5	0
Dr G L Haslip ...	3	3	0
Dr Power	0	10	6
Dr C M Fisher (per Dr [illegible])	1	1	0
Dr de Havilland Hall (second donation) ...	2	0	0
Mr Lawford Knaggs ...	5	0	0
Dr H Elwin Harris ...	2	2	0
Dr A [illegible]	3	3	0
Mr H Quarrell [illegible] ...	1	0	0
Dr Margaret Orange ...	0	10	0
Mr A W[illegible]	1	1	0
Dr C [illegible]	2	2	0
Dr D [illegible]	1	1	0
Mr E F [illegible]	1	1	0
Dr George Mac[illegible]	1	1	0
Mr H A [illegible]	2	2	0
Dr Wa[illegible] ...	3	0	0
Mr A [illegible] ...	[illegible]	[illegible]	0
Dr Alex Smart ...	10	10	0
Mr C F Hawkins ...	1	1	0
Dr Morgan Richey ...	2	2	0
"[illegible]"	0	10	0
Mr M Cashmore ...	1	1	0
Salford Division B M A (per Dr J P Ellis Hon. Sec.)—			
Dr F Benington	1	1	0
Dr J Bradley	1	1	0
Dr Davie	1	1	0
Dr D[illegible]	0	10	0
Dr J P Ellis	1	1	0
Dr S B Harnes ...	0	10	0
Dr J Mercer	1	1	0
Dr James Morrow	1	0	0
Dr Pilkington	2	2	0
Dr F T [illegible] ...	0	10	6
Dr W J [illegible] ...	1	1	0
Dr J P Williams ...	1	1	0
Messrs [illegible] and Co	2	2	0
Mr A[illegible]	2	2	0
Mr J [illegible] ...	1	0	0
Dr H Darwin Hey ...	1	1	0
Mr C W O'Brien ...	5	5	0
Birmingham Local Committee (per Dr Robert Saundby)—			
Professor Gilbert Barling	10	10	0
Mr Christopher Martin	5	5	0
Mr J T Hewetson	5	5	0
Dr Purslow ..	5	0	0
Professor Haslam ..	3	3	0
Mr Leonard Gamgee	2	2	0
Dr Lilley	2	2	0
Dr W T Lydall ...	2	2	0
Dr Leonard Hackey	1	1	0
Dr Thomas Nelson	1	0	0
Mr Arthur Oakes ..	0	10	6
Dr T S Short	5	5	0
Dr T M Tibbits ..	3	3	0
Mr T B Ward ..	2	2	0
Mr Frank Barnes ...	2	2	0
Dr Mary Sturge ...	2	2	0
Dr C W Suckling	2	2	0
Mr G P Mills ..	2	2	0
Mr J F Stockwell	2	2	0
Dr William Gordon	2	2	0
Dr John Robertson	2	2	0
Dr W A. Morris ...	1	1	0
Dr Alice Maclean ...	1	1	0
Dr Haltly Burn	1	1	0
Mr Bertram Lloyd	1	1	0
Dr George St Johnston	1	1	0
Mr Gilbert Smith ...	1	1	0
Dr Smallwood Savage	1	1	0
Anonymous	1	0	0
Dr B Watt	1	1	0
Dr Marion S Linton ..	5	0	0
Dr J K. Jones	1	1	0
Dr Richard Ainsworth	2	2	0
Dr George E Percy	5	0	0
Dr Thomas Wilson ..	3	3	0
Dr William Glaister ..	2	0	0
Dr W B Drummond ...	3	5	0
Warrington Branch of B M.A. (per Dr T A. Murray)—			
Dr B Kennon ...	0	10	0
Dr J Bennett	0	10	0
Dr Henry Langdale	0	10	0
Dr Lindsay	0	10	0
Dr G Binns	0	10	0
Dr G T Schofield	0	10	0
Dr J B Naden	0	10	0
Dr A. J Hutton ..	0	10	0
Dr J D Liston ...	0	10	0
Dr E. J Geary	0	10	0
Dr F R. Seager ...	0	10	0
Dr Arthur Anderson	0	10	0
Dr T G Mercer	0	10	0
Dr O H Edwards ...	0	10	0
Dr F J Breakell ..	0	10	0
Dr E E Bowden ...	0	10	0
Dr J S Manson	0	10	0
Dr Ian Ogilvie ...	0	10	0
Dr Hodgkinson ..	0	10	0
Dr C Hutchinson	0	10	0
Dr G H. Joseph	0	10	0
Dr D Ferguson ...	0	10	0
Dr T A. Murray ..	0	10	0
West Suffolk Division B.M.A. (per Dr B E. A. Batt)—			
Subscriptions from Doctors in West Suffolk	23	16	0
Collected by Doctors in West Suffolk ..	5	1	0
Boxford Parish Church Christmas Day Collection ..	5	0	0
Dr E W Ainley Walker	1	1	0
Dr James Hewlett ..	2	2	0
Bolton Division B M.A. (per Dr T O'Neill Hon. Sec.)—			
Dr Kershaw	2	2	0
Sir T E. Flitcroft	5	0	0
Dr A. Cosgrave	2	2	0
Dr J Johnston ..	2	2	0
Dr R S Robertson	2	2	0
Drs. Wright and Cochrane ..	5	0	0
Dr J S Sewell ..	1	1	0
Dr J L. Falconer	2	2	0
Dr H Jefferies ..	5	0	0
Dr W A Hatton ...	1	1	0
Dr G P Alderson	1	1	0
Dr Bees	2	2	0
Dr Agnes Bernfeld	0	10	6
Dr Pickering ..	3	3	0
Dr F E Dowling	2	2	0
Drs. Boulton and Robinson	3	3	0
Dr Cross	2	2	0
Dr T O'Neill	2	2	0
Dr Geo Mowatt ..	1	1	0
Dr R.D Mothersole	5	0	0
Dr J M. Thornley	3	3	0
Dr J D Marshall	2	2	0
Messrs Potter and Clarke	2	2	0
Dr F Van Allen ..	2	0	0
Mr F J Gibson	3	3	0
Mr C B Allen ..	5	0	0
Mr A. H. B Bell ...	1	0	0
Mr S R Atkins	1	1	0
Mr T A. White ...	2	2	0
Mr J Parrott	1	1	0
Mr J Rymer ...	5	0	0
"E H"	1	1	0
Mr W L. Currie ..	1	1	0
Mr A. I Robinson ..	0	5	0
Mr I Bourdas	5	0	0
Mr A. S Campkin	3	3	0
"Sterilla"	1	1	0
Messrs Maw Son and Sons	5	5	0
Leeds and District Chemists Association (per Mr H. Gillegban)	57	2	6
Mr W H Gibson ...	5	0	0
Anonymous	0	10	6
Mr Chas Umney (second donation)	3	3	0
Publisher *The National Druggist* St. Louis U.S.A.	5	0	0
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Small donations	11	14	6

For Subscriptions received this week see opposite page

possible intact. Bearing these facts in mind, and further, that although the man who is absent is receiving pay and allowances he is nevertheless bound to submit to, it may be, considerable loss of practice, the Committee suggest the following arrangements for three classes of practice.

Class 1.—Large towns where the question of mileage is not a very important consideration. Here it is suggested that an equal division of the remuneration should be agreed upon, this to apply both to private and insurance practice.

Class 2.—Towns with a considerable population but with a large amount of country work, necessarily involving the question of travelling expenses. It may be possible to ascertain these with more or less exactness, but as a general rule probably a division of all remuneration on the basis of three-eighths to the absentee and five-eighths to the man who is doing all the work and paying all the expenses is the nearest to equity.

Class 3.—Smaller centres or single-practice areas where the question of travelling expenses and consumption of time becomes still more important. (It is not desirable that a man should undertake the duties of a practice whose centre is perhaps ten miles from his own and the committee will do their utmost to provide locums in such cases. In such possibly a fractionally larger proportion should be allotted to the man who is doing the work.)

It should be noted with regard to the three classes of practice that the difference between, say, a town practice (Class 1) on the one hand and a town and country practice (Class 2) on the other, is not entirely one of geographical situation. Practices in large cities will in general offer no difficulty. They are town practices pure and simple. For practices in towns of moderate size, however, much will depend on the character of the town. In industrial burghs many practices will suitably be classed as town practices (Class 1), while in a market town of the same population all practices will probably be of the town and country class (Class 2). In the same town again some practices will belong to Class 1 and others to Class 2. Lastly, in many small towns where the bulk of the work lies in the surrounding country the town element may be practically non-existent, and the practice would fairly be counted in the country class (Class 3). Consideration of the facts and of local conditions can alone determine the correct point of view in doubtful cases.

The foregoing considerations are thought to be applicable both to private and insurance practice, including under private practice all fees for medical attendance, operations, midwifery and the like, and under insurance practice all capitation fees, mileage, and dispensing allowances, and other charges if any. The sum total of such amounts would be divided between absentee and deputy in the proportion of half and half, three-eighths and five-eighths and one-quarter and three-quarters according as the practice falls under Class 1, Class 2, or Class 3. In private practice the treatment of cash payments will be simple. As regards the rendering of accounts for work on behalf of absentees, these should be sent out by the deputy at the same time as he sends out his own, and it is suggested that they should be sent by "Dr A on behalf of Dr B, absent on duty with the King's Forces." The committee are confident that in insurance practice no deputy acting on behalf of a practitioner absent on war service will wittingly endeavour to secure the transfer of the absentee's patients to his own list. It is not necessary for a transfer to be made in order that attendance may be given. By the terms of the existing practitioners' agreements the position of the deputy is recognised and provision is made for his employment. In certain cases, however, insured persons on the lists of absentee doctors may themselves have already taken the initiative with a view to transfer. They may have given due notice of their desire to change their doctor. It appears that having done so they are at liberty to make a fresh choice, and that if they fail to be accepted they have the right to be assigned to a practitioner on the panel. It seems to the committee that it would be a proper course for the practitioner to whom such patients apply to accept them in trust for the absentee, sharing the capitation and other allowances on the principles above proposed and giving the patient the opportunity of being transferred back to his own doctor's list immediately on the latter's return from active service. It is necessary to recognise that proposed transfers may in some cases have nothing to do with the war. Such applications must be considered on their merits, and the decision will often be difficult. In any case of uncertainty the deputy will no doubt lean to generosity and accept the patient in trust for his absent colleague.

It was agreed that this statement should be sent for publication to the medical journals, and that it should be printed as a circular, copies of which can be had on application to the Convener at the Royal College of Physicians, Edinburgh. The committee expressed its satisfaction with the terms of the Director-General's circular, and the Convener was directed to convey its thanks to Sir Alfred Keogh, Director General of the Army Medical Department. Several communications with reference to it had been received, and the committee expressed the hope that full advantage would be taken of this provision, and that even if the individual himself was not benefited by an exchange he would facilitate it in the interests of his colleagues and of the public.

Reference was made at the meeting to the Order in Council applying Part II of the Medical Act, 1886, to Belgium, the outcome of which might be that Belgian doctors can legitimately practise in this country.

Voluntary Hospitals and Wounded Soldiers

The Council of the British Hospitals Association, 14, Victoria street, Westminster, S.W., have had under consideration the varying conditions under which the voluntary hospitals throughout Great Britain are receiving wounded soldiers for treatment. They point out that arrangements which the War Office has made with these institutions as to payment vary considerably, for instance, few, if any, of the hospitals in London have asked for any payment from the Government, whilst most of the provincial hospitals expect to be paid at rates which vary from 2*s* to 4*s* per patient per day. In these circumstances the Council are inviting the secretaries of voluntary hospitals to elicit the views of their committees as to whether an application should be made to the War Office to deal upon the basis of a uniform scale of payment with all the voluntary hospitals in which payment is desired. They understand that some such arrangement has been made in reference to the private hospitals provided by the British Red Cross Society and other similar organisations. The Council have also had under consideration the question as to whether an application should be made to the Inland Revenue authorities to remit the duty on rectified spirit used in hospitals in the making of tinctures, galenicals, &c. This matter has been referred to a small committee for further consideration and inquiry.

THE BRITISH RED CROSS SOCIETY.—In its summary of work accomplished during the week ending Jan 9th the British Red Cross Society states that the number of auxiliary home hospitals accepted by the War Office to date is 675 containing beds for 18,782, including 354 beds accepted during the past week. The following additional ambulance cars have been despatched: 25 ambulances to the British Ambulance Committee (French Red Cross), 11 ambulances, 1 lorry, and 1 motor cyclist to Boulogne, 1 ambulance and 1 soup kitchen to Dunkirk, 1 ambulance to Havre, and 2 to places in England. At the Netley Red Cross Hospital there have been during the week 231 British and 233 Indian sick and wounded. Two cases of tetanus have recovered and have been removed from isolation. Two concerts have been given during the week,

	£	s	d
G N Dunn	1	0	0
P J Dunning	1	1	0
Mrs John Dunville	3	0	0
E P Eustace	1	1	0
J F Fagan	1	1	0
A. T Ferrall	0	10	0
L P J Finegan	2	2	0
W H, Fitzmaurice	0	10	0
H B Fleming	3	3	0
W J Galbraith	1	1	0
A. S Goff	1	1	0
J Gordon	1	1	0
A Greene	2	2	0
K R O Hallowes	1	1	0
M Halpenny	1	0	0
T Hennessy	1	0	0
W H Howe	1	1	0
Hoyte and Son Ph C	1	1	0
Irish Branch, British Dental Association	10	10	0
S T Irwin	2	2	0
M W Kelly	0	10	0
F W Kennedy	2	2	0
J Kilpatrick	1	1	0
J Laird	2	2	0
C L Lapper	1	1	0
Horace Law	5	5	0
J J Long	1	7	0
J W Lougheed	1	1	0
E Lyons	0	10	0
J McBirney and Co	1	1	0
P MacCarthy	3	0	0
G MacManus	0	7	6
G U Macnamara	1	0	0
Mrs W D Martin	1	1	0
R C B Maunsell	2	2	0
J R Middleton	1	1	0
T U Moffitt	1	1	0
T K Mulcahy	1	1	0
C J O Connor	1	0	0
T O Donnell	1	1	0
F G O Donohoe	1	0	0
W D O Kelly	1	1	0
J W Oliver	1	0	0
G Peacocke	2	2	0
J S Pegum	1	0	0
Charles Pentland	1	1	0
Louis Perrin	1	0	0
Gardner Robb	3	3	0
Major J J Robb I M S	1	1	0
Miss L Rowlette	0	10	0
S Scanlan	1	0	0
Sir Wm J Smyly	10	10	0
Brice Smyth	3	3	0
M Brice Smyth	2	2	0
R Spence	0	10	6
B H Steede	1	1	0
W C Stevenson	2	2	0
A G Stewart	1	0	0
J C Sugars	1	1	0
P D Sullivan	1	1	0
George Taylor	1	1	0
Mather Thomson	1	1	0
W H Thompson	3	3	0
Vincent Tighe	2	0	0
H Todd Ph C	1	0	0
J Wallace	1	1	0
D M Watson P, P S I	3	3	0
Herbert Webb	1	1	0
P Wright	0	10	0

In the second list published in THE LANCET on Dec 19th, p 1441, for "Edward Murphy" there should be read "Edmond Murphy"

Subscriptions to the Irish Fund should be sent to the Royal College of Physicians of Ireland addressed to Dr T P C Kirkpatrick, Registrar of the College, and Dr C M Benson, secretary of the Royal College of Surgeons in Ireland, who are acting as honorary secretaries and treasurers to the Fund

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries begs to acknowledge with thanks the receipt of surgical instruments, &c, kindly contributed by the following gentlemen since the publication of the last list —

Dr Hugh R Smith South Hampstead, N W, Mr J D Staple, Bristol, Dr W R Reith, Erdington, Birmingham, and Dr Samuel Davidson, Kelso

THE Governor of Mauritius, in a telegram to the Secretary of State for the Colonies, received at the Colonial Office on Jan 8th, states that six cases of plague were reported during the past week, and the number of deaths was six

METROPOLITAN WATER BOARD AND MEDICAL ATTENDANCE—At the last meeting of this Board, held on Jan 8th, the works and stores committee submitted a report reminding the Board of its decision to provide gratuitous medical attendance for each workman excepted from the provisions of the National Insurance Act, 1911, and to pay each district medical officer appointed by the Board at the rate of 10s per annum in respect of each workman placed on his panel, subject to the approval of the committee, such fee to include attendance, medicine, and the provision of all certificates and reports desired by the Board The Board appointed 84 district medical officers, and as there was reason to be satisfied with the working of the arrangement the committee reported that they had decided to reappoint the whole of the district medical officers One officer had resigned his appointment and in his place Mr Robert Capes was appointed The reappointments, as in the first instance were for 12 months only, as from Jan 1st, in order to allow of the whole matter being brought automatically under annual review The regulations governing the scheme had been confirmed by the committee subject to the amendment of Regulation 6, which had been altered to provide that a district medical officer who examined an employee and considered him unfit for duty must forward his certificate to the district engineer within 24 hours of the examination

The War.

RETURN OF MEDICAL PRISONERS OF WAR

IT is announced that five released medical prisoners of war have arrived this week in London from Germany via Holland Three are officers of the Royal Army Medical Corps who were captured whilst tending British wounded, and the other two are civilian surgeons attached to the British Red Cross Society who were captured while tending Belgian wounded under the Belgian Red Cross Their names are as follows Captain C T Edmunds, R A M C, Captain E S B Hamilton, R A.M C, Lieutenant W S Danks, R A M C, and Dr L J Austin and Dr A R Elliott, temporarily attached to the 1st Belgian Red Cross Unit Graphic accounts of their experiences have appeared in various newspapers

MEDICO MILITARY PAPERS

An interesting article on "Frost bite" appears in another column this week from the pen of Mr A W Mayo Robson, who has had frequent opportunities of observing this condition in soldiers returned from the front We also print communications of medico military interest from Mr J Jackson Clarke, Mr F Newland Pedley, and Mr C F Constant

SCOTTISH MEDICAL SERVICE EMERGENCY COMMITTEE

A meeting of the Scottish Medical Service Emergency Committee was held on Jan 9th in the Royal College of Physicians of Edinburgh There were present the President of the Royal College of Physicians, the President of the Royal College of Surgeons, the Dean of the Faculty of Medicine, Aberdeen University, Dr J R Hamilton (Hawick), Dr J R Currie (Edinburgh), Dr J Adams (Glasgow), Dr J Stevens (Edinburgh), Dr G C Anderson (Methil), and Dr Norman Walker (Convener) Sir Donald MacAlister was present by invitation

The committee considered a draft statement which had been prepared by the subcommittee appointed at the last meeting, and approved of it in the following terms —

Statement by the Committee

From information in its possession the Scottish Medical Service Emergency Committee has reason to believe that some advice on the general principles which should be followed in making arrangements for the carrying on of the practices of those members of the profession who are serving with the King's Forces would be welcome. The available supply of locum tenents is so small that those whose duty keeps them at home must be depended upon to do the work of the absentee The Committee recognise that in many, perhaps most cases there are special circumstances with which it is not possible to deal in a general way There are, however certain broad principles of equity which are generally applicable The man who is with the forces has the stimulus of fresh and interesting work, and he has the satisfaction and honour of directly serving his country On the other hand, he may imperil the position he has established perhaps after many years of hard work. The man who remains to do the necessary work at home has a more prosaic duty He has to take on a large addition to work which may already be considerable and he has to do this without the prospect of its being of any lasting benefit to him, for it is the essence of these arrangements that they are only "for the period of the war and that the absentee when he returns shall find his practice as nearly as abroad during the war The car is of the British Red Cross standard dimensions and was built entirely by Messrs Argylls, Limited at Alexandria, Scotland The chassis is one of that firm's 15–30 h.p models with sleeve valve engine and four wheel diagonal braking system The tyres are extra large, and these with a silent rear axle worm, convey smooth running powers, while the comfort of the passengers is further ensured by rear three quarter elliptic springs and the use of Houdaille shock absorbers, which are attached to both front and rear axles The body consists of a wood frame, with canvas detachable curtains, and the ambulance accommodates four stretchers running on guides The body is so arranged that it can easily be made to accommodate comfortably 12 convalescents An electric roof lamp facilitates night work The executive committee consisted of Professor Rutherford Morison (chairman) Dr James Hudson (vice-chairman), Mr David Ranken (honorary secretary), Sir George Hare Philipson, Sir Thomas Oliver, Dr David Drummond, Dr W L Puxton, Dr Ranken Lyle, Dr S Whillis Dr G H Hume sen. Mr F Page, Dr C J Gibb, Dr E F Pratt Dr R Dagger, Dr J D Wardale, Dr Russell, Dr W S Fraser Dr A. C Burnell, Dr James Don Dr Ethel Williams Dr J T Dunlop, Dr J J Campbell, Dr A. Campbell and Dr H. Ll. Rutter The subscribers numbered 117 In presenting the ambulance Professor Morison said that great pains had been taken in the selection of the car after a most careful investigation of the conditions which such a car would have to meet. Colonel Gowans, commanding the First Northern General Hospital, in accepting the car, thanked the subscribers and paid a tribute to the judgment of the committee on their choice of a car, and hoped that at the end of the war it would be returned little the worse for wear for the use of the civilian sick of the district

THE DUCHESS OF WESTMINSTER'S HOSPITAL —The following is an extract from a letter received by a correspondent from one serving in the Duchess of Westminster's War Hospital —"Le Touquet par Etaples, well known for its first-rate golf links will in future be notable for the excellent war hospital which was organised shortly after the commencement of hostilities The patients are at the Casino which is an ideal place for a hospital, and the doctors and nurses are in the Hotel des Anglais, the use of both buildings has been given free The staff consists of a military commandant 4 surgeons, 2 physicians, an anæsthetist, an X ray officer, 4 dressers, 30 nurses, and 30 orderlies There are 270 beds, up to the end of 1914 about 800 patients had been admitted, chiefly cases of shell and bullet wounds and so-called 'frost bite, which is a misnomer There are a general inflammation of the feet due to long continued standing in wet boots in the rain sodden trenches producing discolouration and associated with anæsthesia or hyperæsthesia. The patients take a long time to recover, one of them was so bad that both feet were gangrenous with a definite line of demarcation, and were amputated He was a German prisoner There have been three cases of gas gangrene one of whom recovered By the irony of fate he was a German We have had three cases of tetanus two of whom died With regard to anti tetanic serum there seems little evidence as to its value, but everyone agrees that it ought to be given, as it does no harm, but with typhoid the case is very different At Wimereux 80 per cent of the cases had not been inoculated, of the remaining 20 per cent. nearly all were infected immediately after the inoculation—i e during the negative phase Two things forcibly strike me here First, the remarkable recoveries considering the horrible septic condition of many of the wounds There is no doubt that the more conservative one's surgery the more successful the results The number of aseptic cases is very small Secondly the happy way and cheerful endurance with which the men face their sufferings I have not heard a complaint or a groan from a patient since I have been here There are 'grousers' in almost every community but, thank heaven they are not to be found here"

THE DRUG HABIT AND MOBILISATION IN FRANCE —Our Paris Correspondent writes Dr Marcel Briand has lately been investigating the behaviour of the morphine takers in the French army Generally speaking while a few have not broken away from their demoralising habit many, being unable to obtain the drug, have perforce been compelled to become demorphinised and have thus been cured but not without considerable suffering The subjection to army discipline has also had a bracing moral effect, while in civil life the morphinomaniacs seek one another out and encourage each other in their vice There are at least two such now in the army who, coming from the same environment and locality, where they frequently associated in their habits and in their search for supplies of the drug on mobilisation, the one as an officer, the other in the ranks in the same regiment, now deceive one another as to their state by each pretending to have been cured long since, and while they still continue taking injections secretly, are rapidly lessening the dose to escape as quickly as possible from their tyrannical need, which becomes daily more hateful to them Their regiment has not yet been under fire, but there is every reason to hope that when this occurs the two men will be quite capable of adequately discharging their duty, which they could not have done a few weeks ago"

ULSTER VOLUNTEER FORCE HOSPITAL —This hospital which has been established in the Exhibition Hall, Belfast (granted by the Belfast City Corporation), for the reception of wounded soldiers and sailors, was opened on Jan 8th by Lady Carson. The Exhibition Hall has been transformed into a hospital with 80 beds, and 20 more beds have been provided at the Samaritan Hospital for Women (which for some time has been closed), where it is proposed to treat the more serious cases A neighbouring house (No 1, College Park East) has been generously placed at the disposal of the committee for use as a nurses' home The hospital is being lent to the War Office by the Ulster Volunteer Force, who will retain the ownership and be able to use it in whatever way they may deem proper after the war has been brought to a termination A large medical and nursing staff have been appointed

M.B DEGREE EXAMINATION AT BELFAST —A special examination for the M B degree was held in connexion with the Queen's University of Belfast last week, when 21 candidates were admitted to the degree A large number of these propose entering the Army Medical Service The degrees were conferred on Monday, Jan 11th.

Obituary.

SIR ROBERT MICHAEL SIMON, B A, M D CANTAB, M D BIRM., F.R C.P LOND,

CONSULTING PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM
PROFESSOR OF THERAPEUTICS IN THE UNIVERSITY
OF BIRMINGHAM.

WITHIN a short period the medical profession of Birmingham has mourned the loss by death of three of its leading members, and some weeks ago a further loss was sustained by the death of Sir Robert Simon after a short illness

Born in 1850 Sir Robert Simon was a native of Nottingham He entered Caius College Cambridge, and graduated M B in 1876 and M D two years later He studied medicine at Guy's Hospital and in Berlin At first he settled in Manchester, where for three years he was honorary physician to the St Mary's Hospital for Women and Children In 1879 he became a Member of the Royal College of Physicians and was appointed assistant physician to the General Hospital, Birmingham, taking the place of the late Dr G A Gibson, who went to Edinburgh On the retirement of Sir Walter Foster (afterwards Lord Ilkeston) in 1891 Sir Robert Simon was elected honorary physician to the hospital, which position he held until April, 1914 His distinguished services to this institution rendered during 35 years were recognised last October, when an illuminated album was presented to him and a diamond tiara to Lady Simon An excellent portrait of Sir Robert Simon was at the same time presented and the members of the D'Oyley Carte Company playing at Southampton gave an entertainment

The total number of cases of stores sent abroad during the week was 479, of these 272 were despatched to Boulogne, 86 to Calais, and 67 to Havre, the balance representing small quantities sent to Dieppe, Wimereux, Dinant, and Dunkirk Seventy hospitals in this country were supplied with 379 cases of stores A large quantity of stores have been purchased to be sent out to Serbia and Montenegro The hospital ship *Queen Alexandra* has been busy conveying wounded from Dunkirk to Boulogne, and is now engaged in transporting stores

BRIGHTON MILITARY HOSPITALS VISIT OF THE KING AND QUEEN —Their Majesties the King and Queen paid a visit to Brighton on Saturday, Jan 9th, and made a tour of the several military hospitals which have already been established there Their Majesties' stay only lasted five hours in all, but in that short time they saw considerably over 2000 sick and wounded of the British and Indian Expeditionary Force, chatted with a great number of them, and imparted their sympathy and hopeful comfort The Indians are quartered at the Royal Pavilion and at a secondary school in the town, and at the former place, noted for its Oriental architecture, although there was no formal ceremony, the King expressed to the mayor and corporation his pleasure that the Royal Pavilion had been given up for the reception of his Indian warriors, adding, "It is not only these beautiful surroundings which the Indians will appreciate, but this lovely air is certain to help considerably in building them up again" The Royal inspection of the Indian General Hospital, as the Pavilion has been named, lasted one hour There were many very touching bedside scenes Their Majesties were filled with pity when in some cases Colonel Niel Campbell, the chief administrator, explained (where the patients were unable to do so for themselves) their battle record and the nature of their injuries But their Majesties' purpose was to hearten and console the wounded, and generally throughout their visit they maintained a cheerful manner, inspiring hope and a bright future on all sides Sir Walter Lawrence the War Office Commissioner, accompanied their Majesties during the tour, and he presented to the King and Queen Colonel Channer, Major Langston, and Major Waters, prominent members of the Indian Medical Service Another hour was spent at the secondary school, an annexe of the Indian General Hospital, where Colonel Sweeney is in charge, and after lunching with the Hon Sir Sidney Greville at Hove, their Majesties motored to the Second Eastern General Hospital in Dyke road, where there are about 800 British and Belgian wounded soldiers The administrators of the hospital, Lieutenant-Colonel Rooth, Captain Walker, and Lieutenant Ross, received the Royal visitors, and all the members of the medical staff were in attendance The King and Queen next visited St Mark's schools at Kemp Town and the Howard Home near by, two more military hospitals, and Mr John Howard, the generous donor of the institution bearing his name, was presented to the King and Queen and personally thanked for a gift of such great value Unfortunately, time did not permit of a visit being paid to the Royal Sussex County Hospital, where a good many wounded soldiers are being treated Everywhere their Majesties went they expressed not in a mere form of words their appreciation of all that they had seen and all that was being done for their wounded soldiers, and those who accompanied their Majesties from bed to bed can testify to the King and Queen's sympathy with their soldiers, showing how real and personal is the interest they are taking in the wounded

A MOTOR SURGICAL AND X RAY VAN —The January issue of *Cooper's Vehicle Journal* contains a full description with coloured plate and working drawing of a combined operating theatre and X ray wagon on a 5 ton Dennis chassis for use as near as possible to actual military operations, which has been devised by Sir William Collins with the help of the staff of that periodical The object of this collaboration was to harmonise in a practical fashion both medical and coachmaker's requirements The reasons for selecting this particular type of chassis are given but it is added that whatever type is chosen it should have an engine-driven lighting dynamo and lighting controls, while the suggestion is made that the theatre should be warmed by superheated steam generated by a burner suited for using petrol vapour or other fuel The body which is arranged to carry at least four persons besides the driver, is divided into three sections the front part for the driver, the middle part a light proof X ray room, 5 ft long, separated by sliding doors from the largest compartment, which is the actual theatre, 9 ft 6 in in length In setting out the theatre Mr G H Colt's brochure entitled "A Portable Operation Theatre" has been followed with much advantage So far as can be judged from studying the plans and descriptions, a very compact and workmanlike travelling theatre and X ray room has been designed One criticism suggests itself. It is a question whether the presence of such an allurement might not cause many operations to be done under temporary conditions that might more wisely be postponed till the patient could be sent back to a more permanent establishment That, however, is hardly a criticism of the van itself, and there will always be a residuum of cases in which promptitude in operating will outweigh all considerations tending towards postponement

Surgeon General Sir Arthur Sloggett, K C B, Director General, Army Medical Service, Overseas, accompanied by a staff officer recently inspected H S H the Prince of Monaco's model convalescent home at Monte Carlo for sick and wounded officers of British nationality Several patients have arrived at the home, which is in full working order

THE MEDICAL LITERATURE OF WAR —A correspondent writes —"Medical, nursing, and ambulance work in modern warfare has a literature of its own, which is swollen considerably after each campaign At least 25 volumes have been published relating to this aspect of the South African War, they range from official reports and hospital records to the memoranda of individual experiences This considerable list, however, is far outdone by the accumulation of medical literature which resulted from the war between France and Prussia in 1870 and 1871 Within 12 months of the cessation of hostilities more than 30 volumes containing in one form or another a medical history of the war had been published in the two lately belligerent countries The complete bibliography of the war, which itself fills a volume, shows that some 45 works in German and some 30 in French have been written exclusively around the experiences of the surgeons with the respective armies, the equipment and routine of the field hospitals, and the medical and ambulance service in the siege of Paris. The works range from brochures, priced at a franc or two or a few marks, up to voluminous and expensive treatises, these latter more especially from German pens Even in the 'eighties' books on the subject were still coming at intervals from the French and German presses and it was not until 1886 that there appeared the last of the eight volumes of the 'Sanitäts Bericht über die Deutschen Heere im Kriege gegen Frankreich' from the Prussian War Department. The French contributions are lighter but generally they are more intimate and vivacious 'Le Livret du Docteur,' by Dr A. Flamarion, Chevalier of the Legion of Honour for instance is really a loosely strung diary of the author's experiences from Sedan to Paris, and while he spares us nothing in his description of the horrible and the bizarre he lightens the narrative with touches of gaiety The principal English contribution to the medical literature of the Franco-Prussian War was in the form of the notes and recollections of Sir William MacCormac, which were published also in French and German In the United States the medical literature of war seems to be much slighter in character than in Europe Doubtless there were many ephemeral publications of the kind issued immediately after the Civil War, but a study of the list of printed books in the United States in 1912 only brought to light half a dozen works which recorded the nursing and surgical experiences of the war between North and South, while only one work, apparently, is extant dealing with this aspect of the Spanish American struggle"

NEWCASTLE PRACTITIONERS' WAR GIFT PRESENTATION OF A MOTOR AMBULANCE BY NEWCASTLE MEDICAL MEN —On Jan 8th at the Royal Victoria Infirmary, Newcastle on Tyne, a motor ambulance purchased by the medical men of the locality was formally presented to the First Northern General Hospital for service either locally or

Carey, Guy's Hospital Wahba Girgis St. Mary's Hospital Boris Abram Moishovich Gordon South Western Polytechnic and London Hospital Denis Paul Guilfoyle St. Bartholomew's Hospital William Rufus George Harris London Hospital Kenneth Charles Johnston Jones St Bartholomew's Hospital and Bedford School John Joseph Miles MacDonnell St. Thomas's Hospital Charles Moffatt Guy's Hospital George Murphy Birmingham University Elizabeth O Flynn School of Medicine for Women Arthur Arnold Osman and Adolphe Gladstone Millott Severn Guy's Hospital Yousif Ahmed Sunbul King's College Douglas Durrand Christian Thomson London Hospital Jacob Eliza van der Merwe and George William Wheldon Guy's Hospital and Frederick William Widgery, Royal Albert Memorial College

At the Second Professional Examination in Anatomy and Physiology held on Jan 7th, 9th, and 11th 51 candidates presented themselves, of whom 35 were approved and 16 were referred The following is a list of the successful candidates —

Eric Burn Andreae, London Hospital Henry Hamilton Bailey, Durham University and London Hospital James Reid Banks University College James Allan Berry Guy's Hospital and Durham University Kasargod Somanath Bhat B.A. Madras Madras University and St Bartholomew's Hospital Francis Caldecott and Oliver St Leger Campion Guy's Hospital Milton Carrasco Grant Medical College Bombay Hyman Maurice Cohen M D Baltimore Baltimore and Liverpool Universities Bernard Stanley Collings and Thomas Morlay Cunnington University College, Henry Andrew Frokjar Melbourne University and University College; Lawrence Gill, Guy's Hospital Edwin Gabriel Harris and John Hollings London Hospital John Hope Manchester University Joseph Christopher Campbell Howe Guy's Hospital John Wilkinson Davis Hyde, University College Ivy Keess Grant Medical College, Bombay Mohamed Elwan Abdel Latif Cairo Kenneth Alexander Ingleby Mackenzie B A Oxon. Oxford University and St. Bartholomew's Hospital Puthiyaveethil Narayana Menon University College Hugh Morris-Jones, Glasgow and Liverpool Universities Pirosha Dinsha Motivala, Grant Medical College, Bombay William Percival Nelson Birmingham University Alice O Reilly L.M S Calcutta Calcutta University Geraint Arthur Pennant University College, Cardiff and Guy's Hospital Frank Neon Reynolds and Alan Harvey Richardson St Thomas's Hospital Edwin John Gostwycke Sargent St Mary's Hospital Basil Lyndon Skeggs St Bartholomew's Hospital Neville Hardcastle Smith B A Cantab Cambridge and Liverpool Universities Iqbal Hosain Syed Grant Medical College Bombay Arthur Stewart Westmorland St. Mary's Hospital and Shebsell Yahilevitz London Hospital

CENTENARIANS — Mrs Mary McCann, who retained her faculties till she died, passed away on Jan 9th in the Roman Catholic Home, Newry, on the 100th anniversary of her birthday —Mrs Lambert, of Edmonton, recently celebrated the 101st anniversary of her birthday

THE SUPPLY OF THYMOL —A shortage of this useful and powerful antiseptic has arisen owing to the fact that most of it was prepared from the raw material (ajowan seeds) by German makers These seeds are supplied for the most part from India, and we learn that the Imperial Institute authorities are taking steps to bring British manufacturers into communication with the Indian exporters of the seed with the view of extracting the oil in this country

THE SALE OF LAUDANUM —At the January meeting of the Council of the Pharmaceutical Society the following was adopted —

> That the policy to be advocated by the Council in regard to the sale of laudanum should be that when "laudanum" is asked for the 1914 preparation should be supplied and the poison book signed but where the 1898 preparation is demanded care should be taken to label it accordingly and the attention of the purchaser should be called to the fact that it is the 1898 preparation

RAINFALL IN THE NORTH OF IRELAND. —December, 1914, will long be remembered as the wettest month in Ulster for many years, while during it there was also an extraordinary prevalence of high winds, as well as a low average temperature Thus, at the famous golfing centre Newcastle co Down, there were 16 days on which rain fell and the total amount was 7 44 inches At Warrenpoint rain fell on 23 days in December to the extent of 8 03 inches as against 2 63 inches in December 1913 In the same district the total rainfall for 1914 was 37 44 inches as against 41 11 inches in 1913 In Newcastle the total rainfall for last year was 38 94 inches At Seaforde co Down the rainfall during 1914 was 38 95 inches as against 40 25 in 1913 at Letterkenny co Donegal it was 45 33 inches, at Markee co Sligo it was 46 58 inches while at Carna Connemara, in the west of Ireland it was [illegible] 10 inches At Cashel, Tipperary, there were 235 days with rain

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Meeting of the House of Lords

THE House of Lords met on three days last week Several matters arising out of the war were discussed An adjournment was then made until Feb 2nd, on which date the House of Commons reassembles

HOUSE OF LORDS

THURSDAY, JAN 7TH

Gifts of Motor Ambulances

Lord BALFOUR OF BURLEIGH asked His Majesty's Government whether it was the fact that with the consent of the War Office some motor ambulances had been provided by private benefaction for special brigades through the British Red Cross Association, whether, on such cars being landed in France, they had been taken possession of by the Army Service Corps and devoted to the general service of the Royal Army Medical Corps, and, if so, whether this course had the sanction and approval of the War Office His lordship went on to say that the facts as given to him from a private source were these Early in the war there was a great need for ambulance cars at the seat of military operations for the purpose of taking the wounded back to the base hospitals with as much speed as possible The fact that the demand exceeded the supply was one on which he did not care to throw stress He was told that this becoming known to the friends of some of the regiments concerned they got up subscriptions for providing ambulance cars for the special units in which they were interested He was informed by Mr Walter Long, whose son was in the Scots Greys, that the War Office was approached to get its consent that such a procedure in regard to this particular regiment should be adopted The War Office stated that individual units could not be given this privilege, but it would give its consent if the car was sent for the service of a particular brigade Accordingly the friends of the Scots Greys, the 12th Lancers, and the 20th Hussars, which made up one cavalry brigade, did provide ambulance motors for the service of that brigade He was told that in no single case had a car reached its destination. He was informed that every condition laid down by the War Office had been complied with and the cars were sent out to the British Red Cross Association He was not speaking on behalf of that organisation, but on behalf of those who supplied the cars Were the statements he had just made correct? If so, was it fair that the property of private persons, subscribed for under the sanction of the War Office for a definite purpose should be taken from them and applied to other purposes?

The LORD CHANCELLOR replied that he had looked into the matter A considerable number of motor ambulances had been provided by private benefactors, and in a great number of instances the donors had stipulated that the ambulance in question should be given to some particular unit or brigade The answer to these stipulations had invariably been that so far as possible the donors' wishes would be carried out, but it must be distinctly understood that any such gifts could only be accepted on the condition that they were available for the general service of the army Those ambulances which had been given for work with the Expeditionary Force had been so dispatched It was obvious however that the circumstances and difficulties of maintaining an army in the field made the special earmarking of certain vehicles to certain units only a practical impossibility A vehicle requiring only slight repairs must necessarily be replaced by an efficient one, and the damaged one when repaired must necessarily go into the general pool available for replacement wherever required It came to this that whilst an effort had been made to carry out the wishes of the donors the circumstances of the army made it impossible to carry them out in certain instances

Lord BALFOUR OF BURLEIGH remarked that the names of the units were painted on the cars concerned, and no communication had been made to any of the donors that the cars had been taken for the service of the Army Medical Corps. He was informed that one of the cars had not been paid for and the donor did not intend to do so until he got compensation

Inoculation against Typhoid

Lord TENTERDEN drew attention to the inoculation in His Majesty's Forces against typhoid, and asked His Majesty's Government for information as to whether inoculation was compulsory, and whether soldiers were involved in any penalties or disabilities if they refused to submit to inoculation He said that pressure was being put on soldiers to be to be hung in the board room of the General Hospital In the University of Birmingham he held for a short time the chair of Forensic Medicine, and for the last three years he was Professor of Therapeutics Besides the General Hospital appointment he was physician to the General Dispensary, consulting physician to the Dental Hospital, the Tewkesbury Hospital, the Nuneaton Hospital, Lichfield Cottage Hospital, and the Sutton Coldfield Dispensary He served a term as examiner in medicine at the University of Cambridge and as examiner in clinical medicine at the University of Birmingham He had also held the offices of President of the Birmingham Branch of the British Medical Association and of the Birmingham Medical Benevolent Society In 1910 he received the honour of knighthood in recognition of his professional position and of the services rendered to the city of Birmingham For 15 years he was a magistrate of the county of Warwick, and more recently had been a justice of the peace for Birmingham. His contributions to medical literature were few, the most important being the chapter on the diseases of workers in brass and copper for Oliver's "Dangerous Trades" An earlier paper on "Brass founders' Ague" had appeared in 1888 He was the author of "Lectures on the Treatment of Common Diseases of the Skin," based on his Ingleby lectures Two papers on "Cardiolysis" were published recently

Sir Robert Simon was a man of very considerable ability and possessed unusual clinical skill, which had gained for him a high reputation as a teacher and a large consulting practice in the Midlands As a physician he possessed broad and philosophic views of disease, and had the power of seizing at once the essential features of a case He was essentially a friendly man and easily won the confidence of his patients He was a good tempered colleague, considerate and helpful to his juniors The post of his house physician was much sought after, and his old residents would acknowledge how much they owe to his clinical experience and skill, to his friendly banter, and to the sense of responsibility and initiative which he tried to inculcate in them He had a great aptitude for games of skill, few were his equals at chess or bridge, and he was a good golfer Three years ago he had severe Menière's disease, which he faced with great courage Since then his health had not been very good, but it was hoped that the greater leisure resulting from his retirement from active hospital work would allow him to enjoy life for many years, and his death following a severe attack of influenza was a great shock to all his friends

Sir Robert Simon married in 1887 Emily Maud, a daughter of the late Mr W H Willans, of London and Seaton, who survives him with her daughter

ERNEST WILSON STOKER, F R C S IREL,

SURGEON TO OUT PATIENTS ST PAUL'S HOSPITAL, RED LION SQUARE W C

Dr Wilson Stoker belonged to the well known Irish family which has produced so many members of the medical profession His father and grand father were medical practitioners, and three out of four of his brothers follow the same calling He received his medical education at the Royal College of Surgeons in Ireland, where he graduated in 1888, and subsequently took the Fellowship He went through courses at Berlin and Vienna under Billroth and Politzer, and travelled extensively when a young man in various parts of the world He then came to London, and after holding the post of house surgeon at the Mount Vernon Hospital, settled in practice 17 years ago He recently took the house of his cousin, Mr George Stoker, C M G., in Hertford street, Mayfair, and attained considerable success in practice A personal friend writes "He loved his profession, and refused, notwithstanding his failing health from diabetes, to take a long rest, and died in harness, as he always wished to do, after a few hours' illness from pneumonia. The strain of the war, bringing attendance upon Red Cross hospitals and work to be done for absent friends serving at the Front, in addition to his personal work, proved to be too much for his strength. He had been a prominent athlete, having played Rugby football for Ireland in 1888–90, besides being a well known tennis player and a keen shot"

EDWARD IRWIN SCOTT, M D ST AND, L R C S IREL, L R C P IREL

Dr Edward Irwin Scott has died at Brighton from angina pectoris at the age of 68 years He was noted for his great thoughtfulness and kindness to all with whom he came in contact, rich and poor alike Dr Scott was formerly a member of the Hove town council, and was interested in local philanthropic societies as well as the National Society for the Prevention of Cruelty to Children and the Charity Organisation Society He was medical officer of the Brighton and Hove Dispensary for 25 years, and was ex president of the Irish Medical Schools and Graduates Association He formerly practised at Swatow

The funeral service was held at All Saints Church, Hove, when there was a large congregation of friends and patients

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND —At the First Professional Examination of the Conjoint Board held on Jan 5th, 6th, 7th, and 8th the following candidates were approved in the subjects indicated —

Chemistry and Physics —Fauzi Fareed Abdullah St Mary's Hospital William George Barnard London Hospital Percival Charles Collyns St. Bartholomew's Hospital Ivor Joseph Corbett, Plymouth Science Art and Technical School William Davies, University College Cardiff Frank Swinburne Drewe M A Oxon., St. Thomas's Hospital Chapple Gill Carey Guy's Hospital Davis Abram Moishovich Gordon South Western Polytechnic and London Hospital Frank Eric Harger St Bartholomew's Hospital Norman Howard Liverpool Technical School John Stephen Moore St Thomas's Hospital Adolpho Gladstone Millott Severn Guy's Hospital Yousif Ahmed Sunbul Polytechnic Institute Douglas Dorrand Christian Thomson London Hospital and Jacob Ellis van der Merwe Guy's Hospital

Chemistry —Frank Edward Edwards Manchester University; Mumtaz Wali Mahomed Hassanally King's College Henry Alfred Connor Kite Sheffield University Clement Nicory and Ernest Algernon Sparks St. Thomas's Hospital and Alfred George Sykes Sheffield University

Physics —Laurence Morrice Calvert Cambridge University and St. Bartholomew's Hospital Alfred Joseph Chiappa, Middlesex Hospital Mohamed Ahmed El Dardiri King's College Arthur James Fenn Birkbeck College Alfred Foster St Bartholomew's Hospital Wahba Girgis St. Mary's Hospital Kenneth Gla[illegible] Uppingham School David Joseph Heritage Jones St Mary's Hospital George Murphy Birmingham University Akinlawon Babatunde Olumuyiwa, St Mary's Hospital and Gladys Mary Thurlow Williams, University College Cardiff

Biology —Yenny Abdel Messiah B A King's College Fauzi Fareed Abdullah St Mary's Hospital Jose Basilio Acosta, Guy's Hospital Frederick Thomas Allen St Thomas's Hospital George Wilfred Almeyda and William George Barnard, London Hospital Charles Reginald Cade Guy's Hospital Alfred Joseph Chiappa Middlesex Hospital William Davies University College Cardiff Arthur James Fenn Birkbeck College Edgar Thomas Flood, St Mary's Hospital Chapple Gill

Newport (Mon), Royal Gwent Hospital.—Resident Medical Officer Salary for first six months at rate of £100 per annum second six months £125 and third six months £150 with board, residence and laundry

Nottingham General Hospital.—Senior House Physician Salary £120 per annum, with board residence and laundry

Preston Royal Infirmary —Assistant Resident Medical and Surgical Officer Salary £120 per annum, with board, residence and laundry

Putney Hospital, Putney Common S W —Resident Medical Officer Salary £150 per annum with residence board and laundry

Queen s Hospital for Children Hackney road Bethnal Green E —Assistant Physician. Also House Surgeon for six months Salary *£80 per annum with board residence and washing*

Rhondda Urban District Council.—Two Temporary Assistant Medical Officers of Health and School Medical Officers Salary £350 and £300 per annum respectively

Rousay and Egilshay Parish of —Resident Medical Officer Salary £71 per annum with free house (partly furnished) and garden

Royal College of Surgeons of England —Election to the Court of Examiners

Royal National Orthopædic Hospital, 234 Great Portland-street W —Resident House Surgeon Salary £100 per annum with board, washing &c Also Honorary Anæsthetist. Salary £21 per annum

St Mary's Hospital, Paddington W —Resident Assistant Anæsthetist for six months Salary at rate of £100 per annum with board and residence

St Mary's Hospital for Women and Children, Plaistow, E —Resident Medical Officer Salary at rate of £90 per annum with board, residence and laundry

Salford Royal Hospital.—Resident Surgical Officer and Casualty House Surgeon for six months Salary at rate of £120 and £100 per annum respectively with board and residence

Salisbury Infirmary —Assistant House Surgeon unmarried Salary £75 per annum with apartments board lodging and washing

Salop County Council.—Temporary Tuberculosis Officer Salary 7 guineas a week.

Sheffield City Hospitals (Infectious Diseases and Tuberculosis) —Assistant Medical Officer Salary £180 per annum with board lodging and washing

Sheffield Royal Hospital.—Assistant House Physician unmarried. Salary £80 per annum with board lodging and washing

Sheffield Royal Infirmary —House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

Sidlaw Sanatorium.—Resident Medical Officer Salary £125 per annum

Southampton Royal South Hants and Southampton Hospital —Junior House Surgeon for six months. Salary at rate of £120 per annum with rooms board and washing

South Shields Ingham Infirmary and South Shields and Westoe Dispensary —Junior House Surgeon. Salary £115 per annum, with residence, board and washing

South Shields Union Harton Poor law Institution —Assistant Medical Officer Salary £200 per annum.

Stirling District Asylum Larbert N B —Female Third Assistant Medical Officer Salary £140 per annum with board &c

Stroud General Hospital.—House Surgeon Salary £120 per annum with board lodging and washing

Taunton and Somerset Hospital, Taunton —Senior House Surgeon Salary £120 per annum with board lodging and laundry

Truro Royal Cornwall Infirmary —House Surgeon unmarried Salary £150 per annum with rooms board and washing

Tunbridge Wells General Hospital.—House Surgeon unmarried Salary £100 per annum with board residence &c.

Victoria Hospital for Children Tite-street Chelsea, S W —House Physician for six months Salary £40 with board and lodging

Wakefield Clayton Hospital.—Senior House Surgeon Salary £160 per annum with board lodging and laundry

Wakefield West Riding Asylum —Assistant Medical Officer Salary £250 per annum with apartments board washing and attendance Also Locum Tenens Assistant Medical Officer Salary as arranged with apartments board &c

Walsall and District Hospital.—Junior House Surgeon and Anæsthetist Salary £110 per annum with board residence and laundry

West Bromwich and District Hospital.—House Surgeon and Assistant House Surgeon unmarried. Salary £150 and £120 per annum respectively with residence, board and laundry

West Ham and Eastern General Hospital, Stratford E —Junior House Surgeon Salary at rate of £100 per annum, with board residence and washing

West Riding of Yorkshire Cardigan Sanatorium near Wakefield. —Assistant Medical Officer Salary £250 per annum

Wigan Royal Albert Edward Infirmary and Dispensary —Female Junior House Surgeon Salary £130 per annum with board apartments and washing

Worcester General Infirmary —Resident Medical Officer Salary £1 0 per annum with board residence and washing

Worksop Victoria Hospital and Dispensary —Medical Officer and House Surgeon Salary £1 0 per annum with rooms coal light, and attendance

The Chief Inspector of Factories Home Office London S W gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Paignton and at Braunton in the county of Devon and at Mountrath in Queen s County

Births, Marriages, and Deaths.

BIRTHS

[illegible] —On Jan 4th to Dr and Mrs. Benson of Ellington House [illegible] [illegible] a daughter

Bernstein —On Jan 6th at Queen Anne s reet Cavendish square W the wife of Dr J M Bernstein (nee Constance Wreyford) of a son

Leathart —On Jan 5th at Gatestone-road, Upper Norwood the wife of Percival W Leathart M.B B C of a son

Rickard —On Jan 8th at Hazelwood terrace Plymouth the wife of Staff Surgeon C R. Rickard R.N *of a daughter (stillborn)*

Thurnell.—On Jan 7th at Woodville-terrace Gravesend, the wife of Herbert L Thurnell, M A. M.D a daughter

MARRIAGES

McNeill—Dawson —On Jan 9th at St Peter s, Earley Berkshire, Captain A N R McNeill R.A.M C to Nora daughter of Mr C S Dawson Chief Justice of Fiji and Mrs Dawson

Nixon—Johnson —On Jan 7th at St Wilfrid s Church Harrogate quietly on account of the war by the Rev Douglas Guy Surgeon Horace Clulow Nixon R N of Harrogate youngest son of the late Benjamin Nixon and Mrs Nixon Ballington House Leek to Hilda de Angelis younger daughter of Dr and Mrs T Mason Johnson The Gables Harrogate.

Ruffmann—Gaylord —On Jan 6th at St Mary Magdalene s, Upper Tooting Hermann H Ruffmann M.B B S to Ada Millicent Parkinson, daughter of the late Mr Percival Gaylord of South Australia

DEATHS

Don —On Jan. 11th suddenly at Sutherland avenue W, and of Braeside Kingsdown, Dover William Walton Don M D aged 42 years

Harrison-Smith.—On Jan 4th, at Ramsgate Horace Harrison Smith, M D R N aged 90 years.

McNamara.—On Jan. 9th at Rosslyn Blakesley avenue Ealing, suddenly Surgeon General W H McNamara, C B C M G late Army Medical Service

Porter.—On Jan. 7th at Edith road W Robert Ibbetson Porter, M.A. Oxon L.R.C P, M.R.C S aged 53 years

N.B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

BOOKS, ETC , RECEIVED

Arnold Edward London

Surgical Materials and their Uses By A. MacLennan, M.B, C M Glasg Price 4s 6d. net.

Baillière J B et Fils Paris

Manuel de Prothèse Restauratrice Bucco-faciale et Traitement des Fractures des Maxillaires Par P Martinier et G Lemerle Professeurs à l Ecole Dentaire de Paris Pp 380 Price 3 fr

Baillière, Tindall, and Cox London

Practical Sanitary Science A Handbook for the Public Health Laboratory By David Sommerville B A. M Sc M D, M R.C P Lond D P H Camb, F C S Second edition Price 10s 6d net

Bale, John Sons and Danielsson Limited London

The Year Book of Open Air Schools and Children s Sanatoria. Edited by T N Kelynack M D Vol. I, 1915 Price 7s 6d net.

Black, Adam and Charles London

Writers and Artists Year Book 1915 Price 1s net

Englishwoman s Year Book and Directory 1915 Edited by G E Mitton Price 2s 6d net

Who s Who 1915 Price 15s net.

Blackie and Son London.

Studies in Questions Relating to Eye-training By W Phillips, M A Price 1s 6d net

Bryan Company The R L. Columbia S C

Transactions of the National Association for the Study of Pellagra. Second Triennial Meeting at Columbia, October 1912.

Butterworth and Co and Shaw and Sons London

The Sale of Food and Drugs Acts, 1875 to 1907 and Forms Regulations, Orders and Notices Issued Thereunder With Notes and Cases by the late Sir William J Bell LL.D Sixth edition By Charles F Lloyd Chemical Notes revised and enlarged by R. A. Robinson Price 8s 6d net

Caxton Press Oswestry

Calendar of the University of Wales for the Academic Year 1914-1915

Churchill, J and A. London

Year book of Pharmacy: Abstracts of Papers Contributed to British and Foreign Journals and Transactions of British Pharmaceutical Conference at Fifty first Annual Meeting Edited by J O Braithwaite Reginald R Bennett and Thomas Stephenson

Medical Diagnosis By Arthur Latham M A. M.D Oxon., F R C P Lond and James Torrens M.B B.S Lond M R.C.P Lond. Price 15s net

Foulis T N London and Edinburgh

Nietzsche The Preacher of War Translated by Helen Zimmern. Price 1s net.

Frowde Henry and Hodder and Stoughton London

Text book of Massage and Remedial Gymnastics By L. L Despard. Price 12s 6d net

A Nursing Manual for Nurses and Nursing Orderlies By D C L. Fitzwilliams M D Ch M F R C S Price 6s net inoculated, even in cases in which they entertained conscientious objections to the operation Many cases had been brought to his notice where soldiers who refused had had their Christmas leave *stopped* He had seen many letters from soldiers in which they protested against the exercise of this pressure It was perfectly evident in spite of all official assurances in Parliament that inoculation was being made practically as compulsory as it could be

The Lord Chancellor replied that inoculation against enterical typhoid was not compulsory for any soldier There were special dangers at the front to men who were not inoculated, and the medical authorities were convinced of the benefits of inoculation Every effort was made to persuade men to be inoculated The only circular issued on the subject was that dated Oct 4th, 1914, and in it it was pointed out that this disease was a great danger on active service and that it was the duty of soldiers to guard against it, and if they did not do so they risked their chance of seeing active service because men who had adopted this precaution might be selected in their place It came to this that the medical authorities and the highest authorities were convinced that this inoculation was the very highest protection against enteric fever

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward to The Lancet *Office directed to the Sub-Editor, not later than 9 o clock on the Thursday morning of each week, such information for gratuitous publication*

Barnes Helen P, M B B S Lond has been appointed Resident Medical Officer at the Wolverhampton and Staffordshire General Hospital

Hudson Arthur Cyril, M D, B C Cantab, F R C S Eng has been appointed Ophthalmic Surgeon in Charge of Out-patients at St Thomas s Hospital.

Mackay, Helen M. M M B B S Lond has been appointed House Surgeon at the Wolverhampton and Staffordshire General Hospital

Mallet Refna, M R C S L.R C P, has been appointed House Surgeon at the Wolverhampton and Staffordshire General Hospital.

Mitchell, A. Philip M.D Ch M Edin, F R C S Edin has been appointed Temporary Assistant Surgeon at the Royal Hospital for Sick Children, Edinburgh

Morison D, M D Edin. has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Tobermory District of the county of Argyll

Phillips Llewellyn Powell, M D Cantab F R C P Lond F R C S Eng has been appointed Physician in Ordinary to S M the Sultan of Egypt.

Rees J H. M D Edin has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Penarth District of the county of Glamorgan.

Warburton Gilbert B M.B, Ch.M Vict F R C S Eng has been appointed Temporary Honorary Surgeon to Ancoats Hospital, Manchester

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Ashton under Lyne Union Workhouse.—Resident Assistant Medical Officer Salary £150 per annum with rations, laundry and residence.

Barnsley Beckett Hospital and Dispensary—Second House Surgeon unmarried Salary £120 per annum with apartments board and laundry

Barnstaple, North Devon Infirmary—Female House Surgeon Salary £100 per annum with board residence and laundry

Barry Education Committee—Assistant School Medical Officer Salary £300 per annum

Barry Urban District Council Accident and Surgical Hospital.—House Surgeon Salary £250 per annum

Bethnal Green Infirmary Cambridge-road N E—Assistant Medical Officer Salary at rate of £200 per annum with apartments board and washing

Birkenhead Borough Hospital.—Junior House Surgeon Salary £100 per annum with board and laundry

Birmingham and Midland Eye Hospital, Church-street.—Senior and Junior House Surgeons Salary £110 and £100 per annum respectively with residence and board &c.

Birmingham and Midland Hospital for Diseases of the Nervous System, Bath Row—Physician to Out patients

Birmingham City Mental Hospital, Rubery hill.—Female Junior Assistant Medical Officer Salary £200 per annum with apartments board laundry &c

Birmingham General Dispensary—Resident Medical Officer unmarried. Salary £240 per annum with apartments fire lights and attendance.

Birmingham Union—**Dudley road Infirmary** Third Assistant Medical Officer Salary at rate of £170 per annum Fourth Assistant Medical Officer Salary at rate of £160 per annum **Selly Oak Infirmary** Assistant Medical Officer Salary at rate of £180 per annum All with apartments rations laundry and attendance

Bolton Infirmary and Dispensary—Junior House Surgeon and Third House Surgeon Salary £150 and £130 per annum respectively with apartments, board, and attendance

Bradford Royal Infirmary—House Surgeon unmarried. Salary £100 per annum with board residence and washing

Bradford St Luke s Hospital and Union House—Assistant Resident Medical Officer unmarried Salary £150 per annum with rations apartments and washing

Bridgwater Hospital.—House Surgeon unmarried Salary at rate of £125 per annum with board, lodging and washing

Bristol, Cossham Memorial Hospital, Kingswood—House Surgeon Salary £120 per annum with board, *lodging and washing*

Bristol Eye Hospital.—House Surgeon Salary £100 per annum, with board residence and laundry

Bristol General Hospital.—Resident Obstetric Officer for six months. Salary at rate of £120 per annum, with board residence, &c.

Bury Infirmary—Junior House Surgeon Salary £150 per annum, with board residence and washing

Canterbury Kent and Canterbury Hospital.—Senior House Surgeon *and Junior* House Surgeon unmarried. Salary £100 and £90 per annum respectively with board lodging and washing

Canterbury Kent County Asylum Chartham.—Third Junior Assistant Medical Officer Salary £250 per annum with quarters, board washing &c

Cape Town Somerset Hospital.—Two Assistant Medical Officers unmarried Salary £200 per annum with rations and quarters.

Cardiff King Edward VII 's Hospital.—Female House Surgeon for Ophthalmic and Ear and Throat Departments. Salary £140 per annum, with board laundry and residence

City of Westminster Union Infirmary Fulham-road, S W—Second Assistant Medical Officer and Third Assistant Medical Officer Salary £160 and £140 per annum respectively, with board residence and washing

Coventry Coventry and Warwickshire Hospital—House Physician Salary £110 per annum with rooms board washing and attendance

Croydon General Hospital.—Senior House Surgeon. Salary £105 per annum with residence board and laundry

Douglas Isle of Man, Noble s Hospital.—Resident House Surgeon unmarried Salary £150 per annum with board and laundry

Dudley Guest Hospital.—Assistant House Surgeon for six months Salary £100 per annum with board residence, and washing

Eccles and Patricroft Hospital.—House Surgeon unmarried Salary £70 per annum with board, lodging and washing

Exeter City Asylum—Assistant Medical Superintendent Salary £250 per annum, with apartments board laundry, &c.

Glasgow, Gartloch Mental Hospital.—Assistant Medical Officer Salary £200 per annum, with board, lodging and laundry

Gloucester, Gloucestershire Royal Infirmary and Eye Institution—Assistant House Surgeon for six months Salary at rate of £80 per annum with board, residence and washing

Great Northern Central Hospital, Holloway N—House Physician for six months Salary at rate of £60 per annum with board lodging residence and laundry

Great Yarmouth Hospital.—House Surgeon unmarried Salary £200 per annum with board lodging, and washing

Guildford Royal Surrey County Hospital.—House Surgeon Salary £150 per annum with board, residence and laundry

Hackney Union Infirmary High-street, Homerton N E—*Junior* Assistant Medical Officer Salary £200 per annum *with rations* apartments and attendance.

Hospital for Consumption and Diseases of the Chest, Brompton—House *Physician* for six months Salary 30 guineas

Hospital for Sick Children Great Ormond-street London W C—Two House Surgeons unmarried, for six months. Salary £30 with board residence &c.

Hull City Asylum.—Junior Assistant Medical Officer Salary £200 per annum with board, lodging and washing

Hull, Victoria Children's Hospital, Park street.—Female House Surgeon and Female Assistant House Surgeon Salary £60 and £50 per annum respectively with board and laundry

Leeds Public Dispensary—Female Resident Medical Officer Salary £130 per annum with board, residence and laundry

Leicester Borough Sanatorium and Tuberculosis Dispensary—Assistant Medical Officer Salary £300 per annum

Leicestershire Education Committee.—Temporary Assistant School Medical Officer Salary at rate of £300 per annum

Lewes East Sussex County Council Education Committee.—Assistant School Medical Officer Salary £320 per annum

Liverpool, Brownlow Hill Institution—Resident Assistant Medical Officers. Salary £280 per annum, with apartments and usual resident allowances

Liverpool, City of—Female Assistant Medical Officer Salary £350 per annum

Liverpool, David Lewis Northern Hospital.—House *Physician* and House Surgeon for six months. Salary at rate of £60 per annum each with board residence and laundry

Liverpool Stanley Hospital.—House Surgeons and Physicians

London Homœopathic Hospital, Great Ormond-street and Queen square *Bloomsbury* W C—*Surgeon* for Diseases of the Eye Also Assistant Physician.

London Temperance Hospital, Hampstead road N W—Assistant House Surgeon for six months. Salary at rate of 100 guineas per annum

Manchester Corporation—Two Assistant *Tuberculosis* Medical Officers Salary £350 each per annum.

Manchester, County Asylum Prestwich—Assistant Medical Officer unmarried Salary £250 per annum *with board* apartments attendance and washing

Manchester Royal Eye Hospital.—Junior House Surgeon Salary £70 per annum with residence board and washing

Metropolitan Hospital, Kingsland road N E—*Two* Assistant House Surgeons for six months Salary at rate *of* £40 per annum with board and washing

Mount Vernon Hospital for Consumption and Diseases of the Chest—Surgeon Laryngologist.

National Hospital for the Paralysed and Epileptic, Queen square Bloomsbury W C—Temporary Junior House Physician. Salary £100 per annum with board and *residence*

HEALTH AND HOSPITALS IN HONG KONG

A REPORT on the *Blue-book of Hong Kong*, prepared by Mr Claud Severn, Colonial Secretary has been received at the Colonial Office and presented to Parliament From this it appears that at the Census taken on May 20th, 1911, the Chinese population amounted to 444,664 and the non-Chinese civil community numbered 12,075, making a total of 456 739, of whom 104,287 reside in the New Territories and in New Kowloon The estimated total population at the middle of 1913 was 489,114, but this included the New Territories, and as the birth and death figures do not include those from this area (with the exception of New Kowloon) the population for the purposes of calculating these rates is estimated at 398,520, of whom 21,740 were non Chinese The general birth rate for the year was 11·7 per 1000 among the Chinese community and 15·8 per 1000 among the non Chinese The general death rate was 21·75 per 1000 among the Chinese community and 10·9 among the non Chinese The number of deaths from malaria (290) showed a considerable decrease on the previous year (432) The deaths from plague numbered 386 as compared with 1768 in 1912 Small pox deaths numbered 84, all Chinese but two There were 2537 deaths from respiratory diseases among the Chinese, as compared with 2317 in 1912. Pulmonary tuberculosis and phthisis claimed 885 Chinese victims while other forms of tuberculosis represented an additional 384 deaths, making a total of 1269, or 15·5 per cent of the total deaths among that community Beri beri was responsible for 339 deaths as compared with 231 during 1912 and 320 in 1911

There can be very little doubt that the Chinese quarters generally are still in an overcrowded condition, and although the incidence of plague was light during 1913 there is reason to fear that the colony may not continue to be so fortunate The Sanitary Department are continuing their efforts to keep down the number of rats and to exclude them as far as possible from dwellings, while the scavenging service is also being strengthened with a view to reducing still further the available food supply of the rat population The mean shade temperature for the year at Kowloon (108 feet above mean sea level) was 71·9° the same as in 1912 and the ten preceding years The hottest month was July, with a mean temperature of 82·8° and the coldest January, with a mean temperature of 59·2° The temperature at the high levels of the Peak district is from 3° to 8° less than at Kowloon The total rainfall for the year was 83·73 inches, as compared with an average of 80·85 inches during the ten preceding years

The policy of the Government in controlling the importation and sale of morphine, compounds of opium, and cocaine was vigilantly maintained throughout the year, and the use of these drugs in the colony is now exclusively confined to medical purposes

To avoid the complete seclusion from friends and relatives which removal of Chinese plague patients to the Kennedy Town Infectious Diseases Hospital entailed, four district plague hospitals are now maintained by the Chinese in various parts of the colony These are under the management of the Chinese Public Dispensaries Committee which body also controls the eight dispensaries in existence including one for the boat population on a hulk in Causeway Bay The whole cost of maintenance is defrayed by voluntary subscription These institutions provide the Chinese with the services of doctors whose certificates will be accepted by the Registrar of Deaths, and with the services of interpreters who can assist the inmates of houses where cases of infectious disease have occurred Coolies are engaged and ambulances and vans are provided in order to remove cases of infectious diseases to the Infectious Diseases Hospital and dead bodies to the mortuary The dispensaries also receive sick infants and send them to one or other of the convents and arrange for the burial of dead infants Free advice and medicine are given and patients are attended at their houses

The new Kwong Wa Hospital for Chinese in the Kowloon Peninsula was opened in the autumn of 1911 It occupies a site of three acres and will ultimately provide accommodation for 210 patients The Hong Kong University is composed of three faculties (1) medicine (2) arts and (3) engineering and the medical faculty offers great facilities for the practice of medicine The anatomical laboratories were the gift of a Cantonese gentleman Mr Ng Li Hing There is a large staff of instructors in medicine and all the principal doctors of Hong Kong give lectures at the University

"WAR BREAD"

THE Germans have been issuing repeated warnings to the public to economise in the use of bread especially wheaten bread although the most frequently used bread in that country is black bread or rye bread and now a new bread called the "K" (Kriegs War) bread has been ordered to be consumed which contains a large admixture of potatoes With wheat steadily going up in price this has interest for ourselves There would no doubt be some grumbling at bread containing potatoes, but it is interesting to recall that in years gone by potatoes have been used in the making of bread by British bakers as a routine At certain times of stress in this country the rich have been exhorted to be sparing of the use of wheaten flour by mixing it with potatoes so that more might be available for the poor, and elaborate recipes for making bread with the proper proportions were printed in some of the old British favourite almanacks Potatoes yield in Germany 40 million tons to 8 million acres, whereas wheat only yields 4 million tons to 5 million acres, and rye 8 million tons to 14 million acres

ACCEPTABLE APPRECIATION

To the Editor of THE LANCET

MY DEAR EDITOR,—As I look back over this busy and eventful year, I realize to how great an extent the progress of the Department has depended upon the helpfulness of those who, while not in the Department or of it, have sympathised with its aims and have co-operated in its work Officially and personally I feel under obligation for the help you have given

With best wishes for the new year,

I am, yours cordially,

S S GOLDWATER, M D

Commissioner of Health, City of New York

Dec 31st, 1914

THE BRITISH TRADITION OF ENDURANCE

A TRADITION of endurance is the heritage of Englishmen It may prove of interest at a time when so much is being suffered in the trenches at the front and, be it remembered, in our North Sea Fleet during its anxious and strenuous vigil, to remind ourselves of some of the famous stories of what Britons have endured in the past A choice collection of horrors nobly faced is contained in the fine old "Narrative of Captain David Woodard and Four Seamen," which was published in 1804 with a curious appendix "containing narratives of various escapes from shipwrecks, under great hardships and abstinence, holding out a valuable Seaman's Guide, and the Importance of Union, Confidence and Perseverance in the midst of Distress." The case of Robert Scotney is so well authenticated as to compel belief This man a whaler, was picked up in the South Seas in the year 1803 He was the sole surviving occupant of a large boat, the crew of which had been swept away by a heavy sea which drenched his food He was alone at sea for 75 days, during which while steering a course for what he believed to be the nearest land he kept himself alive on 3½ lb of meat 3 lb of flour, 6 lb of bread, and two hogsheads of water, some whale-oil found at the bottoms of casks, and a small quantity of salt "He likewise emptied a medicine chest he had on board and got out of it some burning medicine which he found made his body a little comfortable and warm" He never had his clothes off and was almost constantly wet, yet he, humble sailor though he was, possessed the foresight and the moral courage to allowance himself daily while setting his sails, first for Tristan da Cunha which he missed and then for the Cape of Good Hope When found he had been for some days too feeble to visit his small store of food or to shift his helm and had kept alive with the help of tobacco of which he took an amazing quantity When taken on board "both his cheeks were swelled out amazingly with the ruinous quality he had in his mouth, and which he seemed to suck with convulsive agony" He had entirely lost the use of his limbs, he was pale and emaciated and it was the opinion of the surgeons that he could not have survived two days Scotney was a Lincolnshire man but we are not told whether he was strong or particularly enduring, or whether his heredity was in any way remarkable

Other survivors of hardship whose narratives are on record attained to respectable ages and must have been men of exceptional stamina Thus William Boys, for many years Lieutenant of Greenwich Hospital, who died in 1774 and fasted for 12 days annually in order to commemorate the hardships endured by him in 1727 must have been of a peculiarly sturdy type Cast away with 15 others in a boat in mid Atlantic he managed to survive 12 days without food or liquids, except a little rain water, some human blood and a few mouthfuls of human flesh Though seven or eight of the boat's crew died the survivors were restrained through horror and various other motives from becoming complete cannibals, and they carefully abstained from eating any parts of their dead comrades save the hearts and from drinking more than 4 pints of blood carefully measured, of four of them They might have been more cannibalistic but the point of the narrative is that for 12 days they abstained from human flesh almost entirely and were obviously debarred from

HAMMOND W A, Holborn Hall London
Science and Religion By Seven Men of Science: Sir Oliver Lodge Professor J A. Fleming Professor W B Bottomley Professor Edward Hull Dr J A. Harker Professor Sims Woodhead Professor Silvanus Thompson Price 1s net

HEINEMANN, WILLIAM London
Fighting in Flanders By E A Powell Price 3s 6d net.

HILL AND SONS, SAMUEL, Liverpool
Edward Alanson and His Times By R W Murray, F R C S

HILTON AND CO, Calcutta
A Treatise on Hygiene and Public Health with Special Reference to the Tropics By B N Gosh L.M S Calcutta and J Lal Das L M S Calcutta With Introduction by Col Kenneth Macleod I M S, retired Price 6s net

HODDER AND STOUGHTON, London
National Health Insurance through Approved Societies: Being a Practical Legal Treatise Incorporating the Operative Orders and Regulations By W Addington Willis LL.B Lond Price 10s 6d net
University of London Regulations and Courses for Internal Students Price 2s 6d. net
Regulations for External Students September 1914 Price 1s 6d net.
University of London Calendar for the Year 1914–15 Price 6s net

LAURIE T WERNER, London
Soldiers English French Conversation Book By W A. Gallichan. Price 7d
The Nightside of Japan. By T Fujimoto Price 7s 6d net
Nietzsche By J M. Kennedy Price 1s net
A Woman in China. By Mary Gaunt Price 15s net
The Old East Indiamen By E Keble Chatterton Lieut. R.N V R Price 12s 6d net
My Bohemian Days in London. By Julius M. Price Price 10s 6d net.

LIPPINCOTT, J B, COMPANY, Philadelphia and London
Ten Sex Talks to Girls By I D Steinhardt M D Price 4s 6d net
Ten Sex Talks to Boys By I D Steinhardt, M D Price 4s 6d net.

LONDON PUBLICITY COMPANY 11 Adam-street Adelphi London
Mental Therapeutics (Faith Medicine and the Mind) By Charles Reinhardt-Rutland M.D D S Brux. With Introduction by Sir Oliver Lodge, F R S Third edition Price 2s net

LONGMANS GREEN, AND CO London, New York and India.
What is Adaptation? By R E Lloyd M B, D Sc Lond., Major I M S Professor of Biology Medical College, Calcutta Price 2s 6d net.

MACMILLAN AND CO London.
Text-book of Embryology Vol I Invertebrata By E W MacBride, M.A. D Sc LL.D F R S Edited by Walter Heape M.A F R S Price 25s net
First Book of Physiology and Hygiene By Gertrude D Cathcart, M.B B Sc. Glasg D P H Camb Price 1s 6d
The Philosophy of Change a Study of the Fundamental Principle of the Philosophy of Bergson. By H Wildon Carr Price 6s net.

MARLBOROUGH AND CO, London.
French Self Taught. Enlarged edition revised by J Laffitte B-es L Price 1s paper covers, 1s 6d cloth

MASSON ET CIE Paris
Précis de Chirurgie de Guerre Par E Delorme, Médecin Inspecteur Général de l Armée, Membre de l Académie de Médecine, Membre et ancien Président de la Société de Chirurgie, grand officier de la Légion d Honneur Price 4.50 fr

OLIVER AND BOYD Edinburgh
Transactions of the Edinburgh Obstetrical Society Vol XXXIX Session 1913–1914 Edited by Dr James Young

G P PUTNAM S SONS New York and London.
Recreations of a Physician. By A. Stuart M. Chisholm M.D Price 7s 6d net
Life and Law: The Development of the Exercise of the Sex Function together with a Study of the Effect of Certain Natural and Human Laws and a Consideration of the Hygiene of Sex By Maude Glasgow M.D Price $1 25 net.

SAUNDERS (W B) COMPANY London and Philadelphia.
Abdominal Operations New third edition. By Sir Berkeley Moynihan M S Lond. F R C S 2 vols 387 illustrations 5 in colours, per set 42s net
Local and Regional Anæsthesia By Carroll W Allen M.D Instructor in Clinical Surgery at the Tulane University of Louisiana. 255 illustrations 25s net.
Chemical Analysis By A. R Bliss Ph G M D Professor of Chemistry and Pharmacy Birmingham Medical College Alabama Cloth, 8s 6d net

UNIVERSITY OF BRISTOL.
Calendar 1914–15

WILEY JOHN AND SONS New York. CHAPMAN AND HALL London
Outlines of Organic Chemistry: a Book Designed Especially for the General Student. By F J Moore Ph.D Professor of Organic Chemistry in the Massachusetts Institute of Technology Second edition Price 6s 6d net

WOMEN'S EMPLOYMENT PUBLISHING CO, Prince s-street London W
Careers Fourth Edition of the Fingerpost A Guide to the Professions and Occupations of Educated Women and Girls Price 1s 6d

Notes, Short Comments, and Answers to Correspondents.

MEDICAL NOTES IN HISTORICAL MANUSCRIPTS

To the Editor of THE LANCET

SIR,—The papers of the Harley family include an excerpt from the *Newsletter* dated Whitehall, Oct 23rd 1688, which relates to the birth of James Francis Edward, Prince of Wales and son of James II, who was born on June 10th 1688 Some fear was entertained that the party in favour of the Prince of Orange (afterwards William III) would endeavour to impeach the legitimacy of the Prince of Wales, and the journal shows the quaint steps that were taken to forestall such an event

Yesterday the Lords Spiritual and Temporal now in town being summoned to attend His Majesty in the Council Chamber and the Queen Dowager with most of the Ladies and Gentlewomen who had been attending on the Queen s person during her being with child, or present when she was delivered of the Prince of Wales, and the physicians that had attended during that time, being all come into the Council Chamber, his Majesty declared to them the reason of their being called thither, which was as followeth —That by reason the malice of his Majesty s enemies had spread abroad some reports concerning the Prince of Wales as if he had not been his Majesty's but a 'suppose' child, and his Majesty expecting the Prince of Orange with the first easterly wind, when his Majesty intended to go in person at the head of the Army and not knowing what might happen, his Majesty was desirous to prevent any disturbances which might happen for the future concerning the Prince of Wales After which his Majesty desired the Queen Dowager to declare what she knew concerning the Queen being brought to bed Whereupon she declared that as soon as the King sent to her to come to the Queen's labour she came immediately and was with the Queen till she was delivered of a son Then the Marchioness of Powis and other ladies and gentlewomen, and after them my Lord Chancellor, Lord President, Earl of Middleton, Earl of Mulgrave, Earl of Feversham, and some others did declare upon Oath their knowledge touching the birth of the Prince of Wales, the sum whereof were as followeth —That the Queen being ill in the morning, after she was up, ordered a pallet bed to be got ready for her in the Bed chamber, but the pallet bed not being aired Mrs Dawson, who was then alone with her, persuaded her Majesty to let her own bed to be made ready again for her, which the Queen consenting to her bed was made and warmed with a warming pan of hot coals of fire, after which the Queen went to bed again, then the Queen Dowager and most of the persons above named being in the room the Queen had several pains which lasted for some time, after which the most part of Lords and Ladies there saw the midwife bring the child from between the clothes and laying it in a linen cloth gave it to Mrs La Badie and held up the after birth That Mrs La Badie carried immediately into the little bedchamber where all the Lords followed and saw her open the cloth, saying it was what they all desired a son And my Lord Chancellor said a steam came from it as from a new born child My Lord Middleton said it was foul as a new born child Sir Steven Fox said it was as a new born child and the Ladies declared some that they had seen the Queen milk her breasts during her being with child, others that they had frequently seen milk upon the Queen's smocks, and some that they had seen the Queen's belly during that time The Physicians declared that at the instance of the ladies they cut the navel string, from whence flowed lukewarm blood which they mixed with black cherry water and gave the child to prevent fits Mrs Pierce the laundress and wife to Pierce the chirurgeon declared upon oath that the Queen's linen during the time of lying in was as the linen of a child bed woman used to be, and the midwife deposed that she delivered the Queen of the Prince of Wales After all which the King himself was pleased to declare that besides that his Majesty had felt the child stirring in the Queen's belly about twenty times during her being with child, his Majesty as he had usually done at the birth of his other children had laid his hand upon the Queen s stomach during her being in labour to keep the child from coming back, and that he followed the child down with his hand till he could tell them it was coming into the world

I am, Sir, yours faithfully,

Jan 12th, 1915 WHITE ROSE

SATURDAY —10 A.M. Dr Saunders: Diseases of Children. Dr Davis: Operations of the Throat, Nose and Ear Mr B Harman: Eye Operations 12 noon Lecture:—Mr Souttar Surgical Anatomy of the Abdomen 2 P.M. Medical and Surgical Clinics X Rays. Mr Pardoe: Operations

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL, Gray's Inn-road, W C

TUESDAY AND FRIDAY —3 P.M., Lecture:—Dr A. Wylie Diseases of the Larynx.

THE THROAT HOSPITAL, Golden square W

MONDAY —5.15 P.M. Special Demonstration of Selected Cases

THURSDAY —5.15 P M. Clinical Lecture

ST JOHN'S HOSPITAL FOR DISEASES OF THE SKIN 49 Leicester square W C

THURSDAY —6 P M. Chesterfield Lecture —Dr M. Dockrell Vesicular and Bullous Diseases and their Treatment

ROYAL INSTITUTION OF GREAT BRITAIN Albemarle-street, Piccadilly W

TUESDAY —3 P M Prof C S Sherrington: Muscle in the Service of Nerve (Lecture I)

THURSDAY —3 P M Mr H G Plimmer: Modern Theories and Methods in Medicine. (Lecture I) (Illustrated by experiments micro-photographs &c., and Cinematograph films)

CHADWICK PUBLIC LECTURES, Lecture Hall Royal Society of Arts John street, Adelphi W C

FRIDAY —5 15 P M Dr F M Sandwith War and Disease—II , The South African and Russo-Japanese Campaigns

MANCHESTER HOSPITALS POST-GRADUATE CLINICS

THURSDAY —ANCOATS HOSPITAL, Mill street.—4.30 P.M., Dr D Core Cerebral Tumour

For further particulars of the above Lectures &c , see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed " To the Sub-Editor "

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed " To the Manager*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title-page to Vol II of 1914 were given in THE LANCET of Dec 26th, 1914

VOLUMES AND CASES

VOLUMES for the second half of the year 1914 are now ready Bound in cloth, gilt lettered price 16s , carriage extra

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Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m by Steward's Instruments)

THE LANCET Office, Jan 13th 1915

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp Shade	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks.
Jan 7	29 486	S W	0·53	54	52	43	46	46	Cloudy
8	29·480	S W	1 10	66	47	42	41	43	Cloudy
„ 9	29 304	W	..	60	45	40	40	41	Raining
„ 10	29 690	S	0·30	47	44	35	36	33	Fine
„ 11	29 390	S.W	0·01	65	47	38	40	42	Fine
„ 12	29·760	N W	0·05	57	46	39	40	43	Raining
„ 13	30 000	S W	..	61	54	42	45	45	Raining

The following magazines, journals, &c., have been received — Eugenics Review Revue d Hygiène Birmingham Medical Review Journal of Anatomy and Physiology Bulletin de l Office International d Hygiène Publique Dublin Journal of Medical Science Cleveland Medical Journal Medical Journal of Australia Medical Review American Journal of Medical Sciences Indian Journal of Medical Research Surgery Gynecology and Obstetrics Journal of Tropical Medicine and Hygiene St George's Hospital Gazette, Duodecim Science Progress &c.

Communications, Letters, &c., have been received from—

A.—Mr R Ackrill Harrogate; Messrs Allen and Hanburys Lond Mr R J Albery Lond. Captain G K. Aubrey R.A.M C Dr H Abou Saif Cairo

B.—Messrs Burroughs Wellcome and Co Lond Mr W H Battle Lond Dr J B Berkart Lond. Dr N Bardswell Lond. Messrs W Browning and Co Lond. Mr W H Barrett Chichester Captain J A. Bennett R A M C Farnborough Messieurs J B Baillière et Fils Paris Messrs H Bradfield and Sons Mansfield Monsieur E Bougault, Paris Dr J B Burt Buxton Messrs. J Beal and Sons, Brighton Messrs W Barton and Sons Edinburgh Fleet Surgeon R F Bate R.N Sheerness Mr Bannerman Lond. Mr W Bryce Edinburgh Messrs B Blackhouse and Co Dundalk British Hospitals Association Lond. Hon. Secretaries of Lieutenant D Bywater R.N.V R. Lond Major R J Blackham I M S Simla Barry Herald Co Birmingham and Midland Hospital for Diseases of the Nervous System Hon Secretary of; Messrs. John Bale Sons, and Danielsson Lond Board of Agriculture and Fisheries Lond. Messrs. Charles Barker and Sons

[Acknowledgments continued on next page

other nourishment These old sufferers were curiously religious and strangely subordinate even when they turned into eaters of dead men and waited to eat their horrid ration after Captain Scurrion had been fed And it is this strong religious feeling and this sense of discipline which seems to have become part of the British tradition It emerges in innumerable letters from the front to-day, and is one of those assets of mind as dominant over body which differentiate the great from the ignoble races There is a similarity about these classic narratives of endurance which, though inspiring, renders repetition unnecessary We have cited two typical instances, and need not do more than mention the sufferings of Lieutenant Bligh, Captain Inglefield, Dean, Dominicus, Fellowes, and Kennedy, all of which were attested by numerous witnesses Among these heroic old sufferers one figure particularly interests us, that of the ship's surgeon, who seems always to have been of the boat's crew Among Boys's companions, for instance, was Thomas Scrimsour, surgeon, who lived at North Cray in Kent, and died at the age of 80 in 1784 Though he had been one of the first to be served in the shrinking and horror stricken anthropophagies of his comrades, he was noted through life as a pattern of "*probity and benevolence*" Character, indeed, seems never to have been wanting to the old adventurous medical men of the age that saw the foundation of the Empire and the final formation of the British type

VITAL STATISTICS OF BARBADOS

A REPORT prepared by Major J A. Burdon, C M G, Colonial Secretary of Barbados, states that the population of the colony on Dec 31st, 1913, was estimated to be 72,066 males, 101,293 females—total, 173,359 The birth rate per 1000 for the year was 31·9, as compared with 36 8 in 1912, and the death rate 21 3, as against 41·0 Illegitimate births numbered 3359, or 60 5 per cent of the total births The burials of children under a year old numbered 1173, giving a rate of 213 per 1000 births This shows a decrease of 1469 such burials, and a reduction of 203 in the rate per 1000 on the figures for 1912, which were abnormal The mean maximum temperature for the year was 83 2° F and the mean minimum 74 9° The average rainfall from 138 stations was 56 84 inches At the General Hospital, situated in Bridgetown, 3356 patients were admitted during the year, of whom 247 died, and 26,913 out-patients were treated At the Lazaretto there were 12 admissions, 1 discharge, and 11 deaths, leaving 120 inmates at the end of the year Compulsory segregation is not in force in the colony At the Lunatic Asylum the daily average number of patients was 399 The admissions numbered 132, the discharges 39, and the deaths 76

BRITISH SALVARSAN

THE British Board of Trade having granted a licence to Mr Henry S Wellcome for the use of the enemy patents, Messrs Burroughs, Wellcome, and Co are now manufacturing a chemical product which, after a biological test under arrangements approved by the Board, is issued under the name "Kharsivan" Brand Salvarsan "Kharsivan" is positively stated to be identical chemically, physically, and therapeutically with the salvarsan of German manufacture, and is employed in the same manner and dosage At the moment two strengths only are issued, 0 4 and 0 6 gramme, in hermetically sealed tubes, and supplies are limited That Messrs Burroughs, Wellcome, and Co should have been equal to the occasion, and that their scientific resources should have brought them to the prompt solution of the problem of manufacture is a matter upon which this enterprising firm may well be congratulated.

THE ETIOLOGY OF THE WAR

ONE of the best condensed summaries of the causes, predisposing as well as exciting of the war that we have seen is "Origins of the Great War, or the British Case," by John Kirkpatrick, M A LL D, Emeritus Professor of History, University of Edinburgh, published by Adam and Charles Black, Limited of London, price 1*d* The author divides the causes into (1) immediate, (2) indirect, (3) constitutional, and considers each class with remarkable lucidity and such method and order as one has a right to expect from a professor of history

BOISSELIERS' BELGIAN CHOCOLATE FUND

MESSRS Boisseliers, chocolate makers at Watford, are appealing to the public to buy 250 000 boxes of their excellent chocolates and thus provide £5000 for the Belgian sufferers About one-fifth of the total receipts of the sales are being given to H M the King of Belgium through the *Daily Telegraph* Shilling Fund, and the purchase of either one 5*s* box two 3*s* boxes, or four 1*s* 6*d* boxes means a contribution of 1*s* to help the Belgians

THE gentleman who found an unopened letter addressed to the Editor of THE LANCET in an omnibus, and who kindly and anonymously posted it to this office, is informed that his courtesy is much appreciated

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY, Burlington House, London W

THURSDAY —Papers:—Dr C Chree Atmospheric Electricity Potential Gradient at Kew Observatory 1898-1912 —Prof A. E H Love: The Transmission of Electric Waves over the Surface of the Earth —Mr L Silberstein: Electromagnetic Waves in a Perfectly Conducting Tube (communicated by Prof A. W Porter) —Mr H B Keene: An Electrically heated Full Radiator (communicated by Sir O Lodge)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

TUESDAY

SECTION OF THERAPEUTICS AND PHARMACOLOGY (Hon Secretaries—W *Langdon Brown Philip Hamill J Gordon Sharp*) at 4.30 P M

Papers

Dr Douglas Cow: The Action of the Suprarenal on Renal Secretion.

Dr Ikeda and *Professor Dixon*: The Action of Ergot on the Pulmonary Circulation

GENERAL MEETING OF FELLOWS at 5 P M

A Ballot will be held for Candidates for Fellowship

WEDNESDAY

SECTION OF THE HISTORY OF MEDICINE (Hon. Secretaries—Raymond Crawfurd Leonard G Guthrie): at 5 P.M.

(1) Exhibition of Books *Illustrating the History* of Military Hygiene. The President, Dr Norman Moore will discourse on such books as he may select from the collection

(2) Lucian and Medicine Part I: Dr J D Rolleston.

N.B —The books to be shown and discussed at the meeting will be on view in the Library from Jan 14th to 21st and will be open to all Members of the Section between 11 A M and 6.30 P M

THURSDAY

SECTION OF DERMATOLOGY (Hon. Secretaries—S E Dore A. M H Gray): at 5 P M

Exhibition of Cases (at 4.30 P M):

Dr H W Barber Pityriasis Rubra Pilaris

Dr J H Sequeira: (1) Gangrene of Toes in an Infant (2) *Bristle from Hair-brush* with Ova of Hæmatopinus Suis

Dr G Pernet: Extensive Pigmented Hairy Nævus

FRIDAY

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—Philip Turner, J D Rolleston, Sidney Gilford): at 4 30 P M.

Cases and Specimens

Dr E B Gunson: Suprarenal Hæmorrhage in an Infant.

Dr J D Rolleston Congenital Heart *Disease* and *Ulcerative* Sore Throat.

Mr Sydney Stephenson: Hæmatoma of the Eyelid in an *Infant*

Dr H W Barber: Enlarged Liver in a Boy

ROYAL SOCIETY OF ARTS John-street Adelphi W C

MONDAY —8 P.M. Cantor Lecture:—Dr F M. Perkin: Oils their *Production* and Manufacture (Lecture I)

LONDON DERMATOLOGICAL SOCIETY St. John's Hospital 49 Leicester-square W C

TUESDAY —4.30 P.M., Demonstration of Pathological Specimens and Clinical Cases

ROYAL MICROSCOPICAL SOCIETY 20 Hanover-square W

WEDNESDAY —8 P M Paper:—Dr C Singer: Notes on the History of the Microscope.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, *Hammersmith*-road, W

MONDAY —10 A M., Dr Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards 12 noon, *Dr Bernstein: Pathological* Demonstration 2 P.M., Medical and Surgical Clinics. X Rays Mr D Armour: *Operations* Dr *Pritchard*: Bacterial Therapy Department. Mr B Harman and Mr Gibb: Diseases of the Eye.

TUESDAY —10 A.M. Dr Owen: Demonstration of Cases in Wards. 2 P.M., *12 noon* Mr T *Gray*: Demonstration of Fractures &c. Operations. Medical and Surgical Clinics X Rays. Mr Baldwin: Operations Dr Pernet: Dr Davis: Diseases of the Throat, *Nose* and *Ear* Diseases of the Skin

WEDNESDAY —10 A.M Dr Saunders: *Diseases of* Children. Dr Davis: Operations of the Throat, Nose, and Ear 11 A.M., Mr Souttar: Demonstration of Minor *Operations* 12 noon, Lecture —Mr Souttar Abdominal Diagnosis 2 P M Medical and Surgical Clinics. X Rays. Mr Pardoe: Operations. Dr Simson: *Diseases of Women.* Mr Gibb: Diseases of the Eye.

THURSDAY —9 A.M. Dr Bernstein: Bacterial Therapy Department. 12 noon Lecture:—Dr G Stewart: *Neurological* Cases. 2 P.M., Medical and Surgical Clinics X Rays. Mr D Armour: Operations Mr B Harman: Diseases of the Eye.

FRIDAY —9 A M Dr Simson: *Gynæcological* Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards 12.15 P.M., Lecture:—Dr Bernstein: Applied Pathology 2 P M., Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Pernet: Dr Davis: Diseases of the Throat, Nose, and Ear *Diseases of the Skin.*

A Clinical Lecture.

"AGAINST HIS OWN BODY"

Delivered at St Bartholomew's Hospital on Jan 20th, 1915,

BY D'ARCY POWER, F R C S ENG ,

SURGEON TO THE HOSPITAL LIEUTENANT-COLONEL, R.A.M C (T)

GENTLEMEN,—The subject which I have chosen for my lecture to day would appear at first sight to be scarcely germane either to the time or the circumstances A little reflection, however, will show you that it is not so foreign as it seems It touches us politically and socially Politically, because we require the most perfect health possible in every man of the nation to enable him to undergo the wellnigh intolerable hardships of war Socially, because our losses are so great that the physique of the next generation must depend largely upon the continence of the young men of to day The subject, as you know, has already arrested the public attention in a remarkable manner, and henceforward you will be expected to give satisfactory reasons against the practice of fornication

If you ask me why I should lecture to you on so distasteful a subject I should reply, as the Lord John answered the Queen in that Italian Guazzo "An old, a grave, discreet man is fittest to discourse on such matters because he hath likely more experience, observed more, hath a more staid judgment, can better discern, resolve, discuss, advise, give better cautions and more solid precepts, better inform his auditors and by reason of his riper years sooner divert them" And that short excuse of Mercerus shall be mine "Si male locata est opera scribendo, ne ipsi locent in legendo" ("If I have spent my time ill to write, let them not be so idle as to read") But I am persuaded it is not so ill spent I ought not to excuse or repent myself of this subject on which many grave and worthy men have written whole volumes

I may say at the outset that the moral aspect of the question does not concern us directly and may safely be left in better hands than mine I would express my belief, however, that our present standard of sexual morality is much too low, although there is some evidence that it is improving with the spread of education To day at any rate I am concerned with the medical and eugenic sides of the question

THE PHYSIOLOGICAL ASPECT

We may start at once with the broad statement that fornication is absolutely unnecessary There is a widespread belief amongst many classes that sexual connexion is necessary for a young and healthy man Such a belief is physiologically incorrect It no more represents the truth than that other belief which long held sway, but is now fortunately exploded that no man could attain a healthy old age unless he "purged his reins and cleared his head by getting drunk at least once a month some said every fortnight Both suggestions originated with egotistic hedonists and were promulgated by those who were glad of an excuse to cloak their vices

Virility depends amongst other things upon the internal secretion of the testes which as you well know, is produced continuously, is reabsorbed into the blood, and is not excreted The semen or external secretion of the testes is formed in a manner similar to many other glandular secretions in the body It is stored up in the vesiculæ seminales, and if it is not required a great part is reabsorbed whilst the rest is excreted from time to time by a purely involuntary process The whole is a reflex action, and it is no more necessary to stimulate the vesiculæ seminales to contract than it is necessary to hawk and spit when saliva fills the mouth Occasional nocturnal emissions are natural and unavoidable If they are too numerous it is an indication that the man is thinking too much about sexual matters or that his general health is disturbed Nature is quite able to take care of herself in regard to the seminal secretion, and it is wholly unnecessary to resort to fornication to help her

You may safely assure any young man who asks your advice that fornication is a dangerous and unnecessary expedient, and you may further warn him that if he once begins it will be extremely hard to become continent again, whilst if he remains chaste the sexual appetite will remain dormant without in any way deteriorating In the end, too, he will be healthier, he will be more likely to marry for he will have a better opinion of women, he will have a happier married life, healthier children, and he will be free from the remote and often painful effects of those diseases which are known as venereal You may also assure him that fornication is no more an evidence of manliness than is smoking or drinking All three are the false ideals of youth and a bygone age Who of you did not think at school that it was a manly thing to smoke? Did not the lower classes endeavour to express the summum bonum of aristocracy when they said that such a one was "as drunk as a lord" Lapse of time has changed our ideals in both cases, and we know that manliness connotes very different attributes

Promiscuous intercourse degrades immediately by causing loss of self respect "Post coitum omne animal triste,' said Aristotle, and the more introspective pass through a purgatory which is out of all proportion to the satisfaction they have gained, the pain being partly regret for their folly and partly fear for the possible consequences This loss of self respect would be bad for the community if it was limited to the man, it is made ten times worse by the fact that it is shared by the woman and often drives her to very desperate courses Much has been written about the mentality of the prostitute, public as well as clandestine and it is agreed that whatever her physical attributes may be she differs widely from the average type of woman in the race to which she belongs In Europe she is often a sexual degenerate in spite of the highest social gifts, or she may be the most degraded of all animals like the woman who earned £30 a week by receiving 40–50 men a day Consort with such persons does much to destroy happiness in subsequent married life even if the husband has remained free from disease The sexual instincts of the prostitute are directed towards the gratification of lust or the acquisition of money those of the healthy minded woman so far as they exist at all before marriage, are towards motherhood the means being secondary and ill understood Indeed they were well expressed by the little girl who when asked what she was going to do when she grew up replied boldly that she was going to get married, have a baby, and then

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[illegible]

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Y —Miss May Yates Lond ; Dr A. M Fernandez de Ybarra, Havana.

Letters, each with enclosure, are also acknowledged from—

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more adequately but with less blasphemy. There is very little doubt that with more to talk about and a wider range of interests the dirty story will suffer a similar eclipse. Pornographic literature already finds fewer adherents, whilst, thanks to the admirable writings of such men as Anatole France, the cult of the old fashioned "French novel" and its "realistic" successor is dwindling rather than extending.

Were I asked in what way the State could best help to stop the spread of venereal disease I should answer without hesitation, Put the law against solicitation into active operation. At present it is a dead letter, and the streets of our large towns are a disgrace to the community. The women who frequent them must be well known to the police, for they may be seen day after day in the same streets. They will certainly continue their trade, but the men will then have to look for them, and many a youth will be protected from temptation. Knowledge, too is a powerful help. The physiology of the generative system is no more a mystery than the physiology of digestion or respiration, and there is no reason why it should not be explained in a scientific manner as a part of a course of biology. Let the women teach the women—there are plenty of well taught women nowadays who are fully equal to the task—and let the men instruct the men. The teachers themselves must be carefully chosen not only for their knowledge but for their general attainments, which should be sufficient to put their facts in proper focus.

TREATMENT

If, as unfortunately happens only too often, a man finds that he is infected with venereal disease, he should be taught that in his own interests as well as in those of the State he ought to go at once to a doctor. Every day that he delays lengthens the duration of his cure and may even prevent it entirely. Quacks and unqualified practitioners should be carefully avoided. They may have empirical knowledge, but they lack the scientific basis which every qualified man must have in some degree. Their object is to obtain as much money as possible, and they consequently prolong the cure and work upon the fears of their unfortunate clients, indeed, of all quacks the unqualified specialist in the treatment of venereal diseases has the worst reputation. The doctor, on his side, must not assume a repellent attitude. It is his business to cure, not to moralise, and to remember that the diseases run on the same lines as any other infective disorder. He must be especially careful to make a correct diagnosis especially in syphilis, where immediate treatment alone holds out a prospect of cure. For this purpose he must avail himself of scientific tests and must not rely solely upon clinical diagnosis. He should warn his patient from the outset of the particular dangers which are likely to arise and of the manner in which the diseases are spread. Above all he must point out the necessity for patience, since it is only by a prolonged course of treatment that a real cure can be effected. We have now long passed the stage when the disappearance of symptoms and signs was thought to be identical with eradication of the disease, and we have learnt that the worst effects have followed a conscientious but insufficient treatment. By these means you will gain the confidence of the patient and when you have gained his confidence the battle is half won. He will follow your advice and if he has come early enough you can accompany him well on the road to complete cure.

THE BLACK (PIGMENTED) APPENDIX[1]

BY WILLIAM HENRY BATTLE, F R C.S ENG,

SURGEON TO ST THOMAS'S HOSPITAL.

IN THE LANCET of July 19th, 1913, p 135,[2] I described a series of four cases in which a very unusual amount of pigmentation of the mucous membrane of the appendix was found after its removal for disease. Three of them were sketched; and I am able to produce the illustrations for the inspection of the section, the fourth appendix was mounted by Mr Shattock and is also shown. It differs from the others in the fact that there has been a great destruction of tissue towards the distal extremity.

With the exception of the case of extensive pigmentation of the large bowel, due to lead deposit, described by Dr G Newton Pitt,[3] I did not know of any similar appearance at that time. Recently, however, the subject of pigmentation of the bowel has been referred to by Sir J Bland-Sutton,[4] who found a very blackened state of the mucous membrane of the bowel in a woman suffering from obstruction due to cancerous growth of the large intestine. The cause of this pigmentation could not be ascertained, for the patient recovered. He refers in that address to an article by Dr Ludwig Pick[5] (which had escaped my notice) in which Dr Pick refers to two cases of pigmentation found in English publications (besides that by Dr Pitt), both of which were caused by the deposit of mercury in the tissues. 1. The case (described by Dr C J Williams) of a woman, aged 74[6], who had taken mercury regularly for 43 years. Here the submucous tissue of the large intestine from the ileo cæcal valve to the rectum was mottled like the skin on a toad's back. The patient had rectal prolapse before death; and the mucous membrane was seen to be deeply pigmented when extruded. 2. The case of a man, aged 64,[7] who had been under treatment for syphilis. He presented a similar pigmentation of the large bowel dependent on a deposit of mercury in the mucous membrane. In this case, which was described by Dr H D Rolleston, there was no evidence of pigmentation during life.

The contribution to the subject which I wish to make now consists of two cases of marked pigmentation of the appendix met with in women of different ages and circumstances. Their residences were far apart in Berkshire and Worcestershire, whilst of the four other instances already published three came from inside London and one from Kent. The cause of the phenomena must therefore be very widely distributed.

CASE 1.—The patient was an unmarried lady aged 48, who was seen in consultation with Dr L M Guilding on April 30th 1914. The medical history was a long one. Since the age of 13 she had been delicate and for years past constantly under medical treatment. Since the age of 21 she had always suffered from constipation, and the bowels had not acted without the use of purgatives. She had complained of indigestion for years, sometimes worse and sometimes better, of late years she had of necessity been very careful as regards her diet. In 1899 the cervix uteri was divided for dysmenorrhœa. In 1900 she had symptoms of kill her husband that she might have the child all to herself

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[1] A paper read before the Surgical Section of the Royal Society of Medicine Jan 5th 1915.

[2] The Black (Pigmented) Appendix Battle.

[3] Pathological Society's Transactions London 1891 p 109.

[4] Presidential Address of the Medical Society of London THE LANCET Oct 17th 1914 p [illegible].

[5] Verhandlungen der Berliner Medicinischen Gesellschaft 1911 p 181.

[6] C J Williams Pathological Society's Transactions London 1877, p 3.

[7] H D Rolleston ibid 1892 p [illegible].

Venereal Disease

If these were the only arguments against fornication we might well be contented to deal with the whole matter privately, as we have to deal with other filthy practices which merely concern the individual We should be neither better nor worse off than in the pagan times when philosophers wrote and argued against it in vain There is now an added danger of catching and transmitting disease This danger is very great, for in the year 1908 no less than 1959 prostitutes examined in Berlin were found to be diseased out of a total of 2944, whilst in Cologne in the same year only 247 were found healthy out of 600 Even the unaffected women were only relatively healthy and were not capable of infecting at the particular time they were examined Sooner or later all become diseased A Wassermann test proves that prostitutes are immune to syphilis because they already have it, and they are sterile as a result of inflammatory conditions associated with gonorrhœal infection Every man, therefore, who practises fornication runs a risk almost amounting to a certainty that he will get gonorrhœa or syphilis or both. Either or both diseases may follow a single lapse, and may be productive of life-long misery to himself, to the woman who is unfortunate enough to become his wife, and to the children of the marriage Through him the State, too, may suffer a grievous injury

Of the three diseases which can be caught from fornication—viz., soft sores, gonorrhœa, and syphilis—I have told you repeatedly that soft sores are neither more nor less than poisoned wounds and must be treated as such Their danger lies in the fact that they may be associated with a coincident syphilitic infection, masking its existence and causing active treatment to be unduly postponed

Gonorrhœa is a more serious disease than it is usually supposed to be It is serious to the individual during the acute stage by incapacitating him from work, later by crippling him from joint disease It is very difficult to cure, and if a stricture results it may shorten his life by causing retention of urine, cystitis, and disease of the kidneys Because of the difficulty of cure a man may give the disease to any healthy woman he marries She may thus become a permanent invalid, and may remain sterile as a result of the inflammation from which she has suffered, although in many cases the sterility is caused by the double epididymitis of which the husband has been the subject Children born whilst the mother is still uncured frequently have such a severe purulent inflammation of the eyes that the sight is impaired or may be completely lost The State, therefore, is greatly damaged by the gonococcal infection of the family, it loses the services of two generations either wholly or in part from a cause which is easily preventable

Syphilis is even more harmful both to the family and the State It often paralyses and lands its victims in an asylum with the most incurable of mental disorders, it predisposes to tubercle and cancer, and it shortens the expectation of life Unfortunately, it does not render the man sterile, as often happens in gonorrhœa, and the disease is transmitted to the children They may either be born dead, or those who survive may suffer from serious illnesses which leave them with lasting evidence of their father's incontinence as well as a depression of their natural physical and mental activity Syphilis has the farther disadvantage as a disease because there are periods when it is acutely infectious, and during these stages a man may infect his nearest and best friends in the most innocent manner, as by kissing or using in common a pipe or a glass

It must be clearly understood that these diseases are not contracted only from mercenary prostitutes—the ordinary street walker They are equally, or perhaps more, likely to be obtained from the very dangerous class who are known as clandestine, or occasional, harlots These women are much more ignorant in sexual matters than their more hardened sisters A gonococcal infection to them is merely an attack of "the whites," and the initial manifestation of syphilis is only "a boil" They do not know that they are ill, and they do not consequently seek advice to be cured

The Question of Prevention

The risks attending fornication, therefore, are very great, but they can be absolutely avoided by continence Much rests with the individual, though he ought to be helped by the State, whilst as members of the medical profession I conceive it to be part of our duty both to the individual and to the State to teach the elements of sexual physiology, and by so doing to diminish the diseases which cause so much damage

A healthy minded man does not become unchaste without a struggle, and when he has been warned of the risks he usually has the sense to look forward and not imperil his future health and happiness His natural modesty comes to his assistance, and he neither goes out of his way to look for a prostitute nor does he deliberately endeavour to seduce a virgin Some day, however he takes a little too much alcohol He does no get drunk, but he takes enough to lower his self control He is "picked up," as he will tell you by some loose woman on his way home, and from that evening he dates his downfall The temptation acts with especial force at the presen time, when the young men of the country ar separated from the good influences of home, and ar herded in camps with many thousands of companions of their own age The result is already beginning to show itself, and in some places more than in others It behoves everyone, therefore, who is in a position of authority to set an example of probity in sexual matters They should remember that venereal disease and the illnesses which result directly from them are very common causes of invaliding men out of the army, that at the present time every soldier is needed in the best of health and that it is of vital importance that preventable wastage should be prevented

It goes without saying that a young man who is happily engaged to marry a sensible girl of his own age and station in life is not so likely to yield to temptation as his less fortunate comrade He has the satisfaction of thinking that if she is willing to wait for him he can exercise equal restraint It is needless, too, to point out that the less a man concentrates his thoughts upon his sexual appetite the less it will trouble him The time is fast coming when it will be thought as bad form to tell a "smutty" story as it now is to swear We have it on excellent authority that our army swore terribly in Flanders, and our fathers have told us how prevalent was the habit even as late as the Regency period and the early Victorian days in England The spread of education, bringing with it a larger vocabulary, has enabled us to express our feelings the chemist for examination, but the result of examination for iron is negative, there appears to be very little in them

The question of the influence of roller milling in the causation of appendicitis is one which has interested me for some years Facts are accumulating to show that it is a serious factor, but this is not the occasion on which to consider it There is, however, very little doubt that in addition to the small sharp particles which result from the disintegration of the fluting of the rollers, and which sometimes cause localised ulceration of the mucous membrane, there is a considerable amount of "iron dust," which is given out in such quantities that in certain individuals it can produce an actual blackening of the mucous membrane over extensive portions of the large bowel This pigmentation is more extensive than could be produced by blood extravasations, and is more uniformly diffused.

Harley-street W

THE THEORY OF SALICYLATE THERAPY IN RHEUMATIC INFECTION

BY REGINALD MILLER M D LOND, M R C P LOND,

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ANY theory formulated to explain the action of the salicylate group of drugs in acute rheumatism has one great difficulty to overcome It is briefly this In some rheumatic manifestations, notably arthritis, salicylate is so successful in its action as to suggest strongly that the drug has an inhibitory power over the activity of the infecting organism, while in others, particularly chorea and carditis, such a power is by no means obvious It is this so called "selective" action of salicylate on the various manifestations of rheumatism which is responsible for the variety of views held upon its method of action

In a recent paper[1] I studied some of the practical objections which have been urged against the use of salicylate as a "specific" remedy in acute rheumatism, but purposely refrained from discussing the truth of the theory on which it is based Here it is intended to support this "specific' theory, using the word ' specific" as implying that the drug has the power of diminishing the activity of the rheumatic infection, the argument adopted being that this theory becomes acceptable when, but only when, the method by which the rheumatic infection produces its various results is properly understood

Modus Operandi of Rheumatic Infection

The modern view of rheumatism is that it is due to an infection by a particular type of micro organism This can be supported on strong clinical grounds as well as by the results of bacteriological research which are still unaccepted by some authorities How this infecting organism produces its results has been made clear by the histo pathological researches of Coombs,[2] supplementing earlier work of Poynton and Paine and others He finds evidence that rheumatic infection is a bacteriæmia which results in three sets of tissue changes 1 Interstitial inflammatory changes of a peculiar and characteristic type in the organs attacked by the infection 2 Parenchymatous toxic changes from toxins produced from foci of infection either local or distant These changes reach their maximum significance where important tissues, such as the cerebral cortex or myocardium, are involved 3 Sclerotic changes connected with healing processes

Modus Operandi of Salicylate Treatment

It is evident that a drug possessed of the power of diminishing the activity of the rheumatic infection could not control these three sets of tissue changes with equal success 1 The inflammatory processes should be well under the control of an antirheumatic drug Assuming that the foci of infection were open to the drug circulating, its only limitations would be concerned with the virulence of the infection compared with the amount of the drug which could operate 2 The toxic parenchymatous changes, on the other hand, could not be under the direct control of the drug All that such a remedy could do here would be to cut short the supply of toxin at its sources, and thus prevent further damage 3 The sclerotic changes obviously cannot be influenced by an antirheumatic drug, and need not be further discussed

Clinically, then, salicylate, if possessed of a specific antirheumatic power, would control such rheumatic manifestations and symptoms as are dependent upon active inflammatory processes, but could only indirectly influence those dependent upon toxic parenchymatous changes I must now review the chief rheumatic manifestations, attempting to show that their reaction to salicylate conforms to this theory

Arthritis—The histological changes here are those of acute inflammation of the infected tissues within and around the joint Toxic parenchymatous changes are of minimal importance here, as there are no "noble tissues" whose degeneration might produce symptoms Under salicylate treatment there is a rapid subsidence of the local signs of inflammation together with a fall in general temperature This last is of special importance, particularly when it is remembered that such a fall in temperature is not produced so markedly nor so constantly in any other infection, and therefore cannot be due merely to the slight general vaso dilatation caused by salicylate A fall in temperature, occurring in conjunction with local amelioration and general constitutional improvement, is generally held to be the best evidence of diminished bacterial activity, and it is certainly difficult to account for the success of salicylate in the treatment of rheumatic arthritis except by allowing a specific antirheumatic action to the drug Another result confirms this view—namely, the way in which salicylate puts a stop to the development of arthritis in other joints which is so characteristic of the untreated infection

There is one limitation to the successful action of salicylate on rheumatic arthritis—that concerned with large effusions These may remain for a week or so before disappearing, even though the temperature has fallen and the other local signs have cleared up The fluid obtained, however, from a joint at this stage will be found not only to be sterile but to show practically no cells It shows, that is to say, no signs of bacterial activity, and it is evident that no antirheumatic drug could have an action upon such an effusion Its absorption is necessarily and mainly a matter of time

The action of salicylate on rheumatic arthritis shows well how the drug successfully controls such symptoms as depend upon bacterial activity, and inflammation of subacute character which were said to have had their origin in the right ovary and broad ligament Ever since the operation in 1899 she had had occasional attacks of pain and tenderness in the right iliac fossa, during which there had sometimes been vomiting In some of these attacks the pain was more in the upper part of the abdomen In 1904 she had an attack which was described as acute ovaritis on the right side, and had felt "uncomfortable" on that side since In 1911 she had an attack of "neuritis" in the right arm, which lasted nearly the whole year She was also under treatment for colitis and a toxic condition towards the end of that year and this was resumed for varying periods during 1912 and 1913, finishing in March, 1914 Before 1914 the right iliac fossa was not much in evidence, after the beginning of that year she had four attacks of pain and tenderness in that region, one of them being severe and accompanied with a rise of temperature and other signs of inflammation, but without vomiting She had become thin, sallow, and pale with a persisting tenderness over the appendix region The diagnosis previously given was that of a chronic appendicitis with probable ileal kink and chronic intestinal stasis

An examination by the X rays after a bismuth meal had been carried out and the following points were established 1 A delay in the passage of the bismuth through the cæcum 2 The ascending colon and transverse colon were distinctly dropped, and there was considerable stasis in the passage of the bismuth all along the large bowel 3 Considerable loss of tone in the rectum Here the bismuth lodged and distended the part, having to be evacuated by means of enemata

When I saw her in April I agreed with the diagnosis of subacute inflammation of the appendix, with want of muscular power in the large bowel and rectum She was rather feeble delicate, and "tired looking" The abdomen was slightly distended, generally tympanitic, and tenderness was complained of on examination of the right iliac fossa Operation was performed on May 2nd 1914 The appendix was about 3¼ inches long, slightly adherent at the tip The meso-appendix was shortened at one point, and there were chronic catarrhal changes with submucous fibrosis The mucous membrane was of a uniform brownish black colour, due to the deposit of pigment From the abrupt termination of this at the place where the appendix had been cut off it was quite evident that a similar condition extended into the cæcum The intestine did not give any evidence of this on inspection The right ovary was atrophied and the tube normal A membrane united the transverse and ascending portion of the colon at the hepatic flexure, making a somewhat sharp and fixed bend It appears to have been derived from the right margin of the omentum This membrane was divided, and a few vessels in it were ligatured. The cæcum was somewhat larger than usual with a tendency to drop towards the pelvis The ovary and tube were removed Recovery was uneventful

CASE 2 —This case was also met with last year On May 17th, 1914, I operated for Dr A. A Brockatt, of Malvern, on a young unmarried lady, aged 27, who gave the following history Five months before she had had an attack of appendicitis which lasted five days Two months before she had suffered from a second attack which lasted seven days There had been some occasional pain between the attacks but otherwise she had not been ill She always suffered from constipation Nothing abnormal was felt on examination, but there was some tenderness in the right iliac fossa and she stated that pain had been present there the previous evening The temperature was normal The appendix when removed was found to be 5½ inches in length bulbous and red at the top from recent inflammation The meso appendix was shortened at one point The mucous membrane was pigmented the shade deepening in intensity to the line of section where it was quite black. There was submucous fibrosis No adhesions were present No other abnormal condition was found This appendix was lost

These two cases, together with those already published, make a series of six which present some common features In the first place there was an extensive brownish black pigmentation evidently not limited to the appendix but spreading an unknown distance into the large bowel The patients were all of the female sex (aged 27, 30, 32, 43, 48, and 48) and in each there was a history of constipation of long standing, which amounted to intestinal stasis in more than one of them according to their medical attendants It would appear as if in some the difficulty with the bowels had led to a secondary inflammatory affection of the appendix Operation in each was for the relief of pain caused by this The pigmentation was found on examination of the removed appendix, and in only one was there any appearance of darkening of the bowel as examined from the operation incision. Microscopical examination showed the deposit to be both in and between the cells of the mucous membrane (Shattock)

Chemical analysis of the first three specimens by Mr Le Sueur showed that the pigmentation was produced by a deposit of iron, the exact combination not being defined owing to the small quantity of material available There was no bismuth, lead, or mercury present In only one patient was there any history of the taking of iron medicine, and she had been given the compound syrup of the hypophosphites (¾ gm ferri hypophosph) There is very little, if any, tendency to pigmentation of intestine by iron given in the form of medicine, otherwise the condition would be frequently met with in the post mortem room And we should have had many references to it in our medical publications

From the fact that I have met with these six cases within a comparatively short period there is a probability that it is more common and widely spread than we have suspected The question arises as to the source from which the iron has been obtained There can, I think, be very little doubt that it is derived from wheat flour prepared by the iron rollers which are used in the modern process of milling These rollers are fluted, and the fluting wears down somewhat quickly, and although measures are taken to prevent iron particles from entering the mill none are taken to remove the iron dust and small particles which come away as a result of the rubbing of one roller against the other The method of grinding with iron rollers was once applied to the manufacture of light coloured pigments for painting walls, but had to be given up because of the brown patches which appeared on the walls to which such paint was applied The rollers wear away more quickly in the grinding of wheat, especially that grown abroad, which is harder than ours, than in the preparation of pigment Chemical examination of a quantity of best flour has shown the presence of an abnormal amount of iron, although none could be separated from the flour by means of a *magnet*

I have already alluded to the fact that no measures are taken to extract the iron from flour prepared by these rollers, therefore there is a considerable quantity being taken into the alimentary canal by the population at large It is very probable that the increased amount of troublesome constipation of recent years, which in some cases is described as "stasis" and ascribed to a kink of the bowel, is due to this cause, kinks possessing a clinical value are in my experience very rare It would be interesting to know from the experience of the physicians whether anæmia is any less common than it used to be

I think that it may be possible that fæcal concretions are helped to form by this ingredient of flour, but it is not possible to say much on the subject I have submitted several concretions to an increase in the daily dose of salicylate to, say, 100–120 gr.

In more severe cardiac cases, where there is evidence of advanced myocardial degeneration, a different form of temperature is often seen. It is characterised by being very irregular, usually keeping below 100°. How far this is dependent upon bacterial activity it is difficult to determine; possibly in many cases it is due rather to the absorption of toxic material from degenerated myocardial cells. At all events, salicylate has seldom any beneficial action here even when used without causing symptoms of intolerance, which are so quickly aroused in cases of this type.

In practice I have come to lay stress upon the regularity or "saw-like" feature of the temperature. Where this is absent and the temperature is seldom above 100°, I think severe cardiac cases are little benefited by salicylate, and may easily be harmed by it if nausea or vomiting be induced. But where the temperature is persistently raised at night, even though the evening temperature is quite low, I prefer to continue with salicylate if possible, as I think that under these circumstances there is some smouldering activity of the infection present. My chief reasons for this conclusion are (a) that this type of temperature usually develops from a similar saw-like temperature of higher grade; (b) that relapses of pyrexia are frequent; and (c) that the patient's improvement is seldom satisfactory until this type of temperature ceases.

In some instances rheumatic hyperpyrexia can be reduced by salicylate, but here it is evident that we are dealing with an extremely virulent infection and with usually but little time in which to attempt to control it.

Taken as a whole, therefore, and with due allowance for the difficulties connected with parenchymatous cell changes, the action of salicylate upon the pyrexia of the rheumatic infection is in accordance with the theory that the drug has the power of diminishing the activity of the infection.

Tonsillitis.—Acute rheumatic tonsillitis appears to react well to salicylate treatment. The chronic forms, in which the organisms are buried deeply in the glandular crypts, cannot be expected to be much under the control of any drug circulating in the blood stream. This is of importance, since histological evidence suggests that in human rheumatism there are repeated reinfections of the blood. If these come, as is commonly assumed, from the tonsils, it is evident that an antirheumatic drug, if it could not destroy the organisms at their source, could only do so after they had gained access to the blood stream. This perhaps explains some of the relapses that may occur in patients recently under salicylate treatment or while the drug is being given in small doses.

Other manifestations.—Acute rheumatic nephritis and bursitis, both probably due to local infection, react well in my experience to salicylate. Rheumatic anaemia, on the other hand, is a toxic change and can be only indirectly benefited by the drug. It is noteworthy that this state is not improved by the administration of iron until the activity of the rheumatic infection is at an end. True rheumatic rashes are so irregular in their appearance and disappearance that the effect of salicylate upon them is hard to judge. Erythema nodosum and the so-called peliosis rheumatica I do not regard as truly rheumatic. Rheumatoid arthritis is excluded from the rheumatic group by many authorities, with whom I am inclined to agree.

Other Theories of Salicylate Action.

The "specific" theory of salicylate action in rheumatism which I have supported above is probably widely held, although possibly not always with a just appreciation of exactly what it entails. On the other hand, it is well known that some of those most interested in rheumatic problems are strongly opposed to this view, and it is therefore necessary to examine briefly opposing theories.

Antitoxic theory.—A. E. Garrod[4] has suggested that salicylate possibly possesses the power of neutralising rheumatic toxin rather than of attacking the infecting agent. Thus he writes:—

> Can it be that they [the salicylates] exercise an antitoxic rather than a bactericidal action? It must be granted, as Professor Stockman has pointed out to me, such a conception finds no support in the established facts of pharmacology, and that no parallel example can be quoted of a neutralising effect of a simple chemical compound, administered as a drug, upon bacterial toxins; but neither can any other instance be adduced of such selective influence of a drug upon certain of the manifestations of a disease of bacterial origin.

F. J. Poynton[5] seems to favour a somewhat similar view, more elaborated. Thus:—

> I believe the bacterial poisons are so subtle that they vary with the tissues in which the lesions occur, and I think it probable that salicylates may possibly be specific to some of them and not to others.

In addition to the difficulty already quoted by Garrod, an important argument against the truth of this antitoxic theory lies in the fact that it is diametrically opposed to the evidence afforded by the histo-pathology of rheumatism. As I have attempted to show, it is those symptoms which are dependent upon inflammatory processes that are well controlled by salicylate, while those due to toxic parenchymatous changes are comparatively unbenefited. It would therefore seem that a bactericidal rather than an antitoxic action would best explain the "selective influence" of the drug.

Partial specific theory.—This view, for which I cannot find a more satisfactory name than that given, is widely held. A couple of quotations will demonstrate the theory. A. F. Voelcker[6] writes: "We are not justified in regarding the salicylates as a specific for any and every rheumatic affection." Again, A. Abrams writes: "Salicylates have a specific action only on the articular manifestations."

We must here pause to remind ourselves that the term "specific" may be applied to a remedy in two senses. It may be employed as meaning merely "peculiarly efficacious." Used in this sense, although the above statements become defensible, they are of little theoretical interest since no explanation of the drug's action is attempted. Employed, however, in connexion with a remedy for an infective disease, the term "specific" is usually meant to express that the drug has a bactericidal power of some sort over the infecting agent. Used with this meaning any "partial specific" view becomes full of difficulty. For if the modern view of rheumatism as a definite infection attacking various organs of the body be correct, it is clearly illogical to presume a bactericidal action on the organisms attacking one part of the body and to deny it to those producing similar lesions elsewhere. The only explanation of such a selective action would be that in some organs the foci of inflammation become closed (as in tuberculosis) and thus unapproachable to a circulating drug, and of such a process there is no histological evidence; indeed, the inflammatory foci appear closely connected with dilated vessels.

fails to control such as persist after all signs of such activity have passed. The antirheumatic action of salicylate is seen at its best in rheumatic arthritis because it is here that the symptoms due to inflammatory change are at a maximum, and those due to toxic parenchymatous change at a minimum.

Chorea.—In chorea we have histological evidence of two sets of changes in the central nervous system (*a*) perivascular inflammatory changes from the presence of infecting organisms, and (*b*) toxic changes in the cells of the cerebral cortex. Before discussing the action of salicylate we must consider how far each of these sets of changes is responsible for symptoms in cases of chorea.

In certain acute febrile cases it is clear that we are dealing with an actual infection of the central nervous system. Poynton and Holmes[3] have produced post mortem evidence of this, which has been corroborated by Coombs. It is also confirmed in some non fatal cases by the discovery of streptococci and cells in the cerebro-spinal fluid during the acute stage of the disease. On the other hand, it is probable that many slight cases of chorea are due to a rheumatic cerebral toxæmia rather than a cerebral infection. Of much more importance, however, is the recognition of the fact that the nervous symptoms of chorea may persist long after all rheumatic bacterial activity has ceased either in the brain or elsewhere, being dependent upon the damage already done by the infection to the cerebral cortex. That this is the case is shown by the normal (or subnormal) temperature and the normal cerebro spinal fluid in many cases still showing the nervous symptoms of chorea.

No antirheumatic drug, therefore, can put an end to choreic movements. The most it can do is to diminish the activity of the infection, relieving such symptoms as are directly dependent upon such activity, and thus to limit the supply of toxin which damages the cerebral cells. These latter are then in a position to undergo repair, which when accomplished relieves the nervous symptoms. The fact, then, that salicylate cannot "cure chorea" in no way invalidates the theory that it has the power of diminishing the activity of the rheumatic infection. Indeed, the generally accepted view that salicylate is useful in chorea where signs of active infection (fever, pains, arthritis) are present is in accordance with this theory. When these have ceased salicylate, no matter in what large doses, can do no more to check movements, and at this stage treatment should aim at restoring the structure and function of the cerebral cells by rest, feeding, re education, and such measures.

Carditis.—Here again we find two sets of tissue changes inflammatory changes in the valves, pericardium, and interstitial tissue of the heart muscle, with toxic parenchymatous changes in the myocardium. Of these it is now generally recognised that the latter are productive of most of the ordinary cardiac symptoms, the inflammatory changes producing such symptoms as fever, friction, and possibly certain murmurs. The usefulness of salicylate, however strongly antirheumatic its action may be will therefore be limited in carditis as in chorea. We cannot expect it to relieve the symptoms due to myocardial degeneration any more than we can expect it to remove the signs of mitral stenosis, on the other hand, we must expect evidence of its power to diminish the activity of the infection in the heart and the symptoms dependent upon it.

Such evidence will be forthcoming to anyone who has used salicylate to test this particular point. But very convincing cases are not numerous, because in children most cases of acute carditis show evidence of severe toxic myocardial degeneration, and in adults many are associated with a severe failure of myocardial power. Perhaps the most striking cases are seen in adults who, with a recent history of rheumatic arthritis, show fever, a quickened pulse, and a mitral bruit without much cardiac dilatation. In such cases, which appear to be examples of acute carditis in which the inflammation is acute but the parenchymatous changes slight, salicylate successfully reduces the temperature to normal and puts an end to the infective process. Similar results may sometimes be seen in first attacks of endo or pericarditis in children where there is no considerable dilatation of the heart. Even where the myocardium is severely degenerated the patient's temperature will often react to salicylate treatment if well tolerated, but this will not be associated with any immediate relief to the symptoms of cardiac dilatation.

This inability to cope with the myocardial degeneration and the symptoms thereof constitutes the first limitation to the practical use of salicylate in cardiac rheumatism. But there is a second, again associated with the state of the heart muscle. I have shown elsewhere[1] that the amount of vomiting produced under salicylate treatment depends much more upon the state of the heart than upon the dose of the drug employed. Where the heart is only slightly affected vomiting is only troublesome in 4 per cent of the cases, and now that the proper methods of administration are better understood practically should not occur. On the other hand, where the heart is much affected, particularly where it is severely dilated, troublesome vomiting occurs in about 30 per cent of the cases, and in a large proportion of these is directly attributable to the drug, even though very small doses are employed.

Nodules.—These consist of macroscopic collections of inflammatory products, probably the results of bacterial emboli in end arteries. We cannot tell how long a nodule may be expected to remain, so that we cannot tell if salicylate directly hastens their absorption. In investigating the theory of salicylate action the matter of rheumatic nodules does not assist us. All that one can say is that if salicylate can put an end to rheumatic activity it is probably doing all that is possible to hasten the disappearance of nodules. I have elsewhere[1] discussed nodule formation as a rheumatic relapse under salicylate treatment.

Pyrexia.—As in other infections the temperature in rheumatism is a most important index to the activity of the infection. The fall in the temperature in the rheumatic arthritis of adults, coinciding as it does with marked local and general improvement, gives the strongest support to the specific claim of salicylate.

On the other hand, there is often seen, particularly in cases of cardiac rheumatism, a "saw like" temperature with about 2° difference between the morning and evening readings, the latter reaching 101°–2° F. This is sometimes referred to as the fever of the "rheumatic state" but it denotes, I am convinced, some activity on the part of the infection. It is often stated that salicylate does not control this type of rheumatic pyrexia, but in my experience it is usually satisfactorily modified by which the suction force can be varied from an equivalent of 5 to 100 lb. air pressure.

The vascularity of the larynx is favourable to the process of dry cupping, as the vessels enter and pass out at definite sites. There are two chief and two subsidiary sources of arterial supply, and the veins and lymphatics accompany the arteries almost exclusively. The box of the larynx, chiefly made up of the two wings of the thyroid cartilage, has no vessels perforating its immediate sides, but they pass into it above and below. Above the superior laryngeal arteries pierce symmetrically the thyro-hyoid membranes, being branches of the superior thyroid arteries. Having entered the interior of the larynx they spread out like the roots of a plant in the submucous tissue of the inner laryngeal lining. These branches are mostly directed to the posterior aspect, and in the lower half of the area of the thyroid cartilage meet similar ramifying branches coursing up from below—viz., those of the inferior laryngeal artery, which has similarly pierced a membrane, the crico-thyroid. The inferior laryngeal artery is a branch of the inferior thyroid and also has its intralaryngeal branches directed to the posterior part of the lining of the larynx. While the superior laryngeal veins follow closely the same artery, the inferior laryngeal veins chiefly join the more centrally situated inferior thyroid veins. The subsidiary vessels are the crico-thyroid arteries, one on each side, which spread inwards from the superior thyroid arteries as they pass down to the thyroid body. These two small vessels run in horizontally from each side on the crico-thyroid membrane and meet and anastomose in the middle line. Branches pass from them through this membrane and spread out freely in the lining of the anterior aspect of the larynx. There is in this manner a special blood supply given to the anterior part of the lower region of the larynx which compensates for the large distribution of vessels at the posterior part, to which the superior and inferior laryngeal arteries are mainly directed. The lymphatic vessels similarly pass through the membranes above and below the thyroid cartilage, following the blood-vessels more or less closely. Those accompanying the superior artery go into the superior deep cervical lymphatic groups of glands, while those with the inferior pass to the inferior deep cervical glands. There are other lymphatic vessels which pierce the crico-thyroid membranes directly and join small lymphatic glands lying on the surface of this membrane. No vessels, either arterial, venous, or lymphatic, pierce the wings of the thyroid cartilage.

The anatomical arrangement of these arterial, venous, and lymphatic vessels has an important bearing on the application of dry cupping. It indicates that for the most effective relief of vascular and œdematous congestion of the interior of the larynx the cups must be correctly placed anatomically to get the maximum result. The cups should therefore be applied over the posterior half of the thyro-hyoid membrane and over the crico-thyroid membrane both laterally and in front. In this way there can be brought about a lessening of intralaryngeal congestion both by retarding the entrance of blood and by facilitating venous and lymphatic circulation onwards and so relieving venous and lymphatic engorgement.

I append brief notes of four cases.

CASE 1.—The patient, a man of [illegible] the age, was sent to [illegible] complaining of difficulty [illegible] breathing [illegible] marked inspiratory dyspnœa, especially on lying down and on exertion. On inspecting the larynx the vocal cords and their movements were found to be normal, but a subglottic swelling was seen on the left side bulging into the air-passage. There was some tenderness on pressure over the left thyroid cartilage and a fulness filling up the hollow in the lower part of the inferior carotid triangle. He was taken into the hospital at once, as some of the dyspnœa attacks had been so severe that there seemed a likelihood of tracheotomy being required. Dry cupping was used, the cups being placed on the left side over the thyro-hyoid membrane, on the front of the larynx over the crico-thyroid membrane, and lower down over the position of the lateral swelling and at the position of the entrance of the inferior laryngeal artery into the larynx. After the first application he expressed himself as feeling more comfortable, saying that he was breathing more easily and that the sense of suffocation had diminished. He was in the hospital some weeks and learnt to apply the cups exactly and to use the apparatus regularly night and morning for himself. The subglottic swelling became much less prominent, and this seemed to be a result of the cupping. It was subsequently found that Wassermann's reaction was positive and he was put on potassium iodide, when he still further improved.

CASE 2.—The patient, a man aged 22 years, suffering from well-marked laryngeal tuberculosis, came to the hospital complaining of difficulty of breathing and swallowing and of pain in the throat. The epiglottis and vocal cords were seen to be swollen and ulcerated, and the arytenoid apices infiltrated, red, and inflamed. Dry cupping was made use of over the crico-thyroid and the thyro-hyoid membranes on both sides and at the lower and lateral parts of the larynx. The pain was much relieved, and he swallowed a glass of milk with greater ease than he had done for a very long time. The dry cupping is being applied every morning at the hospital, where he is now under treatment.

CASE 3.—A man, aged 32 years, who worked in a dusty warehouse, had contracted a head cold followed by partial loss of voice and marked hoarseness. On inspection the interior of the larynx was seen to be very congested and somewhat swollen over the ventricular bands, the vocal cords being red. Dry cupping was applied over the usual positions with marked improvement of the hoarseness, and the vascularity of the larynx could be seen to be distinctly lessened. After two more applications the voice became normal.

CASE 4.—A young woman, a private patient, was sent on account of loss of voice and pain deep in the throat (larynx). The vocal cords were seen to be much suffused, but approximated well on phonation. Dry cupping having been applied over three positions on each side, the pain ceased and her voice returned. I think that this was a case of catarrhal laryngitis, but there may have been an element of functional aphonia.

When first commencing the treatment it is well to apply it for a minute only at the longest until one observes the effect on the skin, as some patients, having very susceptible skins, are liable to get ecchymosis. Others, as in the case of these just cited, can bear the cups on the skin for quite five minutes without any visible mark being produced and even a reapplication without the skin becoming very deeply reddened at the site of suction. I have now used the cupping method in a considerable number of cases with good result. This treatment might even be useful in such cases as laryngismus stridulus (laryngeal asthma) in young children where there is a spasm of the muscles of the larynx and vascular engorgement. The mucous membrane of the larynx is thin and closely adherent on the true vocal cords but more vascular, thicker, and loosely adherent over the other parts. It therefore quickly becomes congested, swollen, and even œdematous as in acute laryngitis. Dry cupping might be advantageously employed, but I have not yet had an opportunity of trying it under such conditions.

Harley-street, W.

The only possible alternatives to the specific view would appear to be either the "antitoxic theory" already considered or the "non specific theory" to be discussed immediately Poynton, who admits the difficulty, is drawn to both alternatives, but apparently is not well satisfied with either To quote the passage in full[5] —

> I do not dispute that some rheumatic lesions, notably arthritic and muscular pains, are greatly relieved and the temperature is lowered by these drugs, but further than that I am not prepared to go How can such a position as mine be justifiable? I believe the bacterial poisons are so subtle that they vary with the tissues in which the lesions occur, and I think it probable that the salicylates may possibly be specific to some of these poisons and not to others I am even tempted to feel that their specific action upon rheumatic arthritis is perhaps overrated, for I have seen other acute forms of arthritis relieved by them It does not follow, I think, because acute rheumatic arthritis subsides rapidly that it is the salicylates which produce this subsidence though they may relieve the pain

Non specific theory—It might be logically held that salicylate has no power to control the activity of the rheumatic organism wherever displayed Some are drawn to this view, although nowhere can I find it very definitely put forward How far Poynton is prepared to go in this direction has already been shown L G Guthrie[6] may also be quoted —

> Salicylates relieve pain and lower temperature I do not think they cure rheumatism and am sure they do not avert cardiac affection Drugs may palliate but do not cure either rheumatism or chorea

Before such a view can be accepted some explanation of the reaction of rheumatic arthritis to salicylate must be forthcoming, particularly in connexion with the fall of temperature, which, when accompanied by local and general improvement, is usually accepted as strong evidence of a lessening activity on the part of an infection. The only alternative to allowing a specific action to salicylate here would seem to be to deny that the drug acts any more successfully upon rheumatic than on any other form of infective arthritis And this would be against general experience, for, although every one has seen some lowering of the temperature under salicylate in other infective conditions, yet it is generally acknowledged that as regards its degree, constancy, and permanence the fall of temperature in rheumatic arthritis under the drug is peculiar

Chemical Support of Specific Theory

Space will not permit me to do more than refer to Stockman's important article on the Action of Salicylates in Rheumatic Affections,[9] in which he shows that the antirheumatic power of salicylate and chemically allied drugs depends upon the relative positions of the carboxyl and hydroxyl groups He writes —

> The action of salicylic acid in acute rheumatism is undoubtedly specific It is of little or no therapeutical value in other febrile diseases and it exerts no action on the healthy man from which one could infer its action in rheumatic fever But besides clinical evidence the chemical evidence points conclusively in the same direction

Conclusion

That salicylate has the power of diminishing the activity of the rheumatic infecting agent may be taken as the working basis of salicylate therapy in rheumatism, and the drug should be administered with the sole view of controlling the bacterial activity Of this the temperature chart is as accurate an index in rheumatic as in other infections (e g, tuberculosis) Care must be taken to discriminate between symptoms directly due to active rheumatic inflammatory processes and those dependent upon toxic parenchymatous changes which may remain long after all bacterial activity is at an end

Note on dosage.—The temperature chart is the guide to the dose of salicylate to be employed. Used solely with a view to controlling bacterial activity, the effective range of dosage for child or adult is usually from 60 to 120 grains per diem. Less than 1 drachm daily is rarely sufficient, more than 2 drachms need seldom be given. Much larger doses than these have been shown to be safe if properly administered, and if necessary to gain control may be used, but for the most part "massive doses have been administered in cases of chorea in which there was no evidence of bacterial activity remaining

Any dose greater than 100 grains daily should be given, as Dr D B Lees teaches, subdivided into 10 doses in the 24 hours Large infrequent doses should never be given, particularly in children Constipation must be avoided The sodium salicylate should be combined with an equal dose of sodium bicarbonate, I have not found the double quantity of soda necessary in doses of this grade. Vomiting in cases of severe cardiac dilatation may be difficult or impossible to prevent, but in other cases may be avoided for the most part The more serious symptoms of salicylate poisoning (acid intoxication) should nowadays never be allowed to arise

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Harley street, W

DRY CUPPING IN LARYNGEAL AFFECTIONS

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FOR some time I have been using dry cupping of the external surface of the larynx and adjacent area of the neck with very beneficial effect in some laryngeal affections, but I can find no record in laryngeal literature of its employment for this class of disease That dry cupping should not have been used for the relief and amelioration of laryngeal trouble is the more remarkable since it is so readily and so easily applied, and the anatomy of the parts, particularly the blood supply, lends itself advantageously to such treatment

The best and most easily worked apparatus for regular and systematic dry cupping is a suction apparatus (tankless), an American instrument, the agents for which in this country are Messrs Rouse, of Wigmore street There are two sizes of this machine, the No 20, with three cylinders suitable for consulting room work, and the smaller portable one, which I have found quite sufficient and most useful at the bedside I have had cups made of various sizes and shapes for adaptation to the front and sides of the larynx, and have found it best to have the edges of the cups covered with rubber so that any inconvenience the patient might feel when the suction is strongest may be minimised Some of these cups are half moon shaped, others horse shoe shaped Suction can be applied effectively to one or both sides of the larynx simultaneously There is an adjusting mechanism on the instrument by wire leads to an electrode connected to the patient On starting the machine and separating the discharging rods the patient is subjected to powerful oscillatory discharges from the jars I use this current chiefly for the treatment of another form of stasis about which we hear much—intestinal stasis With one jar attached to a rectal electrode and the other to an abdominal a powerful current passes between the two, and that it causes contraction of the unstriated muscle of the intestine is shown, I think, in the resultant relief of the constipation which is often obtained Not all cases of intestinal stasis can be relieved in this way I have, however, cured one case of 25 years standing with colitis of five years standing Until she had this treatment the patient had had no normal evacuation of the bowels for 25 years Other cases have done well Failures, however, occur In one subsequently operated on by Sir Arbuthnot Lane the patient told me that the large bowel, which was removed *in toto*, was in a very diseased condition and quite incapable of recovery When I saw him last he was feeling quite well and was about to proceed to the front

Another use of the static induced current is to stimulate muscles which have degenerated from one cause or another, as in cases of anterior poliomyelitis I believe it is more efficient for the purpose than faradic or sinusoidal. The mechanical effects of static electricity are obtained even when the current is broken up, if I may so describe it—that is, when the electricity instead of travelling in a massive spark is broken up into a spray as in the static brush discharge, or is broken up in another way as in vacuum tubes, glass tubes that is, in which there is a partial vacuum The static brush discharge is used for treatment of stasis in parts which are too sensitive either from inflammation or locality to permit of the use of the wave current A gouty toe, for instance, is sprayed for half an hour with manifest relief resulting to the patient In treating a varicose ulcer the effects can be watched At first as the current is applied some blanching of the skin takes place This must be due to a preliminary contraction of the arterioles due to stimulation of their muscular coats Soon relaxation follows, and a more permanent reddening of the skin results As we watch the ulcer we see an exudation of plastic lymph appearing on the base, and after half an hour's treatment I usually derive the impression that the ulcer is smaller and more shallow However that may be, the patient will usually tell you next day that the pain is better, and after a shorter or longer series of treatments healing takes place This current is most useful in the treatment of chilblains, acne and I once used it with gratifying success in a case where a hypertrophied scaly condition of the skin followed on a prolonged irradiation with radium The discharge breaks up the air into ozone and nitrous oxide both of which are antiseptics

The vacuum tube discharges are used when we wish to obtain an effect stronger on the one hand than the static brush discharge effects and weaker than the static wave current They are particularly useful in searching for tender points in a case of neuritis These if not too deep are quickly [illegible] by this means In the treatment of neuralgia of the supra orbital or infra orbital nerves the vacuum tube is very useful as also in the treatment of acne herpes zoster and other skin conditions Specially shaped vacuum tubes are used in the cavities of the body, some for rectal use for fissures and inflamed piles, others for vaginal, urethral, and so on

I mentioned at the beginning of this paper that there were other therapeutic effects of the static currents which I could not explain as being due to mechanical causes only First there is the sensation of well being derived from treatment by the static wave current by a certain number of patients, but not by all This is quite well marked, and a patient who feels these effects will probably refer to it without being asked Patients certainly retain a part of the charge after treatment ceases, as is shown by the fact that one can sometimes get a spark out of them, and I suppose this extra charge suits some people In addition, there is an increase of the urea output in the urine, so that I suppose metabolism is increased There is also the deep massage effect above referred to More important effects are those derived from the static bath In this the patient is seated in a chair on the insulated platform, which is connected to the negative part of the machine, the positive being grounded, the spark gap is opened wide and the machine run slowly The patient has no sensation except of a gentle breeze or of the hair standing on end From 20 minutes to half an hour of this treatment is most soothing to the nervous system, leads to quiet sleep in those suffering from insomnia, and is generally useful in quieting down people who have been worked up by worries and anxieties or who are suffering from nervous irritation due to other causes I use it, for instance on patients who have complained of sleeplessness or too much exaltation following on treatment with the static wave current Lastly, the most useful application of the static brush discharge is its application in cases of neurasthenia People who are depressed, cannot sleep, suffer from dyspepsia, are anxious, easily tired, worried by business, &c, are they to whom this treatment is applied

The brush discharge is applied up and down the spine for 20 minutes to half an hour daily for two weeks In the second week an amelioration of the symptoms begins, and then the treatment is intermitted given three times a week, then twice, and finally stopped Sometimes it works like a charm I remember a lady who had a headache daily and a severe headache which necessitated retirement to bed every two weeks She began treatment, I recall, just before Derby day, and had a violent headache after seeing the Derby at which a suffragette was killed She had the course of treatment above outlined, but somewhat interrupted by social duties I saw her in the following October, and in the whole of that interim she had had no headache that a dose of acetyl salicylic acid would not arrest, and very few of them

I conclude then that we have in the various applications of static electricity methods of treating a variety of conditions medical and surgical, not all of which do well under the ordinary methods of treatment in vogue

Welbeck street W

LITERARY INTELLIGENCE—The Cambridge University Press announce for early publication the third edition of Shipley and Macbride's "Zoology," which has been thoroughly revised and in parts rewritten The newer discoveries in the laws of inheritance are dealt with in the introduction and there are many new illustrations

SOME USES OF STATIC ELECTRICITY IN MEDICINE AND SURGERY[1]

By JOHN J GRACE, F R C S Eng,
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THE effects of static electricity may be summarised as being chiefly but not entirely mechanical, just as those of the constant current are chiefly due to the carriage of ions by the current, and those of high frequency are chiefly due to its heating effects Static electricity may be converted into high frequency or into X rays, but in either event it loses its static quality in whole or in part I do not think any effects due to the carriage of ions can ever be obtained from static electricity Other therapeutic effects are ascribed to static electricity such as its suggestion effects There are therapeutic effects of static electricity other than mechanical, to which I will refer more particularly later I do not know what they are due to precisely, but I am sure they are not due to suggestion

I will deal first with the mechanical effects and will begin with the static wave current, the most generally useful current there is An electrode is applied to the bare skin of the patient, who is seated on an insulated platform Special electrodes are applied to special parts This electrode is attached by a wire to the positive pole of the machine, the negative pole is grounded, and the machine is started The spark gap is then opened If the machine is properly regulated a spark travels across the gap at the rate of 120–200 a minute In the intervals of the spark the patient is filled like a Leyden jar with static electricity When the spark crosses over the gap he is discharged at one point, the part with which the electrode is in contact The effect of this sudden discharge at one point or in one small area is a violent commotion of all the tissues in the neighbourhood of that point It is, in fact, a deep massage of all the tissues but intensifying towards the electrode Theoretically we should expect such a commotion of the tissues to relieve stasis Practically we can see it do so If we take a case of simple chronic synovitis of the knee joint we have an ideal condition in which to study results In such a case, often in one treatment, usually in three or four, an obvious and marked reduction of the swelling takes place So impressed am I with the results obtained in these cases that if I did not see and the patient did not feel a marked improvement after three or four treatments I should suspect that the diagnosis was wrong and that I was dealing with a tuberculous joint Having said and seen that the effect of this treatment is to relieve stasis we have but to ask ourselves, In what pathological states have we stasis? to arrive at a conclusion as to the kind of case in which static electricity is useful

I do not wish to enter into the pathology of lumbago, sciatica, or brachial neuritis I am not qualified to do so if I did wish it, but any of you who have been plagued with these troubles know that there is something in the muscles or nerves which ought to be eliminated This treatment I know from experience in my own case and that of many others will eliminate it

An enlarged prostate can be reduced and the symptoms due to it relieved Here are the notes of a typical case The patient, aged 57, had had symptoms of enlarged prostate for five or six years, he rose three or four times a night to urinate There was a very small amount of residual urine Per rectum the prostate was found to be moderately enlarged, its consistence somewhat firmer than normal The static wave current is used with a metal rectal electrode which has a concavity which rests against the posterior aspect of the prostate The part of the electrode opposite the sphincter is insulated. Treatment was given for 20 minutes daily After eight treatments I have the following note Patient retired to bed at 10 30 P M Got up and emptied bladder at 2 A M Awakened from habit and not by his bladder Did not wake again until 8, when he got up After 16 treatments he arose once only at 5 A.M He remarked that his stream was less crooked and stronger Some of these patients progress to complete alleviation of symptoms, others have to rise once at night instead of four or five times In a majority of cases there is some improvement

A subinvoluted uterus can be contracted. Dysmenorrhœa is often relieved I have reduced enlarged livers and enlarged thyroid An enlarged spleen can be reduced In rheumatoid arthritis of the knee I have had considerable success, in that of the hip joint I am sorry to say no success There is in fact a wide variety of chronic conditions and a few acute ones such as sprains where the static wave current gives good hope of prompt relief

If, as I believe to be the case, the static wave current relieves stasis by the commotion set up by the interruption of the current, how much greater and therefore more effective must be the commotion set up by the static spark Here the whole charge resident in the body of the patient rushes to an exit at one small point, the point of exit of the spark That sparks are most efficient is seen in cases where such indurations as synovial thickenings get softer and less marked from day to day Unfortunately I must add, however, that I have had no success with them or with anything else in the treatment of the most obvious indurations of all—i.e, those around the knuckles in rheumatoid arthritis of these joints I believe that failure here may be due to the fact that these joints are too tender to allow of the application of a really effective spark to them.

Another effect, and a very important one, of the static spark is the relief of spasm in muscles connected with inflamed nerves and joints Sometimes these muscles can be felt to be in a state of spasm, at others the inability to make certain movements discloses it For instance, I had a patient recently under treatment who could not use his deltoid at all This was after a fall from a bicycle, when he fell on his hand and doubtless bruised the muscles around the shoulder joint After a few sparks applied to the deltoid region he immediately had much more use of the muscles which raise the arm to a right angle Next day it was as useless as ever and again immediately responded to the sparks, and so again the next day After the third day the improvement continued. It seems to me that only spasm could account for such immediate recovery and loss of power again next day

The following is the arrangement of the static induced current Two Leyden jars are connected by their inner coatings to the two poles of the static machine From each of the outer coatings a the right lung, and on the left side (three lobes) pleurisy and early broncho pneumonia

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[1] A paper read before the Hampstead Medical Society

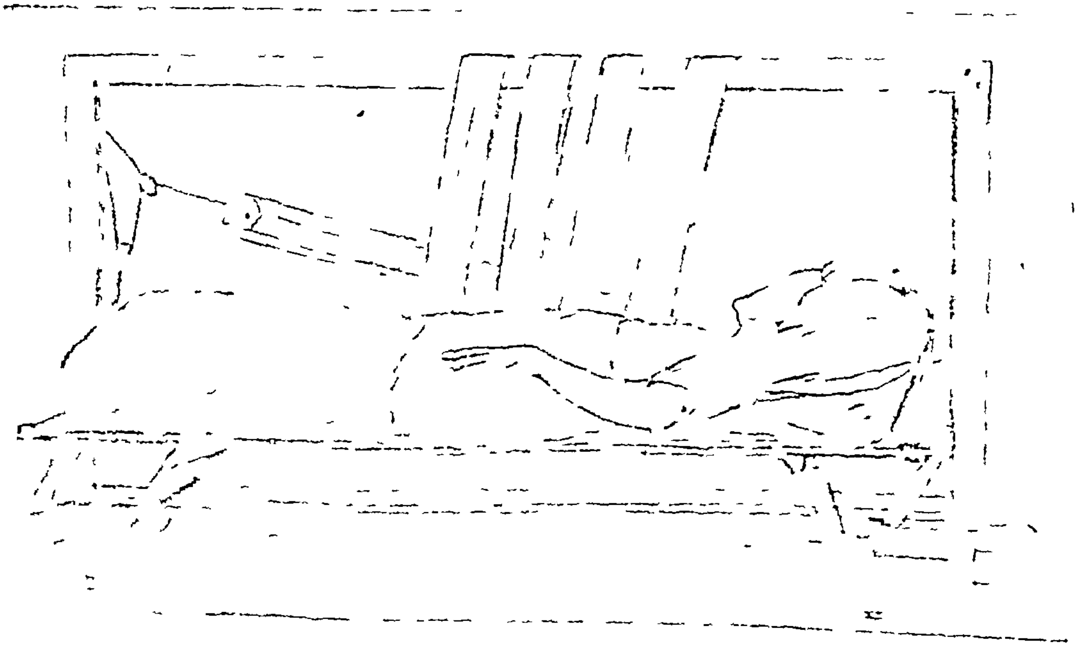
This case seems to show a remarkable accident The pointed broken handle of a pitchfork pierced this man's scrotum, it was deflected by the pubic bone into the anterior abdominal wall and so on into the chest wall He must have doubled himself up when the point was in the abdominal wall, thus causing it to pass anterior to the ribs, through the pectoralis major origin, and finally to stop at and break the second rib, where it deposited the cloth and hay At the inquest evidence showed that a fellow workman pulled some 2 feet of handle out of the man's body The patient then "walked" three miles home and drove ten miles to the hospital Presumably the correct treatment would have been to lay open the whole track, but there was no evidence until the formation of the abscesess that the fork handle had made any further injury than that in the scrotum

A SIMPLE SPLINT FOR FRACTURES OF THE UPPER EXTREMITY

By M W B OLIVER, M.A, M.B, B C CANTAB, F R C S ENG,

LIEUTENANT ROYAL ARMY MEDICAL CORPS

THIS splint has been devised for the treatment of compound fractures of the upper extremity, and it is especially useful in cases where there is an extensive wound requiring much dressing It is also extremely useful in cases of simple wounds in which there is no fracture The splint consists of a horizontal wooden bar supported by an upright at each extremity of the bed The arm is suspended from the horizontal bar by means of flannel slings In place of these a gutter splint of perforated zinc suspended by cords may be used As a rule the flannel slings are more convenient and facilitate the dressing of the wound If a fracture is present extension may be applied as shown in the accompanying diagram



Illustrating the splint for fractures of the upper extremity

The advantages of the splint are 1 It is very simple and can easily be made by any carpenter 2 The patient is made very much more comfortable, as with the arm sling he is able to move his body without interfering with the position of the arm 3 Extension can be applied very easily 4 The dressing of the wound is very much simplified and is less painful This splint is a modification of the "Balkan" splint, which was devised for the treatment of fractures of the lower extremity, and has been used in this hospital with very satisfactory results

No 13 General Hospital British Expeditionary Force

THE REMOVAL OF A SEBACEOUS CYST UNDER SUGGESTED ANÆSTHESIA

By J W ASTLEY COOPER, L R C P & S EDIN, L F P S GLASG,

RESIDENT PHYSICIAN AT GHYLLWOODS SANATORIUM, CUMBERLAND

THE patient had at the time of operation been under treatment for chronic alcoholism by hypnotic suggestion for six weeks Incidentally complaining of a sebaceous cyst of some years' standing in the skin of the chest over the sternum which was slowly getting larger, I proposed its removal during one of his hypnotic sittings This was agreed to I hypnotised the patient and suggested total absence of pain during and following the operation I then dissected out the cyst (about as big as a large filbert) The wall was strongly adherent, and had to be torn away piecemeal at one spot, to ensure its destruction I subsequently swabbed out the cavity with tinctura iodi The patient gave no indication whatever of any feeling of pain or discomfort, either during this small but painful operation or during the subsequent healing of the wound but on being roused expressed surprise that all was finished and that no pain had been felt

[illegible]

CONGENITAL LYMPHANGIOMA SITUATED OVER THE STERNUM

BY JOHN A C MACEWEN, M B , C M , B SC GLASG ,
F R F P S GLASG ,
SURGEON TO THE ELDER HOSPITAL ASSISTANT SURGEON GLASGOW
ROYAL INFIRMARY SENIOR ASSISTANT TO THE REGIUS
PROFESSOR OF SURGERY UNIVERSITY OF GLASGOW

IN THE LANCET of July 19th, 1913, a case of large dermoid cyst occurring over the sternum was reported by me, and the one now to be described resembled it in situation and in being congenital and cystic, but the patient was younger and the appearance of the tumour very different

The patient, a girl aged 8, was admitted to the Elder Hospital in September, 1913 Her mother stated that she had a birthmark of about the size of a bean, which had always been white and soft until recently, and which was situated over the sternum A few weeks *prior to admission* the tumour first became hard and of a blue colour, and then rapidly enlarged, becoming red and inflamed as it did so On admission a large cystic tumour was seen, situated in the middle line, over the sternum, commencing about 3 inches below the episternal notch, and extending downwards a distance of 3½ inches The tumour was pear shaped, with the stem directed downwards and inclined to the right side, its greatest breadth was 2½ inches, and it projected fully an inch from the surface That it was cystic was apparent on superficial examination, and tense *fluctuation* was *marked* On *close inspection* the skin over the tumour, which showed no evidence of inflammation, was found to be thin and stretched, and it was seen to contain small superficial bluish pearl like cysts in places The condition was painless and did not *occasion* any marked discomfort

An operation was performed on Sept 24th An oval incision was first made so as to remove the area of affected skin On carefully deepening the incision a sac wall was seen, which was thin, pearly, and translucent, and which contained fluid, the appearance strikingly resembling that of the tunica vaginalis *testis* when *exposed in the operation* for hydrocele An attempt was made to remove this sac entire, but it was firmly adherent to the subjacent tissues, and, unfortunately, ruptured when almost freed, several ounces of clear amber fluid escaping The tumour extended down close to but did not involve the sternum The wound was stitched up, and the child made an uneventful recovery

On examination of the tumour it was found that while the largest cyst had been ruptured, there were a few much smaller ones also present, in addition to those in the skin itself, which have already been referred to

Dr J Anderson, pathologist to the Victoria Infirmary, Glasgow, very kindly made sections from various parts of the tumour, *and reports* as follows —

The epidermis is very variable in thickness and in outline, small papillary projections appearing at places The horny layer is scanty, and the Malpighian varies as to thickness and interpapillary processes In one section a small cyst is seen in the epidermis resembling an eruption cyst, which presents an endothelial lining and thin fibrous wall and is supported by cells of the Malpighian layer to the inner and of squamous to the outer aspect The contents are mucinous and present several lymphocytes The true skin is atrophied as a whole although apparently increased as compared with the Malpighian layer, and the apparent increase is added to by the presence of inflammatory proliferation of connective tissue and a few lymphocytes There is a *scarcity of* glands generally, and particularly of sebaceous glands Small mucinous areas, cyst-like in character, are seen in the deeper layers of the corium, often surrounded by inflammatory foci, and slightly larger cysts of the same character are found in the fatty tissues Some of these cysts present marked hæmorrhages from their walls into the *interior* The fatty tissue is, as a whole, well represented, and at places there are hæmorrhages into it, and also inflammatory *infiltrations of the stroma The margin of the large cyst* presents a well defined wall composed chiefly of fibrous tissue, but containing a little unstriped muscle fibre, and is richly vascular, the *vessels* in places being engorged It is lined by flattened endothelium I consider the condition as one of lymphangioma.

Glasgow

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

AN EXTRAORDINARY ACCIDENT

BY T O THOMPSON, M B , B CH OXON ,
LIEUTENANT R.A.M C FORMERLY CASUALTY HOUSE SURGEON
RADCLIFFE INFIRMARY OXFORD

THE patient, a man aged 34, was admitted into the Radcliffe Infirmary, Oxford, on Jan 28th, 1914 He had fallen 7 feet off a haystack on to a pointed handle of a hayfork, which produced a wound 3 inches long in his scrotum This *did not* appear to extend beyond the skin and dartos muscle He complained of pain in the right side, but no lesion or any bruising could be found on the right side or the arm Two days later the pain was less severe, *fomentations* having been applied On the next day pain at the right nipple was *felt on coughing*, and breathing friction rub was heard The breath sounds were not affected, and *there was no obvious* dulness on percussion

Three days later the patient developed a fluctuating area under the right pectoral, which on evacuation contained purulent blood effusion and two pieces *of straw* 3 inches and 6 inches long This area was drained freely and the patient improved Two days later another subcutaneous abscess formed mid way between *the right* nipple and the right side of the scrotum This was opened and drained, and proved to be a long purulent track Later a piece of hay was removed from each *abscess* cavity The patient continued to become worse, the *temperature rising and* the respirations becoming more rapid An extensive œdema of the anterior chest wall occurred with an inflamed area internal to the right nipple This was freely incised but no pus was found The patient developed broncho pneumonia and died

A post mortem examination showed a *complete* subcutaneous track from the wound in the right *side of the* scrotum to the infraclavicular region, with putrefaction along the whole track, and under the pectoralis major a cavity in the same condition in which were *found* wedged in one corner a piece of tweed cloth from the man's trousers and some straw and hay There was inflammation of the right side of the neck and lower *face and the* whole anterior chest wall The second rib was fractured and *osteomyelitis* was present The spleen was almost fluid while the heart was flabby *There* was pleurisy, with solid œdema of the lower lobe of was obvious bulging of the sternum due to enlarged thymus Dr. Williams here discussed the clinical signs of hypertrophy of thymus. He referred to a complete description by Oelnitz,[1] who divides cases into four groups (1) those with sudden death, (2) latent forms, with sudden symptoms calling for immediate intervention, (3) silent forms, with intermittent and transitory respiratory symptoms, and (4) forms with continuous manifestations with intermittent symptoms. The symptoms are (1) dyspnœa, generally with cyanosis, (2) often stridor, (3) epistaxis, (4) malnutrition and cachexia. Physical signs are (1) œdema of eyelids, (2) exophthalmos, (3) increased tension of fontanelles, (4) persistent facial cyanosis, (5) superficial cervical veins dilated, (6) inspiratory contraction of platysma, (7) asymmetrical arching of sterno-costal articulation, more frequent on right side, (8) enlarged thymus can often be felt beneath the sternum, (9) abnormal percussion dulness in thymic region, (10) auscultatory vascular souffle with head over-extended, and (11) radiographic shadow above cardiac shadow Dr Williams quoted Sajous to show that the function of the thymus is to supply through its lymphocytes the excess of organically combined phosphorus or nucleins required, especially by osseous and nervous systems during growth This theory, besides explaining thymic idiocy, thymic marasmus, and thymic dwarfism and rhachitis, explains thymic Graves's disease through the toxæmia induced by excess of nucleins or nucleic acid In 133 cases of Graves's disease which came to necropsy after operation Mathis found abnormally large thymus in 78 5 per cent —Dr Feiling showed 1 A man, aged 30 years, with very large hands the feet being normal, teeth regular, and the head flattened and elongated in the antero-posterior diameter A skiagram showed the pituitary fossa slightly enlarged There was loss of sensation in the forearms, and heat and cold sensation was lost, much wasting of interossei and thenar muscles, extensor plantar reflexes, and greatly increased knee-jerks Diagnosis syringomyelia. 2 A man, aged 36 years, suffering from Myopathy of the Facio-scapulo-humeral Form, first noticed 11 years ago The peculiarity in the case was that although there was a family history it was confined to a paternal grandfather

Reviews and Notices of Books.

A Text book of Pathology for Students of Medicine

By J GEORGE ADAMI M.A. M D F R S, Strathcona Professor of Pathology McGill University, and JOHN McCRAE M D M R.C P Lond, Lecturer in Pathology and Clinical Medicine, McGill University, Montreal. Second edition revised and enlarged. Illustrated with 395 engravings and 13 coloured plates London Macmillan and Co, Limited. 1914 Pp 878 Price 25s net

THE authors, we think, are amply justified in their contention that the fact that this text book "has measurably succeeded in its purpose is inferrible from the early exhaustion of the large first edition which appeared in 1912 and was reviewed in THE LANCET of Feb 1st, 1913

The number of pages has been increased from 759 to 878 while 91 engravings and two coloured plates have been added, making the total number of excellently clear engravings 395 and that of coloured plates 13 It seems to us that the whiteness of the paper is more marked, and consequently the printed matter stands out more sharply than in the first edition Amongst the changes—all improvements—we notice the relegation of the chapter upon monstrosities and abnormalities to an appendix and a simplification of the classification of tumours A new chapter on the more important infections and their prominent features has been added A very useful addition is the syllabus placed at the beginning of each chapter detailing its contents with page references The volume is completely cross indexed. Taking the work as a whole, it is evident that while the facts of pathology have not been neglected, continued emphasis has been placed upon the reasons underlying pathological conditions

Part I has been very considerably augmented and improved, and certain rearrangements and additions made The chapter on regressive tissue changes precedes that on progressive tissue changes In connexion with the subject of immunity and its "stupendous" literature, we think the authors have exercised a wise discretion in giving a workable plan by which immunity can be understood, based largely upon Ehrlich's views The additions under the head of surgical shock —not forgetting the contributions of Crile—are valuable and practical. As regards the regeneration of bone, we note that the authors are not as yet prepared to accept the views of Macewen ("The Growth of Bone," reviewed in THE LANCET of March 30th 1912) and others, who deny that the periosteum plays any part in the regeneration or even in the growth of bone The results of the cultivation of tissues, known as "growth *in vitro*" find a place Chapter IV (pp 186–258), on the more important infections and their outstanding features, successfully attempts to marshal under one head information on an important subject that in the previous edition was widely scattered. The scope of the new chapter will readily be grasped when we cite the subjects with which it deals—viz, diseases due to lower bacteria, bacilli, higher bacteria, filterable viruses higher fungi, and protozoa, not omitting the group of diseases classed as spirochætoses

Part II deals with special and systemic pathology and occupies about half of the text It must be difficult even for teachers of experience to decide what to include and what to omit Marked additions and improvements have been made in all the chapters Perhaps more illustrations would add value to the chapter on the nervous system As it stands it is none too long There are several welcome illustrative reproductions of specimens from McGill Pathological Museum The short but practical account of the bones is well worth perusal and careful study

The authors we think have succeeded in producing a highly attractive volume, at once practical, philosophic and suggestive Further, we are of opinion that they have classified the facts and so correlated them that the reflective student not only will be stimulated to add by his own endeavours to the progress of pathology, but also will find that the acquisition of the facts themselves is rendered easier by the plain, straightforward consecutive and logical manner in which the authors have presented them The "get up" apart from the subject matter, is excellent

What is Adaptation?

By R E LLOYD M B D Sc Lond Professor of Biology Medical College Calcutta. London Longmans Green and Co 1914 Pp 110 Price 2s 6d net

IN the preface to this book we are told that it is "not scientific in the usual sense, being influenced considerably by M Bergson's philosophy," and we learn further from the book itself that the author's biological creed is ultra mutationist As an ardent anti selectionist Dr Lloyd questions, perhaps correctly the intellectual honesty of those Mendelians who profess a lingering belief in natural selection as an instrument of organic

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[1] [illegible]

Medical Societies.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

Criminal Abortion and Abortifacients

A MEETING of this society was held on Jan 8th, Mr **HERBERT JONES** the President, being in the chair

Dr **W F J WHITLEY** read a paper on Criminal Abortion and Abortifacients He said that criminal abortion was produced or attempted in one of three ways—namely, by means of violent purgation, by the ingestion of drugs having a real or supposed poisonous action upon the fœtus itself or on uterine muscle, and by mechanical interference The abortion which was unsuccessfully attempted was perhaps more serious and far-reaching in its consequences than that which accomplished its object for in the latter life was utterly destroyed and in the former it was maimed and disfigured at its very inception, and the infant when born was frequently puny, undeveloped, and devoid of resistive power There was strong evidence that in this country the commonest way of attempting abortion was by repeated, regular, and systematic purgation Among the drugs having a real or supposed poisonous action upon the fœtus itself lead in the form of diachylon took a prominent position It was taken in the north east of England in combination with aloes As a result of inquiries made among chemists and chemists' associations it appeared that diachylon was frequently asked for in the north by the lay public without the prescription of a medical man At least ten local associations of chemists had passed resolutions declining to sell it Evidence was forthcoming that herbalists sold the drug and did a regular business as abortionists. Among some of the measures which had been suggested for checking criminal abortion were the scheduling of diachylon as a poison and the notification of pregnancy Educative measures held out most hope of success and the greater consideration which was now being given to antenatal hygiene was encouraging A practical measure might be to make all abortions and miscarriages notifiable to the sanitary authority and to enforce a pathological examination of the fœtus and placenta in every such case

Dr **W G WILLOUGHBY** agreed that abortifacients might have a disastrous effect on the health of the child He feared that the scheduling of a few extra poisons would have little effect in restricting the use of abortifacient drugs At the root of the whole matter was the fact that a mother was not looked upon with the respect to which she was entitled People must be impressed with the danger arising from the use of abortifacients, and that if they were used healthy children might not be borne

Dr **SIDNEY C LAWRENCE** referred to the great difficulty in deciding whether lead or some other drug had been taken prior to an abortion

Mr **H H I HITCHON** said that in the north of England the use of instruments for producing abortion was much commoner than was realised A first step in stopping the practice was the prohibition of suggestive advertisements which opened the door to criminal practices

Dr **C W HUTT** asked what evidence there was that there was any injury to a child born after an unsuccessful attempt to produce abortion If the statement were incorrect it would do harm

The **PRESIDENT** agreed that some steps should be taken to prevent the appearance of the advertisements of abortioners and pointed out that abortifacients could be procured with the greatest ease from the very herbalists who were receiving payment from the State for treating patients insured under the National Insurance Act

EDINBURGH OBSTETRICAL SOCIETY

Presidential Address

A MEETING of this society was held on Jan 13th, Sir J **HALLIDAY CROOM** the President being in the chair

The following office bearers were elected for the present session —President Sir J Halliday Croom Vice-Presidents Senior, Dr G Keppie Paterson, junior, Dr Angus Macdonald Secretaries Mr E Scott Carmichael and Dr R W Johnstone Treasurer Dr John M'Gibbon Librarian Dr J Lamond Lackie Editor of Transactions Dr James Young Acting Interim Dr H S Davidson Members of Council Dr J Haig Ferguson, Dr D Berry Hart, Dr H S Davidson Dr G Barbour Simpson, Dr A H F Barbour, Dr W Fordyce, Dr P G Borrowman, and Dr J L Green

The following were elected Honorary Fellows of the society —Dr Cullen, Baltimore, U S A, Emeritus Professor Malins, Birmingham, Professor Briggs, Liverpool, and Professor Jacobs, Brussels

The **PRESIDENT** delivered his Presidential Address After thanking the society for the honour of being elected President for the third time, he proceeded to discuss the problems that were likely to occupy the obstetrician of the future The first problem was that of the scientific pursuits and achievements of women He passed in review the work of Madame Curie and Madame Henri, giving a résumé of the position which radium occupied in gynæcology The declining birth rate was dealt with, especially the investigations of Dunlop, showing the influence of delay of marriage in the size of the family, especially delay on the part of the woman Figures were quoted which showed, among other things, that comparing the average Scotch family with the corresponding figures for similar marriages 20 years earlier, the decrease in the size of the family was universal, and that for all ages under 36, age 32 excepted, that decrease amounted to more than one child per marriage He also dealt with the question of the relations between the working mother and the home, as far as the census figures illustrated them He showed that the mortality of the children of working married women was 62 per cent. higher than in the cases of mothers who were unemployed He proceeded to discuss serotherapeutics, with special reference to Abderhalden, and cognate problems were dealt with very fully He laid special stress upon prematernity beds, pointing out their value both from a scientific and a clinical aspect In conclusion, he dealt with the teaching of midwifery as it is carried out in the Edinburgh School

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ÆSCULAPIAN SOCIETY —A meeting of this society was held on Jan 15th in the Metropolitan Hospital Dr David Ross, a past President, being in the chair —Mr Henry Curtis conducted a clinical afternoon In the absence of Dr E Cautley Mr Sylvester showed a boy, aged 14 suffering from Cerebro-spinal Meningitis On Jan 6th he vomited and had headache at 3 P M, mental confusion and drowsiness He was admitted on Jan 7th with headache groaning, and twitching of hands, chiefly left. He was semiconscious both pupils dilated, later on retracted abdomen Knee jerk plus, a scabies like rash Arms stiff, occasional twitching Temperature 100° F, pulse 84, respirations 30 Jan 8th Restless night Anorexia incontinence, head retracted tache Pulse 72, respiration 30 to 36 temperature 100° to 101° Jan 12th More conscious, takes food well, no spots Injection of 10 c c of Merck s serum Temperature 102° to 103°, pulse 100, respiration 34 Jan 15th Melæna with pain over sacrum on two occasions Temperature 103°, pulse 100, respiration 30 — Dr A Feiling mentioned a similar case in which the temperature was 89°, and never rose above 95° Patient who was comfortable all the time, died following morning —Mr Sylvester showed a man, aged 39 admitted on Dec 2nd suffering from Hæmatemesis On Dec 21st he developed right-sided parotitis On the 23rd gland subsided, but on the 26th was again swollen On Jan 8th pus was seen oozing from Stenson's duct after 1 in 8 acetic acid application to mouth Jan 15th, gland still very swollen and painful —In the absence of Dr W Langdon Brown Mr Sylvester showed the man of 38 years with Aplastic Anæmia shown at last meeting (Case 7), the improvement in his condition is apparent rather than real The quantity of blood is slightly less which is associated with a higher colour index and more red cells, the white cells show a higher percentage —Dr Leonard Williams showed 1 A soldier, aged 30 with greatly Enlarged Thyroid of ten years' standing, no signs of insufficiency After four months at the front the pressure of his equipment caused difficulty in breathing and swallowing He is improving under thyroid extract and potassium iodide 2. A girl, aged 19, with Graves's Disease the exophthalmos being of the flight and fright variety There

L Infection Puerperale Diagnostic, Traitement

By Professor CONSTANTIN DANIEL, Bucarest Paris A Maloine 1914 Pp 123

IN this monograph the author demonstrates that the condition known as puerperal septicæmia is in reality surgical septicæmia affecting the puerperal patient, and not in any sense a specific disease, and points out that this conception of the disease was originally put forward by Simpson in 1851 Although it is not possible to deny the occurrence of auto infection, yet it is certain that in the great majority of the cases the infection comes from without, and its entrance into the body is therefore preventable and should be prevented The two main forms of localised infection, generally with something retained in the uterus and generalised infection, are distinguished, and the great importance of a bacteriological examination is in every case insisted upon Clinically three types may be differentiated that in which the infection remains local, that in which it becomes secondarily generalised, and a third in which it is an acute general infection from the commencement, a true septicæmia. In considering the treatment of these cases the author recommends first an intra-uterine douche and then curetting With this advice most English obstetricians would disagree, they would prefer digital exploration first, with the complete evacuation of the uterus if necessary, followed by an intra uterine douche of some harmless fluid, such as sterile water, and no curetting The author discusses serotherapy and the various methods of producing leucocytosis, but nothing is said of the treatment by vaccines

The book forms a clear and interesting resume of the main facts that are known of puerperal infection, together with some informing statistics

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Local Anæsthesia its Scientific Basis and Practical Use

By Professor Dr HEINRICH BRAUN, of Zwickau Translated and edited by PERCY SHIELDS M D, Cincinnati Ohio From the third German revised edition London Henry Kimpton 1914 Pp 399 with 215 illustrations in black and colour Price 21s net

Professor Braun's work upon local anæsthetics is well known in this country, and the latest edition of his book will be a welcome addition to the library for those who make use of the methods with which his name is associated The book is a very complete exposition of the principles and the practice of local analgesia is well printed and furnished with remarkably clear diagrams and illustrations Many of these are photographs taken at operations to illustrate various stages and processes in the performance of infiltration and conduction anæsthesia

The book begins with a history of the attempts to obtain satisfactory local anæsthesia from very early times up to the introduction of cocaine in 18[illegible] It is from that year that local analgesia begins in any form comparable with that with which we are now familiar Next comes a comprehensive survey of the work that has been done bearing upon the susceptibility to pain of the various organs and tissues of the body and a chapter upon the pain relieving action of nerve compression and anæmia Here it is made plain that the surgeons of old were right in attributing [illegible] anæsthesia to pressure on the [illegible] [illegible] is of only [illegible] In a chapter discussing the effect of osmotic tension of watery solutions the defects of tumefaction anæsthesia, or "anæsthesia dolorosa," are explained, and this method is denounced as practically useless The different local anæsthetic agents are discussed at length with the various methods of using them, and attention is paid to the symptoms and treatment of cocaine poisoning Braun endorses the usual opinion that there is no real antidote for cocaine Stovaine, according to his investigations, causes injury to tissues even in 1 per cent solution His final choice of agents is in favour of novocaine and alypine, tropacocaine and stovaine being reserved for spinal analgesia The two former meet all the requirements which he demands of a local anæsthetic, including compatibility with the use of suprarenin The influence of the vitality of the tissues upon the local and toxic action of anæsthetic agents is considered in a further chapter, and then the technique of operations upon various parts is gone into in detail and supplemented with excellent illustrations

The book may be fairly regarded as a complete and masterly account of local analgesia

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Urgent Surgery

By FELIX LEJARS, Professor Agrégé à la Faculté de Médecine de Paris &c Translated from the seventh French edition by W S DICKIE F R C S Surgeon North Riding Infirmary Middlesbrough. Third English impression Vol I Introductory Head Neck, Chest Spine Abdomen Bristol John Wright and Sons 1914 Pp 614, with 20 plates and 1085 illustrations Price 25s net

THE seventh French edition of this well known work was reviewed in these columns so recently as Sept 19th, 1914, but this, the second English edition, deserves a fresh set of readers in this country For their benefit it may be stated anew that the author takes a wide view of the term "emergency" that he speaks precisely and definitely but not didactically, drawing upon a vast experience, and illustrating his text with brief but lucid case reports

Injuries of all types naturally figure largely in the chapter headings, which indicate the comprehensive character of the text Subcutaneous injuries of the chest for example take six pages, whilst wounds of the thorax need 40 The section on wounds of the pericardium and heart is well illustrated, and embodies the cream of extensive recent literature in addition to the author's personal experience, even gastrostomy and jejunostomy are included, which as we all know ought not to be, but not infrequently are, surgical emergencies Additions in this edition deal with acute dilatation of the stomach, acute pancreatitis, obstruction of the mesenteric vessels, sigmoiditis, and perisigmoiditis

Whilst this book is certainly one to be read by the junior surgeon to prepare him for prompt action in moments of emergency, and may in ideal conditions be available for reference at such times it has in addition altogether another value Most surgeons have very poor records of their most interesting operations for these are of necessity performed in moments of stress A volume such as this read at leisure will enable the busy surgeon to recall his experiences and to collate them with the author's Much indeed of the text is only to be fully appreciated by those well versed in practice [illegible] offers [illegible] means of consolidating knowledge with gain in precision and utility In this light the chapters on abdominal surgery may be read with all [illegible] opinion of the evolution. Having stated in a previous book that "adaptation" (that all-important fact in the view of the selectionist) "needs no explanation," he writes the present one to defend this statement by an endeavour to show how the need for such an explanation has arisen and why it seems unnecessary The author's position, shortly stated, comes to this Adaptation is the primary attribute of living things, and therefore, as an unadapted thing could not live, it is its own explanation But there is a resemblance between organisms and mechanisms in that they both possess the attribute of adaptation, and because man, the chief maker of mechanism, does not regard himself actually as life, but holds himself apart from it, he wonders, makes for himself a problem, and says, "How is it that life can produce the same kind of results that I myself can produce?" And so men, impelled by this wonder alone, proceed to invent theories, one of which is that of natural selection.

It may be held that the author's statement of his position is its own condemnation, so great are his misconceptions of the attitude of science towards the search after causes, and so erroneous are the assumptions involved in his position But, apart from this, he indulges in much word play in his desire to show that it is unreasonable to seek for any explanation of "adaptation", and frequently misrepresents the position of those whom he is opposing Against the selection theory, for instance, he argues that it is "not science" and should not be taught as such because it cannot be appreciated by all, but only by those "who need a *final* explanation of life" Whether by "final" he means here the *final cause* of life (which words, if correctly used, would stand for the object or purpose for which life came into being) or the *efficient* cause of life and how it arose, his allegation that the selectionist especially must necessarily desire a final explanation of life is hopelessly beside the mark The scientific man seeks for no final cause, or ultimate explanation of anything, least of all for an ultimate explanation of existence All ultimate problems are inscrutable and have nothing to do with science But science can and does seek for answers to questions such as this By what method has organic evolution been brought about?

It is needless to criticise in detail the chaotic logomachy which marks this book, but its quality may be illustrated by a few excerpts "The growth of science is different from the growth of man's perceptive ability, which is evolution." "We shall continue to explain life for the very reason that it has no (final) explanation We shall understand it more and more, simply because we shall never be able to understand it completely' "If the human intellect, which is a part of life, were to understand life, the part would, as it were, grasp the whole, which seems impossible"

The book ends with an advocacy of Bergson's philosophy and of the doctrine of "discontinuity" according to the Mendelians and mutationists The author, however, says that he has "no wish to urge the reality of discontinuity, but only the practical advantage and necessity of admitting it" In denying that the theory of natural selection is scientific the author revives the old and erroneous charge that the theory is equally teleological with that of special creations Against all such "teleology' he opposes the theory of "vitalism," from the point of view of which (he says) it is inconceivable that we should know the cause of life and evolution, and thus he makes short work of biological science It must, however, be borne in mind that, anti teleologist and anti mechanist in one as he professes to be, he espouses the mutationist biology and the Bergsonian philosophy—doctrines which have been widely welcomed either by religious persons to whom natural selection is unpalatable, and who see in mutationism an approximate return to the theory of special creation, or by modern mystics of many colours who frame assumptions and style them discoveries

The whole trend of the author s dialectics establishes his own statement that this book "is not scientific in the usual sense" We venture to add that it is not scientific in any sense

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A System of Surgery

Edited by C C Choyce, B Sc, M D Edin, F R C S Eng, Dean of, and Teacher of Operative Surgery in, the *London School of Clinical Medicine (Post-graduate)*, &c. Pathological Editor, J Martin Beattie, M A., M D, C M Edin, Professor of Bacteriology in the University of Liverpool, and Bacteriologist to the City of Liverpool In three volumes Volume III With 12 coloured plates 22 black and white plates, and 242 illustrations in the text London, New York, Toronto, and Melbourne Cassell and Co, Limited 1914 Pp 901. Price 21s net

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L Infection Puerperale Diagnostic, Traitement

By Professor CONSTANTIN DANIEL, Bucarest Paris A Maloine 1914 Pp 123

In this monograph the author demonstrates that the condition known as puerperal septicæmia is in reality surgical septicæmia affecting the puerperal patient, and not in any sense a specific disease, and points out that this conception of the disease was originally put forward by Simpson in 1851 Although it is not possible to deny the occurrence of auto infection, yet it is certain that in the great majority of the cases the infection comes from without, and its entrance into the body is therefore preventable and should be prevented The two main forms of localised infection, generally with something retained in the uterus and generalised infection, are distinguished, and the great importance of a bacteriological examination is in every case insisted upon Clinically three types may be differentiated that in which the infection remains local, that in which it becomes secondarily generalised, and a third in which it is an acute general infection from the commencement, a true septicæmia. In considering the treatment of these cases the author recommends first an intra uterine douche and then curetting With this advice most English obstetricians would disagree, they would prefer digital exploration first, with the complete evacuation of the uterus if necessary, followed by an intra uterine douche of some harmless fluid, such as sterile water, and no curetting The author discusses serotherapy and the various methods of producing leucocytosis, but nothing is said of the treatment by vaccines

The book forms a clear and interesting resumé of the main facts that are known of puerperal infection, together with some informing statistics

Local Anæsthesia its Scientific Basis and Practical Use

By Professor Dr HEINRICH BRAUN, of Zwickau Translated and edited by PERCY SHIELDS M D, Cincinnati Ohio From the third German revised edition London Henry Kimpton 1914 Pp 393, with 215 illustrations in black and colour Price 21s net

Professor Braun s work upon local anæsthetics is well known in this country, and the latest edition of his book will be a welcome addition to the library for those who make use of the methods with which his name is associated The book is a very complete exposition of the principles and the practice of local analgesia, is well printed and furnished with *remarkably clear* diagrams and illustrations Many of these are photographs taken at operations to illustrate various stages and processes in the performance of infiltration and conduction anæsthesia

The book begins with a history of the attempts to obtain satisfactory local anæsthesia from very early times up to the introduction of cocaine in 1884 It is from that year that local analgesia begins in any form comparable with that with which we are now familiar Next comes a comprehensive survey of the work that has been done bearing upon the susceptibility to pain of the various organs and tissues of the body and a chapter upon the pain relieving action of [illegible] compression and anæmia Here it is made plain that the surgeons of old were right in attributing [illegible] anæsthesia to pressure on the nerves, the accompanying anæmia is of only [illegible] importance In a chapter discussing the effect of osmotic tension of watery solutions the defects of tumefaction anæsthesia, or "anæsthesia dolorosa," are explained, and this method is denounced as practically useless The different local anæsthetic agents are discussed at length with the various methods of using them, and attention is paid to the symptoms and treatment of cocaine poisoning Braun endorses the usual opinion that there is no real antidote for cocaine Stovaine, according to his investigations, causes injury to tissues even in 1 per cent solution. His final choice of agents is in favour of novocaine and alypine, tropacocaine and stovaine being reserved for spinal analgesia The two former meet all the requirements which he demands of a local anæsthetic, including compatibility with the use of suprarenin The influence of the vitality of the tissues upon the local and toxic action of anæsthetic agents is considered in a further chapter, and then the technique of operations upon various parts is gone into in detail and supplemented with excellent illustrations

The book may be fairly regarded as a complete and masterly account of local analgesia

Urgent Surgery

By FELIX LEJARS, Professor Agrégé à la Faculté de Médecine de Paris &c Translated from the seventh French edition by W S DICKIE F R C S, Surgeon North Riding Infirmary, Middlesbrough Third English impression Vol I Introductory Head, Neck, Chest Spine Abdomen Bristol John Wright and Sons 1914 Pp 614, with 20 plates and 1086 illustrations Price 25s net

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THE LANCET.

LONDON SATURDAY JANUARY 23 1915

The War and Nervous Breakdown.

AN increase in the number of nervous troubles is naturally to be anticipated during the time of war All forms of nerve instability will certainly receive fresh impetus Recrudescence of dormant weakness is sure to occur under the additional strain involved in long continued personal anxiety combined with the weakening influence of fatigue and, perhaps, economy of food The loss of central control during an engagement has often been depicted in art galleries, and the conception of the artist is abundantly confirmed by the extracts from letters from the front which have been appearing in many of our contemporaries The overmastering interest of the time of engagement does not persist in normal individuals With the relief of the immediate strain of conflict the organism speedily regains its normal tone, and though there may be a fleeting return of excitement during the narration of experiences, no harm results so long as the individual is not haunted by the past both day and night This is, however, only true for the majority of previously healthy young adults who have been in the firing line Neurologists state that they are being consulted by an increased number on account of many nerve symptoms of an ill defined character Some of these cases present symptoms analogous *to those* of milder forms of epilepsy, and on investigation it may be *found* that during infancy or adolescence similar *symptoms had been present* Far more frequently an accurate diagnosis is *not* possible, or, at least, a diagnosis which will harmonise with any definite lesion The condition resembles that which has long been familiar in the law courts in claims after railway accidents, to which it has been convenient to apply the term "shock"

Although many features *of the* present war will impress future generations with a sense of horror *there* are also happily, many comforting reflections to be *derived* from observation of our national characteristic trend of thought It is distinctly cheering to note how eagerly each possible new development *is* appreciated, as measures are devised for dealing with each contingency on reasonable lines *From the* outset of the war it was evident that one problem would be the judicious treatment of nervous *symptoms* The early arrival of men who had been through all the weariness of the [illegible] marches with insufficient sleep, gave [illegible] that it could not be disregarded *Lord* [illegible] drawing conclusions from the condition of those reaching the London Hospital, appealed for funds to establish an institution for the treatment of cases of shock His appeal met with ready response, which has permitted the opening of a special hospital for officers, equipped for the reception of 35 patients We learn that it is at the instance of the War Office that this undertaking has been restricted to officers, but it would seem possible that ere long something of a similar nature may be required for the treatment of the rank and file At the moment of writing this question is under discussion by numerous voluntary helpers, and it is uncertain whether their conclusions or recommendations will be of a nature to secure official approval No doubt steps are being taken to determine whether the generalisations drawn from a limited number of cases in the early days of the war are supported by further observations It is essential that this question should be decided before it is worth while formulating elaborate schemes likely to entail considerable expenditure Amongst the soldiers who have been through the harassing time in the trenches there are certainly some whose condition appears to call for the utmost consideration and patience They are sleepless, or sleep in short snatches disturbed by frequent nightmares They are dull and depressed, and they are unable to take interest in their surroundings This dreary picture of apathy is said to be strongly suggestive of the usual premonitory symptoms of chronic mental degeneration, familiar to those who work among the border line cases, which so often end in melancholia or in delusional forms of insanity While, however, this is true of some officers, so far, we believe, it has been comparatively rare among the men of the rank and file The latter, although submitted to the same bewildering tumult of noise and to similar short hours of sleep, do not appear to suffer to the same extent as the officers, who, in addition, have to experience the continual strain of heavy responsibility All accounts favour the conclusion that among the men it is rare to find that the apathetic condition persists, or that it leads to more permanent mental changes

It would perhaps be rash to assume that the men possess a greater reserve of recuperative power than their officers, *or to* infer that their restoration is due to lack of imagination *or* want of memory, but all observers agree that just as they take their discomforts in the trenches in light hearted fashion, so they go through hair breadth escapes with cheery optimism Even some of those who seemed most depressed on *their* return to this country speedily recovered tone, after sleeping almost continuously for 48 hours The point which has to be determined, however, is whether all cases of nervous breakdown will really pursue such a satisfactory course and what is to be done with those who still show signs *of instability* long after they have

"Arabian Nights' Entertainments", and this leads us to one querulous complaint the paper is so highly glazed for the sake of the illustrations that in artificial light the letterpress cannot be seen at all at some angles This, to be sure, is but a trivial fault in a book of solid worth It is due to the translator to say that his work has been extremely well done, the text reads as if composed in sound English

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Précis de Chirurgie de Guerre

Par EDMOND DELORME, Médecin Inspecteur Général de l'Armée Paris Masson et Cie 1914 Pp 230 Price 4 50 francs

IMMEDIATELY after the outbreak of hostilities the author delivered an address at the Institute of France on the leading principles of surgical treatment in the field and on removal to hospital This was received with great applause and has been circulated widely by the War Ministry amongst the medical officers of the army and of the hospitals where military patients are received throughout France Dr Delorme, in spite of incessant and laborious military duties during the last three months, has been able to put together in a very handy and compact form all that is necessary for a military surgeon to know in regard to wound treatment Extreme brevity and clearness of expression, with precise directions as to what must be done and what should not be attempted in the treatment of wounds, are the distinguishing marks of the book This is just what is wanted by the surgeon on active service There are a few illustrations The number of these might have been usefully increased, but the circumstances of the production of the book are probably the reason for the absence of some A short description is given of the weapons and of the projectiles used in modern warfare, after which wounds are dealt with, first according to the tissues and then according to the regions affected The author rightly insists that the field dressing must be properly applied by the surgeon or his assistant, not by a soldier or a comrade, "mieux vaut ne pas panser une plaie que de la mal panser," otherwise there is no security against infection. Tincture of iodine (1 in 20) is the disinfectant used Dr Delorme especially emphasises the almost uniformly conservative tendency of modern surgery

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JOURNALS AND MAGAZINES

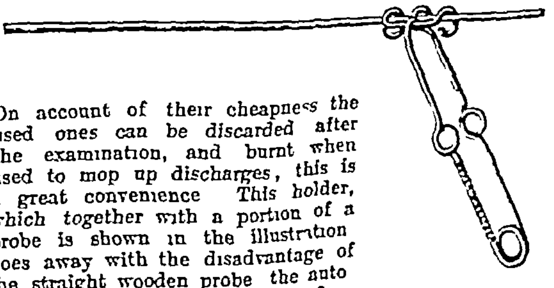
The American Journal of Tropical Diseases and Preventive Medicine Vol II, No 6 (December, 1914)—Dr Isadore Dyer writes on venereal diseases considered as a public responsibility, and points out that although provision is made for such cases in some general hospitals, in most of them these affections are endured and not invited He thinks that it is not extreme to say that nothing at the present time is more menacing to society than the prevalence of syphilis and gonorrhœa, and no demand is so urgent as that of adequate protection by proper hospital provision The present method in the United States as elsewhere makes the victim of venereal disease secretive and neglectful by surrounding treatment at a public institution with such an atmosphere of incrimination that the patient applies for medical relief only as a last resort Dr Dyer therefore pleads for separation of the medical side of the question from the moral and social and he urges that venereal diseases should have the place in the hospital plan which their importance demands — An article on Human Filariasis is contributed jointly by Dr Allen J Smith and Dr Damaso Rivas containing a relation of certain observations carried out by them during the past four years on patients suffering from filariasis in the Laboratory of Comparative Pathology and Tropical Medicine of the University of Pennsylvania A series of experiments were also carried out with bed bugs to test the suggestion that this insect might act as the intermediate host of the filaria bancrofti Although microfilariæ were found in the body of the bed bugs after they had been fed on two infected patients (both of them students from Porto Rico) and although the microfilariæ lived in the body of the bed bugs up to the eighth day, no evidence was found of development taking place It is, moreover, questionable if larval development is possible in the bug But, nevertheless, the chance of finding filarial embryos in these insects in houses where filarial patients have passed the night is at least of interest and might perhaps occasionally be of practical importance —Dr H C Clark, of the Ancon, Canal Zone, Medical Service, gives an analysis, with copious details, of 37 fatal cases in which pellagra had been diagnosed either alone or in association with other diseases Histological, bacteriological, and inoculation observations offered no data that would help to reveal an etiological factor, or to prove that the disease was a separate entity There was a striking association of pellagra with such diseases as syphilis, chronic alcoholism, arterio sclerosis, starvation, chronic pelvic inflammation, and various types of chronic intestinal inflammation, and it would appear possible that this syndrome might frequently be a sequel to the above named conditions —News and comments on passing events along with reviews of current literature, complete the number

Eugenics Review, January, 1915 —In men and in money the present war will exact a toll the effects of which will be felt long after peace has been declared That racial qualities must be affected is equally certain, and any contribution which may help towards a solution of the many problems which will confront us in regard to the well being of the race should receive attention In an article entitled Eugenics and the War, Mr Theodore G Chambers discusses from the point of view of the inevitability of war its racial effects He quotes the opinion of many writers on the subject, and the conclusions are necessarily somewhat indefinite. The Measurement of Intelligence, by Dr T Simon translated from the French by Dr W C Sullivan, is another paper dealing with a subject which is attracting much attention.

New Inventions.

AN IMPROVED PROBE-HOLDER

WOODEN probes are very useful in nasal and aural work, and especially so when used as wool carriers



On account of their cheapness the used ones can be discarded after the examination, and burnt when used to mop up discharges, this is a great convenience This holder, which together with a portion of a probe is shown in the illustration does away with the disadvantage of the straight wooden probe the automatic clip can be released, and a new one inserted without soiling the fingers The instrument has been carefully made for me by Messrs Mayer and Meltzer, Great Portland street London, W

C G RUSS WOOD, F R C S

Shrewsbury

THE GALTON LECTURE —The Galton dinner and lecture which were instituted last year by the Eugenics Education Society in honour of the memory of Sir Francis Galton, F R S will be held this year, as before on the anniversary of his birth Tuesday Feb 16th, at the Hotel Cecil at 7 P M Professor J A Thomson will deliver the lecture, which will deal with Eugenics and the War refuge of a scoundrel" The argument which the agitators employ is that the idea of inoculation is a bar to recruiting Of course, the idea only becomes a bar to recruiting among those who have been filled full with falsehood The man who wishes to serve his country, for the sake of himself and his comrades should be willing to undergo discomfort rather than risk the introduction among the troops of the ravages of a disease which in the past has caused so many deaths For if a man contracts typhoid fever he is a danger not only to himself but to those who are associated with him Some inconvenience for a day or two is nothing as compared with an attack of typhoid fever, to undergo an infinitesimal—nay, a negligible—risk in order to help in the maintenance of a healthy army is what is required of the recruit but this is not the way in which the situation is described by the authors of these circulars, who are thrusting on the public their ill informed pathology by advertisement also No words are too strong in condemnation of those who under the guise of patriotism are seeking to force their own fads, founded upon ignorance, upon our prospective troops to the detriment of the future of the nation

It is evident that the dissemination of these circulars in a broadcast way may prove a distinct danger to the State, and the danger is exaggerated when advertisements in support of the attack upon recruiting are accepted by a national institution like *Punch* Authority has been given to the Press Bureau to prevent anything being published that will act in a detrimental manner to the course of the war The action of ignorant fanatics in attempting to influence our recruiting, and to persuade those in our army to refuse to follow a preventive treatment which the highest medical authorities recommend, is surely detrimental to the cause of the Allies, and we strongly urge the authorities to take all the necessary steps to prevent the publication of pamphlets and advertisements spreading misleading statements on such an important matter as inoculation against typhoid fever The misuse of the term paratyphoid" in the advertisement which appeared on Jan 13th last in *Punch* (and whose insertion our contemporary has now stated to be due to accident) in itself shows the want of knowledge on the part of the persons who are responsible for public statements that the recruits are being treated with tyranny and ingratitude, and that inoculation has been proved to be "an utterly useless and dangerous practice

The recent letters to the *Times* of Sir WILLIAM OSLER and Sir LAUDER BRUNTON form a praiseworthy summary of the situation, and the former's appeal to soldiers in two final questions should have as wide a circulation as possible The questions are —

1 Will you, between the statements of misguided cranks who may [illegible] in the enemy's hands by perverting their [illegible] will you [illegible] listen to men who have devoted their lives to the service of humanity and who have no wish in the matter other than your good ?

2 Against a transient indisposition will you put in the balance the chance of a protracted and costly illness, possibly an untimely death ?

As soon as possible the publication of the statistics of the results so far observed as regards the value of inoculation during the present war should be published No official pronouncement has as yet been made, but it is significant that the French military authorities are stated to be so satisfied with the value of inoculation that army surgeons are sent to the front to vaccinate a whole army corps in the firing line It is further stated that arrangements are being made to inoculate every soldier whether at the front or at the depôts in the interior of the country Whether compulsory inoculation should be introduced into our forces is a question which has no doubt been seriously considered by those responsible for the health of our armies, and doubtless if they decide to introduce such a measure they will be entirely uninfluenced by idle chattering

Annotations.

"Ne quid nimis"

THE AIR RAID

ON Tuesday evening last an air raid took place over the east coast of England, when bombs were dropped into Great Yarmouth, Sherringham, and King's Lynn, confirming the probability of such attacks upon unfortified places So far it is only coast towns that have suffered, whether from raids by sea or air, but while, of course, only such towns can be subjected to shell fire from sea, inland communities, if fortune fights on the side of the attack, can be harassed by missiles from the air It would be childish to point this out were it not that some among us appear to forget it, and their behaviour is as troublesome as that of those who can think of nothing else The raid on the Norfolk coast is a complete answer to those who have grumbled without cease at the atmosphere of depression created by placing London for so long a period in gloom—a gloom which has been accentuated to the point of darkness recently, as information concerning the German intentions grew more complete Those communities which by their geography or their importance invite the attention of the enemy must be prepared for attacks by air, and if we can all imitate the brave calm of Norfolk under trial the attacks will fail in their principal object, whatever miserable toll of life they may exact We do not minimise the anxieties, and in a few sad cases the anguish, caused by air raids on our coast when we say that no serious damage can be done by them to the general military situation But in densely populated settlements of which London is the greatest example in the world, the loss of life following such attacks might be terrible We would urge the citizens of great cities at the first warning of the approach of danger to obey such authoritative advice as they have as yet received—advice which calls attention to the danger from fragments of the shells and bullets fired by our guns used against hostile aircraft.

been removed from the active line Some such cases are certainly hopeless, but there are others, and happily these are in preponderating numbers, where there are good grounds for believing that they may again become useful citizens In these more prolonged cases it is in the highest degree improbable that they can ever be employed again on active service They are so far shaken that they could not be trusted in emergencies They might be of use in the army in times of peace, but having lost nerve they could never be sent to the front again While the outlook in these cases is thus limited, it is to be hoped that the authorities will see their way to some form of treatment which will not hamper the future by the infliction of a stigma. Admitting that they bear all the appearances of border line cases it would be regrettable if they were sent to public institutions as though they had already crossed the border The difficulty of finding employment for those who have been discharged from the service as unfit is already great The difficulty should not be increased by adding the stigma of retention in a lunatic asylum unless there have been unmistakable grounds for this course We mention these things hopefully, for during the administration of Sir ALFRED KEOGH there have been abundant indications that the medical department of the War Office is acting with due consideration for individuals, and for the welfare of the community, as well as for the prosecution of the war to a successful issue

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Antityphoid Inoculation

THE agitation which has been engineered in certain quarters against antityphoid inoculation has drawn public attention to a prophylactic measure the utility of which has been proved for all minds capable of appreciating what proof is, but misrepresentations made with sufficient reiteration and vehemence produce upon ignorant people impressions which are hard to remove Evidence is accumulating in all parts of the world demonstrating the good results which have followed the adoption of inoculation against typhoid fever The large number of deaths which occurred in the South African War well illustrated the ravages of disease during campaigns where preventive measures were imperfect, but we got little therapeutic instruction from the tragedies which ensued There were 57,684 cases of typhoid fever, of which 19,454 (33 per cent) were invalided and 8022 (13 9 per cent) died. Although inoculation had been introduced at that time the conditions under which the treatment was employed made deduction from the results unsafe The technique has since been considerably improved, and the experience of other nations has made clear the beneficial effects of preventive inoculation Sir W B LEISHMAN in a letter in THE LANCET of August 22nd, 1914, instanced the fact that about 93 per cent of the British garrison in India have been protected by inoculation, and the disease which used to cost the nation from 300 to 600 deaths annually was last year responsible for less than 20 deaths Again inoculation was made compulsory in the American army in 1911, it having practically abolished the disease in American stations, in 1913 there were only three cases of typhoid fever in the entire army and no deaths In Japan also encouraging figures have been obtained In short, all experience goes to prove that inoculation against typhoid fever is a most valuable adjunct to the health of an army It must not be asserted that it is an infallible protective—that is to say, that a man who has been inoculated is proof against infection That would be adopting a view which cannot be supported by clinical evidence, and might easily give a false impression to the general public, and so play into the hands of the enemies of research But inoculation does confer a very considerable degree of immunity against typhoid fever, and the disease in the inoculated person is of a far milder type than in the unprotected These two things would constitute a sufficient cause to urge the free adoption of the measure Inoculation, however, does more than this it greatly decreases the incidence of the malady

Medicine is regularly attacked by those quite ignorant of medicine In regard to a knowledge of (say) physics, law, or military tactics, the public at large, as a rule, pay deference to those who have made a life long study of a particular profession, but towards medicine the public to some extent adopts a different attitude, and upon occasion there is a reasonable basis in this attitude, for a man has naturally a feeling towards his body that he has not towards his possessions or his civic privileges Well aware of this feeling, agitators have shown their hatred of scientific medicine in a manner difficult to combat, but very likely to obtain recruits from the ignorant, the timid, and the sentimental Physicians and surgeons who have devoted themselves to a study of disease, its cause and prevention, are quite used to being contradicted by these sort of people, and as a rule only resent the treatment when the general health of the community is in question Consequently faddists are listened to and believed who have had no opportunities of studying the intricate problems of morbid processes, and their opinions are quoted seriously against those of members of the medical profession who have devoted long years to special work At the present time a course is being pursued in connexion with inoculation against typhoid fever which well illustrates the danger of allowing unlimited license to antiscientific agitators A quantity of "literature" is being widely disseminated, containing garbled statements and misrepresentations which can only have an unhappy influence upon a large number of those who read them The pamphlets or circulars are couched in term of patriotism, and came to us in one case accompanied by a little publication, humorously quoting Dr JOHNSON as saying that "patriotism is the las the atlas was reached The incision was then carried through the left lateral occipito atlantal ligament until a small blackened area was found surrounding the bullet Removal was difficult until a good grasp of the bullet was obtained with toothed clamps, because the bullet was wedged beneath the arch of the atlas and there were a few sharp projections on it which were produced in its transit through bone A rubber drain was inserted and the muscles were sutured with chromic gut and the skin with silkworm gut Recovery from the operation was uneventful. The child was kept flat on his back and not allowed to move his neck for two weeks When he was discharged on the twentieth day the wound was solidly healed, but there was considerable stiffness of the neck, particularly for backward movements of the head and rotation from left to right A month later movement was freer, but was still limited in the directions mentioned An interesting point is that the bullet entered the spinal canal in front between the base of the skull and the atlas, and was extracted from the canal in the rear, and yet the cord apparently was uninjured

A NEW METHOD OF STERILISATION

Dr Guido Cremonese, in a recent issue of the *Gazzetta degli Ospedali*, draws attention to the value of iodobenzine as a disinfectant It is prepared by pouring some tincture of iodine into a certain quantity of benzine, the excess of tincture of iodine sinks to the bottom and a saturated solution of iodobenzine is formed Gratifying results are claimed for its use, first for sterilising the hands, it being sufficient to rub in a small quantity, secondly, as a ready method of preparing dressings by soaking them in the solution which is then allowed to evaporate, and thirdly for sterilising wounds by the application of tampons medicated in this manner The author states that with the antiseptics in common use some time is required to render a septic locality sterile Iodobenzine, on the contrary, has a rapid and immediate action by means of irradiation of nascent iodine vapour by the rapid evaporation of iodine and benzine The antiseptic action is therefore developed at once while after a few minutes a simple sterile dressing remains in contact with the wound

THE CHEMISTRY OF RICE POLISHINGS

THE curative substance of rice polishings is still resisting analytical attempts to isolate a definitive principle Some recent work by J C Drummond and Casimir Funk upon this subject is recorded in an interesting paper published in the December number of the *Bio chemical Journal* These workers carried out an exhaustive fractionation of the phospho tungstic acid precipitate from an alcoholic extract of rice polishings They confirm the presence of considerable amounts of choline and nicotinic acid in the polishings and betaine adenine guanine, and possibly guanidine were detected Small amounts of other substances were isolated but in quantities insufficient for identification The work of the Japanese authors Suzuki Shimamura and Odake who claimed to have isolated the curative [illegible] in the form of its picrate was repeated, but the results did not lead to any confirmation of the work of these [illegible] While Drummond and Funk failed themselves to isolate the curative substance which occurs in rice polishings, they are inclined to think that it is decomposed during the fractionation process, when all trace of it is lost From this it would appear that the so called vitamine is a readily decomposed base and it would be interesting to discover what happens to its nitrogen in the processes of nutrition Usually inert, nitrogen may in a nascent state prove to be an activator

DEATH AND THE ADRENAL GLANDS

IT is probably a unique observation in morbid pathology that there exists one particular organ, the adrenal gland, careful examination of which can indicate with tolerable certainty the manner or mode of death With the particular disease responsible for the *exitus* the condition of the gland may have less immediate concern To explain the relation of this gland the following facts may be noted Of the two parts of the gland the cortical constituting 80 to 90 per cent bulk of the organ, stores a lipoid material, the medullary portion secretes adrenalin It is with this latter function that we are immediately concerned An intimate physiological relationship exists between the nervous sympathetic system and the adrenalin gland content which controls the vascular tension An effective supply of adrenalin ensures an efficient circulatory and general tone, diminution leads to fall of blood pressure and asthenia The estimation of the gland adrenalin content after death shows important changes, and it is these which indicate something of the conditions preceding death Dr T R Elliott[1] has examined the glands from the point of view of adrenalin content in 80 cases (the lipoid was estimated in 170 cases) The first fact brought out was that no relationship could be established between the particular disease and the adrenalin content, nor was there any definite relationship between cortex and medulla But an important difference in content was noted when the mode of death was inquired into Sudden death, due to whatever cause, showed a practically normal adrenalin content, where however, general distress preceded death, a marked loss of secretion in the gland was noted For instance, the gland content in a case of sudden death was 4 5 mg (a normal figure) in a heart case with slow failure and apathetic death 2 3 mg, in another heart case with acute failure and mental distress, 0 2 to 0 7 Prolonged anæsthesia may induce similar changes—e g, long anæsthesia, 2 to 3 0 mg That adrenalin exhaustion follows strains imposed upon the nervous system has been abundantly shown in experiments, and that the gland is 'emptied' as it were of adrenalin by splanchnic nervous channels has been shown in cats, where, on splanchnic supply being cut off, the gland it supplies is not affected under exhausting general conditions which "empty" the opposite normally innervated gland The adrenal glands are played upon by emotional and vasomotor reflexes as frequently as are the muscles of the blood vessels themselves In such a crisis as impending death from diphtheria intoxication, for instance there is an urgent demand by the individual to combat the fall of blood pressure and other changes elsewhere To maintain the vascular tone the adrenalin is called upon and we find as a result

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[1] [illegible]

The streets should be avoided by the populace when it is known that an air raid is imminent, as being the really dangerous place There is nearly as much chance of a bomb dropping in a street as on a building, while the streets will necessarily be exposed to the missiles of the defending guns In the metropolis and in some other large towns medical precautions have been taken in case of air raids, and the necessity of the general population taking cover is always assumed in these arrangements In London plans have been made with the full approval of the police for the immediate dispatch of surgeons to the spot in the event of any terrible emergency, and, moreover, a scheme has been carefully thought out whereby first aid will be rendered in harmony with the police to any sufferers from an air raid, all local men assisting in rendering the necessary help before the wounded are removed to hospitals or other institutions We hope that other great cities have organised some plan for making use of their medical inhabitants This should be done at once, for there will be no certainty, and generally no possibility, of summoning medical aid to a given spot after the tragedy has occurred, when there will be few lights, consequent difficulties of transport, and perhaps disorganisation of telephone and telegraph

THE SCHEDULE OF POISONS

THE law relating to the sale of poisons is continually a source of disquiet to the public conscience Upon the occurrence of a fatality due to a poison, whether the result of accident or design, in all probability the scope of inquiry will include considerations of purchase Coroners' juries seem never to weary of calling the attention of the proper authorities to the need of imposing additional restrictions on the sale of poisons It is not always clearly understood who these authorities may be or what difficulties may stand in the way It is felt that the safeguards provided by law are defective, and it is more judicious to kick the law, an impersonal, nonsentient organism, than to pass a resolution of censure upon some unfortunate wight who has been outwitted As the law stands poisons are divided into two groups, Part 1 and Part 2 of the schedule, and the restrictions imposed in the case of any particular drug or poisons depend upon the place assigned to it in the schedule The obstacles in the way of sale to the public are greatest with regard to all poisons included in Part 1 of the schedule Frequently complaint is made that these regulations are unduly troublesome to the vendor, and protests are raised when any additions are made to the list, even though the need of such additions has been emphasised by repeated misadventures, as was notable in connexion with veronal and hypnotics of allied chemical composition It is generally assumed, when there has been delay in the inclusion of new poisons in the schedule, that the fault lies in the intricacy of the steps by which the change is to be effected This is not strictly true, though the recommendations have to receive the approval of certain public officers after they have been transmitted from the Pharmaceutical Society To judge from recent pronouncements it would seem that the reasons for delay are more intimately connected with an amiable desire to meet the demand for the articles We have noted that the alteration in the strength of the official tincture of opium has had the effect of bringing it automatically within the scope of Part 1 of the schedule, which includes opium and all preparations or admixtures containing 1 or more per cent of morphine While no objection has been taken to the alteration in strength, there has been an outcry against the retention of the synonym "laudanum," since it appears that under this name the drug has hitherto been freely sold in small or large quantities The matter has been deemed of sufficient importance for the Pharmaceutical Society to seek the advice of its Law Committee and it has received and adopted the following report —

> That the policy to be advocated by the Council in regard to the sale of laudanum should be that when "laudanum" is asked for the 1914 preparation should be supplied and the poison book signed, but where the 1898 preparation is demanded care should be taken to label accordingly and the attention of the purchaser should be called to the fact that it is the 1898 preparation

It would be interesting to know how often we are likely to meet with a member of the public who has any notion of the difference Probably the majority will ask for what they have been in the habit of using, and if tinctures of both strengths are kept, the one will be reserved for the emissary from the local inspector, the other, with a few words of explanation, will be supplied to the public as before There is always danger in keeping preparations of different strengths with similar names, and it is to be hoped that this suggested system of meeting the demand for the sale of a remedy which may become a poison if improperly employed, will speedily be rescinded Meanwhile it is curious to note that in Ireland opium and all preparations of opium or of poppies appear in Part 2 of the schedule, which means that though they require a label stating the name of the article the word "poison," and the name and address of the seller, it is not necessary in Ireland to make any entry in the poison book of the date of the sale, the name and address of the purchaser, the name and quantity of the article sold and the purpose for which it is stated by the purchaser to be required Comparison of the schedules of Great Britain with those of Ireland reveals several other inconsistencies and affords strong reasons for suggesting that the two should be brought into harmony whenever it is possible to devote attention to the subject

REMOVAL OF A BULLET FROM THE ATLAS

IN the *Boston Medical and Surgical Journal* of Nov 26th, 1914, Dr F H Lahey has reported a case in which he performed the unusual operation of removing a bullet from the atlas The patient was a boy, aged 8 years, who, while sleeping, was shot by a demented parent The bullet entered the left side of the upper jaw just above the second incisor tooth, penetrated the hard palate near its junction with the soft, and entered the posterior pharyngeal wall The X rays showed the bullet lying inside the posterior arch of the atlas on the left side, just behind the groove for the vertebral artery On the next day the boy was taken to hospital An immediate operation was not performed on account of sloughing of the wound of the palate and because the bullet was causing no symptoms After three days, when much of the slough had separated, a curved incision was made from below the external occipital protuberance to the mastoid process The incision was deepened through the cervical muscles as in performing suboccipital decompression, until the posterior arch of of the Fannia scalaris The patient had voided similar objects on Oct 19th and 28th, but had not brought them, fearing he would be laughed at He lived on a farm and was in the habit of micturating into a glass which he kept in a shed turned upside down and which he always rinsed after using He used a syringe of hard rubber for urethral injections This he kept wrapped in paper in a closed drawer Apparently, therefore, the larvæ could not have been derived from the glass or the syringe About 8 o'clock in the morning while digging he was seized with an intense desire to micturate, he hurried to the shed, felt something pass with the urine, and found the larva in the glass He did not see it move When Dr King received it two hours later it was in a perfectly fresh condition The patient could not find any larvæ in the fæces after a diligent search Dr King thinks that the urethra was probably infected while the patient was at stool, flies being attracted by the urethral discharge In Chevrel's case the patient was a paralytic woman, aged 55 years, who was left alone all day on a chair which had been converted into a commode, the receptacle for the dejecta being placed on the floor Flies were able to swarm freely about the buttocks For about two months she daily passed larvæ with the urine Chevrel thinks that while dipterous ova may be carried into the urinary passages by sounds or catheters or in water used for irrigating, they generally are deposited about the meatus urinarius, where are found the conditions favouring their growth—namely, darkness, moisture warmth, oxygen and food, the last being furnished by a gonorrhœal or other discharge The eggs hatch promptly, and the young larvæ pass into the urethra and bladder in search of food They require but little oxygen, for Chevrel kept them under water for hours and found them still active when taken out Infection is favoured by sleeping in hot weather with the genital region uncovered

Brevet Colonel William Heaton Horrocks, R A M C has been appointed Honorary Surgeon to the King, in the place of the late Surgeon Major General Sir John By Cole Reade, K C B

THE second volume of the annual report of the London County Council for the year 1913 has just been issued and comprises the report of the Asylums Committee for the year 1913-14

Dr Llewellyn P Phillips, professor of medicine at the Cairo Medical School, has been appointed Physician in Ordinary to S M the Sultan of Egypt

THE Executive Committee have appointed Dr J A Murray to be Acting Director of the Imperial Cancer Research Fund

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DEATH OF A VETERAN SCOTTISH PRACTITIONER.—The death of Dr Robert Leys took place at his residence [illegible] on Jan 13th Dr Leys commenced practice in Ellon as far back as the year 1853 and was for many years one of the [illegible] practitioners in the district He was for several years a member of the Ellon town council and a [illegible] of the peace Dr Leys studied medicine at King's College, Aberdeen and graduated M D there in 1857 He [illegible] in the district but for the last 17 years had been living in retirement having attained an [illegible]

THE CHADWICK LECTURES ON WAR AND DISEASE

THE first of a series of three Chadwick lectures on War and Disease was delivered in the lecture hall of the Royal Society of Arts on Jan 15th by Colonel F M SANDWITH, M D The chair was occupied by Sir WILLIAM COLLINS K C V O, the chairman of the Chadwick Trust

SIR WILLIAM COLLINS said the trustees had been so encouraged by the new departure made two years ago in giving these public lectures that it was proposed to continue in the same lines Under authority conferred by the Trust a prize of £50 and the Chadwick gold medal was offered to the medical officer of the navy and to the medical officer of the army who most distinguished themselves in promoting the health of the sailors and soldiers The Directors General of the Navy and of the Army Medical Departments had given their cordial approval and support, and nominations had been received by the trustees It was hoped that the awards would shortly be announced The period which Dr Sandwith would deal with in this lecture was the century of Chadwick, for he was born in 1800 and died in 1890 It was also the century of Florence Nightingale who died in 1910 That lady was a great friend of Chadwick and the two were closely associated in military and sanitary reform It was Chadwick who introduced Miss Nightingale to John Stuart Mill and to Kinglake. The work of Florence Nightingale in connexion with the military aspect of sanitary reform was beyond all praise, and she showed how informed gentleness and humane efficiency could produce results which previously had been unthought of Yet when attacking incompetence and inefficiency in high places she could be very caustic

Dr SANDWITH devoted this lecture to a consideration of continental wars of the nineteenth century He said there was a general conviction that the success in this present great struggle must lie with those whose spirit endured, whose faith in themselves and their cause never wavered, and that the destiny of nations lay in the spirit and moral of the troops But the medical officer realised that the sternest determination and the most inflexible courage were, to a considerable extent, dependent upon physical conditions Pain, hunger, cold, and sickness lowered the vitality and tended to reduce physical and moral endurance and these complications might do more mischief than the enemy's bullets But our army was now better fitted equipped, and instructed for a prolonged struggle than in any previous campaign In only one previous instance had sanitary science fitted the soldier for his task—namely in the Russo-Japanese War of 1904-5 In recent wars fought on land, of each 100 deaths 20 were from wounds, 80 from disease, the Russo-Turkish war of 1877-8 showed this proportion In the American Civil War there were 3 deaths from disease to 1 from wounds In the French expedition to Madagascar in 1895 there were 29 killed in action, while 7000 died from disease In the United States army during the Spanish American War 14 died from disease to every 1 killed in action The British losses from disease in the South African War were terrible On the outbreak of hostilities with Russia the Japanese were prepared for all eventualities and by attention to the smallest details they were able to show a proportion of 1 dead from disease to 4 dead from wounds Their aim had been to adapt the best hygienic principles to the life of the soldier in times of peace as well as in those of war Hygiene was but little considered until the public awoke to the necessity of enacting certain laws for the preservation of health in the great cities The outbreak of epidemics in these cities frightened local authorities into inquiries as to their cause and led to the appointment of the first Sanitary Commission of which Chadwick was a distinguished member and though he retired from official life in 1854 his hygienic zeal never abated, and when at this time the Crimean War was in full swing he inquired into the sanitary conditions of our army for it was suffering from extreme and to some extent preventable privations in the Crimea The British public were aroused to a realisation of these by the letters of William Howard Russell the great war correspondent, to the *Times* Even in the time of Napoleon's wars the care of the lessened quantity under such conditions The different effect that mode of death exerts upon the adrenalin where the essential cause, cerebral hæmorrhage, was the same, was strikingly seen in two cases In one case death followed 11 hours after a severe and extensive positive hæmorrhage, adrenalin content much diminished, 1 2 mg Evidence here shows drain on glands due to vasomotor medullary action being induced by the sudden rise of blood pressure demanding slower pulse rate In a second case, however, where pachymeningitis hæmorrhagica occurred with two days' coma preceding death, the adrenalin content was 3 0 mg Here the coma deleted any distressing conditions liable to induce gland exhaustion Many facts in this valuable paper throw light also upon cortical function, theories are critically examined, and an account of the technique for reliable gland examination mentioned We have here noted only one, but an interesting part of this subject

POST-LITIGATION RESULTS IN THE TRAUMATIC NEUROSES

AT last year's annual meeting of the American Neurological Association[1] held at Albany, New York, a profitable discussion on post-litigation results in cases of traumatic hysteria and traumatic neurasthenia was initiated by Dr F X Dercum (Philadelphia) who based his paper on some 605 traumatic litigation cases personally examined and recorded for prosecution or defence In 126 of these the injuries were physical In the others, constituting much the larger proportion, the symptoms were those of so called traumatic neurosis, and in many instances Dr Dercum considered them unreal and unessential He took the view that hysteria, for instance, was an innate affection pre existing in the individual suffering from trauma, and his experience was that in such cases the symptoms always persisted until the final settlement of the action, then they subsided and disappeared He gave brief reports of some 20 cases carried into the court room on stretchers or chairs, or "too seriously injured to be brought into court", in all of these the symptoms rapidly vanished after settlement Dr Dercum said the whole subject was of paramount importance to the community, as on it the eventual cost falls He gave it as his opinion that the law should ensure compensation for physical injuries only In the State of Pennsylvania damages for fright were no longer allowed, and he thought that compensation for traumatic hysteria should also, and logically, be excluded Dr Hugh Patrick (Chicago) said he considered that the employers' liability laws were adding to the invalid list enormously, continuously, and increasingly He referred to the state of affairs in Germany and Austria, where, as is well known to neurologists, the burden of the disabled and quasi disabled weighs ever more heavily on the nation In fact, a new neurosis, distinguished as a "fight for compensation neurosis," has been described by German writers Dr Adolf Meyer (Baltimore) pointed out the essential unfairness of restricting compensation to cases of physical injury only Serious shock was surely physical in quality If too hard and fast a line were drawn, there would be a reaction on the part of the legislature, and what he called "emotional jury verdicts' would result He entered a plea for the elimination of protracted litigation, and urged the necessity of all expert professional reports being committed to writing, so that certain types of so called experts could be pilloried and eliminated. Subsequent speakers also considered that Dr Dercum s position was too extreme, and quoted cases where recovery had not followed settlement Dr Pearce Bailey (New York) said that it was urgently desirable to interview the injured immediately after the accident, if no period elapses for the "working up of revengeful feeling" the traumatic neurosis will rarely develop Dr Diller's attitude was on the whole one which we think will commend itself to the physician He alluded to the handicap felt by the physician in treating such patients pending litigation, and gave it as his experience that a gradual improvement takes place after the award of damages, an improvement much more marked than before settlement He held that if an individual in good health is injured in an accident and thereafter suffers from neurasthenic or hysterical symptoms these should be fairly attributed to the accident, they are real and not imaginary, though they might be exaggerated Exaggeration is a common tendency in all kinds of sickness While it is perfectly true that many of the traumatic neuroses would never have occurred had the individual not possessed a neurotic temperament, on the other hand such an individual might have gone on through life without showing marked nervous symptoms had it not been for the accident Apparently little reference was made in the discussion to the great practical importance of the manner in which the claim is settled Large statistics from railway compensation cases in Germany[2] have shown conclusively that the results are much better when compensation is paid in a round sum than when it is awarded to be paid weekly for an indefinite period. Wherever practicable the medical profession should take up a strong position on this point It is apparent, we think, that the matter is too complex to be settled offhand by any radical declaration Neither the employer nor the employee is responsible for the neurotic temperament of the latter, and were the sufferer from traumatic neurosis to be considered devoid of all claim for compensation it would look, as one of the American speakers said, as though he were being penalised for his own nervous instability The subject is of everyday importance and it might be well on some future occasion to obtain a consensus of opinion from the experts o the profession in this country from which to derive some general rules for the guidance of those who are medically concerned with such cases

MYIASIS OF THE URINARY PASSAGES

MYIASIS of the urinary passages is a very rar condition In 1909 Rene Chevrel analysed all th reported cases, of which he could find only 2 He regarded 6 as authentic, 10 as probable, and as doubtful, and he added a case under his ow observation In the *Journal of the America Medical Association* of Dec 26th, 1914, Dr E King has reported the following case A ma aged 32 years, who had been suffering from chron posterior urethritis for some months, on Oct 29t 1914, brought an object which he said he h passed in the urine This was later identified Dr L O Howard, entomologist of the Unit States Department of Agriculture, as the lar disease in childhood and possibly again in later life It is not at present possible to affirm or deny the truth of the theory that natives serve as the reservoir of the virus The Commissioners are satisfied that of the cases which have been recently diagnosed at Lagos and elsewhere as yellow fever a certain number were true examples of that disease It is thought very probable that the malady which prevailed in West Africa in 1910-11 and in 1912 was genuine yellow fever The general measures for the reduction of stegomyia in the towns of the West African colonies appear to be defective, and this matter requires immediate attention by all concerned

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[1] Journal of Nervous and Mental Disease December 1914 p 785

[2] THE LANCET Oct 4th 1913 p 1005.

Second Report

The second report contains a retrospect (1) of yellow fever in West Africa as a whole, (2) of fevers on the ships of the British navy on the West African station, and (3) of yellow fever in the colonies, both British and foreign, on the West Coast of Africa. Some account is also given of the then existing health conditions in the West African colonies during 1862 a year marked by exceptional prevalence of yellow fever An analysis is furnished of the epidemics of 1910-11 and 1912 Other subjects, such as racial immunity, clinical types of the disease, and its incidence in childhood, are likewise discussed In setting out their general conclusions the Commissioners say that there is no evidence to show that the infection in each yellow fever outbreak under review had been introduced from outside Africa The mild nature of the attack in certain cases makes the identification a matter of difficulty It is therefore essential that in future all cases of fever should be carefully observed and classified in order that, as far as possible such mild attacks of yellow fever may not pass unrecognised The attention of all workers at this subject should be directed specially to the discovery of a clinical test for the disease

The Commissioners do not underestimate the importance of the researches which are being prosecuted in connexion with the nature of the yellow fever virus, and also those concerning appearances by which its presence could be recognised in the body of the stegomyia mosquito The possibility is admitted that by such researches the desired clinical test may be found, but the extreme practical importance of being able to determine whether a mild case of fever is or is not yellow fever renders it essential that all possible methods should continue to be employed in the clinical study of the malady The opinion is expressed that the day has gone by for endeavouring by the use of euphemistic terms to conceal the presence of yellow fever, and that the only hope of eradicating the disease lies in boldly facing the facts Failure to take all possible steps to destroy a focus of yellow fever is regarded by the Commissioners as an offence against the comity of nations With regard to the very important etiological researches on the nature of the yellow fever virus carried out at Lagos by Dr Macfie and Dr Johnston, of which mention was made in the first report the Commissioners reserve their opinion until the issue of their third report, by which time they will have completed the examination of the microscopical and other material which they have received and which illustrate the appearances presented by the "Seidelin bodies" (paraplasma flavigenum) and their possible connexion with the virus of yellow fever The third report of the Commission should prove very interesting reading

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Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH

City of Liverpool.—As usual Dr F W Hope's annual report gives in clear and attractive form a picture of the [illegible] of work undertaken by the medical officer of [illegible] in a great city We can only select a few matters of interest practically at random from the [illegible] who have been familiar with the incidence [illegible] in Liverpool in years not long past will be [illegible] diagrams which are given as to the recent [illegible] The recurring autumnal ep[illegible] [illegible] of cases in the central [illegible] synchronously with the during [illegible] autumnal [illegible] rise fails altogether to occur in this area For the city as a whole, imported cases, and cases attributed to infection by shell fish together form a proportion of the total of notified enteric fever cases, which is larger year by year, in 1913 as many as 43 per cent of the cases are thus accounted for in the report In that year cockles rather than mussels appear to have been the principal source of infection, the shell fish were consumed raw or else merely steamed or immersed in hot water till the shells opened The new measures adopted for treating tuberculosis and recent developments under the National Insurance Act respecting this disease naturally call for much attention in the report As regards pulmonary tuberculosis, 128 cases were admitted during 1913 to the Fazakerley Sanatorium and 423 to the Park Hill Hospital, which in March of that year was taken over and adapted for the treatment of this disease Practically all the cases admitted were either insured or dependents of insured Three "tuberculosis institutes" have been established in Liverpool, to correspond with the "anti-tuberculous dispensaries" mentioned in the Astor Report of 1912 Cases are sent to these institutes by medical men or by the public health or education authorities, comparatively few direct applications from the patients themselves have so far been received. In connexion with the work among children, assistance is given by the Liverpool Invalid Children's Association, particularly in regard to the preparation of the application forms needed if dependents of insured persons are to be admitted into the various homes or institutions available for tuberculosis in children The completed scheme now coming into operation will as far as possible treat all cases alike, irrespective of their insurance A considerable amount of domiciliary treatment is given, and Dr Hope considers that this needs to be put on a more satisfactory footing, so that the patient, by giving a better recognition of the doctor's directions and the doctor by the display of a little more interest in the subject, can unite to "improve the status of official domiciliary treatment' It may be noted that in Liverpool the district sanitary inspectors are fully utilised in the home visiting of notified cases of tuberculosis, where the practitioner agrees to this course being followed Dr Hope states that so far as Liverpool is concerned there is no reason to think that the additional amount of attention paid to the treatment of tuberculosis has interfered with the far more valuable and important measures of prevention The demolition of unhealthy courts and dwellings and their replacement by healthy houses which has been undertaken for so many years still continues, a diagram of the "St Anne-street Area" before and after its reconstruction is a good object lesson of the thoroughness of the work Formerly the corporation on account of the cost usually did not buy the public houses included in areas scheduled for demolition, this policy however, has now been abandoned, and Dr Hope highly commends the change (We would, however like to see the experiment tried of substituting good working class restaurants at which beer could be obtained with meals) New by laws have been introduced to regulate houses let in lodgings, which give additional powers for dealing with the offences created by not cleansing room floors stairs, and passages and the non-separation of sexes The tenant is now amenable in addition to the lodger As regards smoke abatement, great improvement has been effected in recent years by the reconstruction of the furnaces in many factories and the installation of superior appliances for automatic stoking A new duty has fallen on inspectors from the many complaints of the noise and smell from internal combustion engines and advice has been given by them on the methods to counteract these nuisances by deodorants and silencers Public lectures on smoke prevention have been given under the auspices of the University to persons in charge of furnaces with very satisfactory results The report contains several useful illustrations, though we have some doubt of the moral intended to be drawn from the series of family groups whose photographs appear in the volume

Metropolitan Borough of Islington—Mr A. F Harris reports the registration of 24 deaths from appendicitis during the year of which 12 occurred below the age of 20 and 7 below the age of 10 It is noteworthy that the number of deaths registered from this cause has remained at about 24 year by year since 1904 There were 19 cases of poliomyelitis notified practically no connexion was established between them and the houses affected were all in sick and wounded was lamentably neglected, although there were some distinguished surgeons on his staff In 1854 the Army Medical Department consisted of the Director General an assistant, and about six clerks The head of the department struggled in vain, on the outbreak of the war to create every detail of supply, but on grossly insufficient funds and he had no trained staff It was small wonder that many diseases decimated the fighting line In January, 1855, there were 23,076 sick in the ranks At this time Sidney Herbert was appointed Secretary of War He was a man of fearless and independent character, and with the coöperation of Florence Nightingale he got a staff of nurses at the front, and drastic reforms were introduced in the spring of 1855, a Commission was sent from home and they caused important sanitary works to be carried on, including the construction of hospitals and the improvement of the water-supply The death rate, which in February, 1855, had reached 42 per cent., began to fall, and in June it was only just over 2 per cent A Royal Commission appointed in 1857 to inquire into the medical administration of the army revealed that not only was the mortality due to disease in war time enormous, but that of the army in peace time was double that among the civilian population The high figures in barracks were due to their grossly insanitary condition In the sleeping arrangements only 23 inches of space per man was allowed and the beds were practically touching each other Sometimes four men slept in each bed In spite of many representations, comparatively little change occurred until the Crimean War had drawn public attention to the facts Next, the health of our troops in India received attention Florence Nightingale stated that 60 per 1000 of our troops perished annually in India and preventable disease among them cost the nation £388,000 in a year It was thought that the high mortality there was inevitable and was due to climatic conditions and it was the custom to bleed men on the voyage out, under the idea that "blood freshly made would be of a quality germane to the new climate" In 1860 the first army medical school was founded at Chatham to meet this increasing experience It was subsequently removed to Netley Its first professor was Dr Edwin Parkes, who had written brilliant monographs on dysentery and cholera in India, and whose "Manual of Practical Hygiene" long remained the standard work on the subject Parkes was continually endeavouring to improve the physique and conditions of the soldiers, for at the date he wrote officers and men were clothed in a manner which was calculated to hinder the free movements of the body It was a wonder that such long marches as stood to the credit of some regiments—i e, 42 miles in 20 hours and 62 miles in 26 hours—could be carried out, especially as the soldier had to carry equipment weighing 55 lb Fifty years ago, moreover, the British Army was said to be the most intemperate in Europe. The men had a regular ration of rum served out to them, and in the West Indies men had cheap rum in abundance, and it was often contaminated with lead This did not allay thirst but aggravated it In 1864 Sir Hugh Rose reduced the spirit ration to one-half In the American Civil War men who could not be paid owing to lack of funds, so that they could not buy spirits, were healthier and more cheerful than those who bought alcohol Intemperance in our army had now largely disappeared, and Dr Sandwith commended the wisdom of the Czar in prohibiting the sale of vodka throughout his dominions during this crisis and expressed the wish that the magistrates of our great cities might be given greater powers in that direction Alcohol administered in small quantities after a fatiguing march acted as an appetiser when men did not feel inclined for food, and abstainers under normal circumstances were glad of this aid Alcoholic excess was partly responsible for the devilish performances of German officers and soldiers with unprotected women He concluded by paying a high tribute to the organisers in the present war

ROYAL COLLEGE OF SURGEONS OF ENGLAND

MEETING OF COUNCIL

A QUARTERLY meeting of the Council was held Jan 14th, SIR W WATSON CHEYNE the President being in the chair

The Secretary reported the death on Dec. 31st last of Mr Thomas Bryant, past President, and past member of the Council and of the Court of Examiners of the College A vote of condolence was passed expressing the appreciat of the Council of Mr Bryant as President and in othe capacities

Leave of absence was given to the Conservator of the Museum for the purpose of going to America to deliver a course of five lectures on anthropology at the Western Reserve University, Cleveland, Ohio

A vote of thanks was given to Mr G Buckston Browne for a collection of lithotrites presented by him to the Museum and a vote of thanks was given to Sir John Tweedy for his interesting and valuable gifts to the library

It was resolved to contribute a sum of 50 guineas from the funds of the College to the Belgian Doctors' and Pharmacists' Relief Fund

SIR W WATSON CHEYNE was reappointed a member of the Court of Governors of the University of Birmingham for three years

The PRESIDENT reported the delivery by Sir Frederic Eve on Dec. 15th of the Bradshaw Lecture on Acute Hæmorrhagic Pancreatitis, with Remarks on the Etiology of Chronic Pancreatitis The best thanks of the Council were given to Sir Frederic Eve for his lecture, and he was requested to publish it

The PRESIDENT stated that the vacancy on the Court of Examiners occasioned by the termination of office by Mr Bilton Pollard would be filled at the ordinary meeting of the Council on Feb 11th.

REPORTS OF THE YELLOW FEVER COMMISSION (WEST AFRICA)

THIS Yellow Fever Commission, as our readers may remember was appointed in January, 1913, by the Secretary of State for the Colonies with the object of studying the nature and frequency of the fevers occurring among Europeans, natives, and others in West Africa, especially with regard to yellow fever[1] The members of the Commission are four in number—namely, Sir James Kingston Fowler, Colonel Sir William B Leishman, Sir Ronald Ross, and Professor W J R Simpson They have now issued two reports giving a general account of the steps taken to acquire information and the results so far obtained

First Report

The first report, dated Oct 7th, 1913, is signed by the three first of the above named members of the Commission, Professor Simpson having been absent in East Africa advising the authorities there on health matters A brief review is given of the circumstances which led up to the appointment of the Commission and the measures taken to organise and prosecute the investigation Copies of the forms drawn up and sent out to the West African Medical Staff and to other medical practitioners in the various colonies are appended In these information was asked for and coöperation in the inquiry invited Several officers possessing special training and qualifications were appointed to carry out work for the Commission at different centres in West Africa, and one member of the West African Medical Staff, Mr J M O Brien, on his own initiative, in order to increase his knowledge and experience of the disease spent his leave in Guayaquil, in the South American State of Ecuador This town possesses an evil reputation as regards yellow fever which is endemic there and often assumes epidemic proportions Guayaquil it may be added, is notorious all over the Pacific as one of the chief diffusing centres of the disease in South America. The Commissioners state that already certain scientific observations have been made at Lagos which if confirmed promise to prove of great importance in relation to the etiology of the malady and in consequence Dr Harald Seidelin, the well known yellow fever expert was despatched to Lagos to examine the results obtained and to confer with the two local investigators, Dr J W Scott Macfie and Dr J E L Johnston

At present the Commissioners are not in a position to make any statement concerning the Lagos observations until they are supported by further evidence The views previously put forward by the late Sir Rubert Boyce are discussed concerning the alleged immunity against yellow fever possessed by natives and acquired through attacks of the one from small pox The mean annual death rate from hese diseases was equal to 2·0 against 1 3 per 1000 in he large English towns The deaths attributed to whooping cough which had been 28, 44, and 55 in the three preceding weeks were 56 last week and included 30 in Glasgow, 11 in Dundee 5 in Aberdeen and 4 in Clydebank The deaths referred to diphtheria, which had been 16, 14, and 21 in the three preceding weeks fell to 10 last week, of which 4 were registered in Edinburgh and 2 in Aberdeen The fatal cases of scarlet fever, which had been 15 17, and 13 in the three preceding weeks further fell to 9 last week, and comprised 6 in Glasgow and 3 in Aberdeen The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 12, 11, and 17 in the three preceding weeks, fell to 7 last week, of which 4 belonged to Glasgow The deaths referred to measles, which had been 5, 10, and 7 in the three preceding weeks, were again 7 last week and comprised 6 in Dundee and 1 in Glasgow The 3 fatal cases of enteric fever occurred in Glasgow, and were slightly in excess of the average in recent weeks

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[1] THE LANCET April 25th 1914 p 117

The deaths referred to diseases of the respiratory system, which had steadily increased from 154 to 265 in the five preceding weeks further rose to 275 in the week under notice 35 deaths resulted from different forms of violence, against 42 and 32 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland with an aggregate population estimated at 1,212,380 persons at the middle of this year 693 births and 568 deaths were registered during the week ended Saturday, Jan 16th The annual rate of mortality in these towns, which had been 17·0, 27 8 and 25·5 per 1000 in the three preceding weeks, further declined to 24·4 per 1000 in the week under notice During the 13 weeks of last quarter the mean annual death rate in these towns averaged 18 8 against 14 9 and 16 8 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 29 2 in Dublin (against 19 6 in London and 24 2 in Glasgow), 21 7 in Belfast 29 9 in Cork 27 8 in Londonderry 17 6 in Limerick, and 30·4 in Waterford while in the 21 smaller towns the mean death rate did not exceed 18 3 per 1000

The 568 deaths from all causes were 47 fewer than in the previous week, and included 48 which were referred to the principal epidemic diseases, against 42 and 38 in the two preceding weeks Of these 48 deaths, 14 resulted from infantile diarrhœal diseases 12 from measles 10 from whooping-cough 8 from scarlet fever 3 from diphtheria and 1 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 2 1, against 1 3 and 2·0 per 1000 in the English and Scotch towns respectively The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 9 10 and 11 in the three preceding weeks further rose to 14 last week, and included 7 in Dublin and 2 in Belfast The deaths referred to measles, which had been 9 9 and 6 in the three preceding weeks rose to 12 last week and comprised 10 in Belfast and 2 in Cork The fatal cases of whooping-cough which had increased from 3 to 11 in the five preceding weeks were 10 last week of which 5 belonged to Belfast and 3 to Dublin The deaths attributed to scarlet fever, which had been 3 9 and 12 in the three preceding weeks rose to 8 last week and comprised 5 in Belfast 2 in Cork and 1 in Waterford The deaths referred to diphtheria were recorded in Belfast Cork and Portadown and the fatal case of enteric fever in Dublin

The deaths referred to diseases of the respiratory system, which had been 95 162 and 139 in the three preceding weeks rose to 164 in the week under notice Of the 568 deaths from all causes 140 or 25 per cent occurred in public institutions and 8 resulted from different forms of violence The causes of 25 or 4·4 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest in the English

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE following appointments have been made —Fleet-Surgeon H. L Penny to the *Vivid*, additional for disposal Staff-Surgeon T E Blunt to the *Pembroke* additional, for disposal Surgeon G F B Page to the *Vivid*, additional for disposal, and W A S Duck, A Fairley, and L Moss to the *Victory*, additional for disposal Temporary Surgeons J A Gordon, P A. Lemass J F McQueen and G L Ritchie to the *Victory* additional, F T Fisher to the *Pembroke*, additional, for disposal, and E M Lauderdale to the *Victory*, additional, for Haslar Hospital

James Grimoldby has been granted a temporary commission as Surgeon in His Majesty's Fleet

ROYAL NAVAL VOLUNTEER RESERVE

Temporary Commissions in the Royal Naval Volunteer Reserve have been issued as under —Lieutenants Ambrose Congreve Redmond Walter McGrath Surgeon Frederick William Willway

Surgeon Probationer J C Sinclair to the *Woolwich*, for the *Badger*, vice S R Prall (resigned)

ARMY MEDICAL SERVICE

Brevet Colonel William H. Horrocks is appointed an Honorary Surgeon to the King vice Surgeon Major General Sir J B C Reade K C B (dated Nov 6th 1914)

Colonel Thomas J O Donnell, D S O , is retained on the active list under the provisions of Article 120, Royal Warrant for Pay and Promotion, and to be supernumerary (dated Jan 18th)

ROYAL ARMY MEDICAL CORPS

Supernumerary Captain Wilfred W Treves is restored to the establishment (dated Jan 14th)

Supernumerary Captain John Gilmour is restored to the establishment (dated Jan 7th)

Lieutenant Robert William Walter Vaughan relinquishes his temporary commission (dated Dec 31st, 1914)

Lieutenant William H Johnston resigns his commission (dated Jan 16th)

Lieutenant John Spencer Daniell relinquishes his temporary commission (dated Jan 19th)

The undermentioned to be temporary Captains —Gordon Morgan Holmes (dated Nov 5th 1914) Claude Gouldesbrough (dated Dec. 28th, 1914) and James Ewing (dated Jan 5th)

Temporary Lieutenant Thomas Renton Elliott to be temporary Captain (dated Jan 14th)

The undermentioned to be temporary Captains whilst serving with the Red Cross Hospital, Netley —Dated Jan 19th. Donovan Blaise Pascall and Walter Gibson Marsden

The undermentioned to be temporary Lieutenants —Dated Nov 2nd 1914 Francis Hubert Storey Dated Dec 15th, 1914 Archibald Hector Maccoll Robertson Dated Dec 16th 1914 Charles Cavanagh Dated Dec 17th 1914 George William Fleming Dated Dec 18th, 1914 Donald Campbell Dated Dec 20th, 1914 Alfred George Caldwell Dated Dec 21st, 1914 Robert John Jones Albert Edmund Samuel Martin Charles Sand, Herbert Harland Raw George Llewellyn Brunton, and Roland Henry Fletcher Dated Dec 22nd 1914 Francis De Sales McMenamin Dated Dec 23rd 1914 Leslie Charles Johnston George Mitchell Archibald Langwill Alfred Squire Taylor, and Lacey Bathurst Dated Dec 24th, 1914 John Warwick Dated Dec 25th 1914 Jerome Ivo O Sullivan Michael Sullivan, Robert Archibald Slater Sunderland, Mortimer Hynes Norman Garfield Thornley James Sackville Martin Robert McLeod Veitch Edward Mansfield, John Hannay Douglas Martin Melvin Cruickshank, David Cochrane Hanson William De Malet Peyton, Harrold John Pickering David Haig Alan Everley Taylor Edgar Coningsby Myott Harry Stanger Sylvester Davidson Fairweather Hugh Faulkner Henry William Turner Peter

streets lying off main lines of traffic No secondary case *occurred in any household* Mr Harris's practice is to disinfect the rooms and bedding in every case, the latter being adopted more for the purpose of bringing the infectious nature of the disease before the minds of the people than because it is considered strictly necessary In the present state of uncertainty as to the *conditions* under which poliomyelitis is spread, such precautions are considered *desirable*, though their empirical nature is admitted The prompt notification and isolation of diphtheria cases in Islington during the year appears to have had a distinct result in limiting the spread of the disease, the 550 cases notified came from 473 houses, in only 34 of these were there *two cases in the house* and in only 12 houses were there three cases or more In as many as 427 houses only one case was known Mr Harris alludes to a consideration often lost sight of by those who complain of the cost of hospital isolation of infectious diseases in children The educational authority will not permit any children to attend school from infected houses, and in the absence of *isolation many scholars would have to be absent* from school six weeks or more, with the result in loss of education and *dislocation* of the educational machinery, which would entail a considerable cost, what the ratepayers lose in one direction they gain, or nearly so, in another The Islington series of reports have always some valuable observations on food inspection and adulteration, and the 1913 *report is no exception to the rule* Medical officers who are interested in the history and prevalence of adulteration will find much information in Mr Harris's chapter on this subject Generally speaking, the efforts made in this borough appear to be effective in getting food adulteration detected and punished, so far as the limited provisions of the present law allow In particular, Mr Harris is satisfied that *farmers' milk coming straight to* London, on Sundays as well as weekdays, is maintained at high quality, and his results should be gratifying to farmers "who are frequently made the scapegoats of interested persons" The least satisfactory feature of the analyst's reports is the frequency of the fraud of substituting margarine for butter The machinery for detecting the fraud exists *and is skilfully used, but the fraud itself* is so profitable that the fines inflicted seem to fail to put a stop to it

VITAL STATISTICS

VITAL STATISTICS FOR 1914

THE following statement shows the birth and death rates and the rates of *infantile mortality* in England and Wales and in certain parts of the country during the year 1914, the figures being provisional —

—	Annual rate per 1000 living			Deaths under one year to 1000 births
	Births	Deaths		
		Crude	Standardised *	
England and Wales	23·6	13·9	13·6	105
97 great towns including London	24·9	14·6	14·9	113
145 smaller towns	23·6	12·8	12·9	104
England and Wales less the 242 towns	21·9	13·3	12·2	93
London	24·6	14·4	14·4	103

* The standardised death rates are the rates which would have been recorded had the sex and age constitution of the populations *of the* several areas been identical with that of England and Wales as enumerated in 1901 A description of the method of standardising these death rates is to be found in the Registrar-General's Annual *Report* for 1911 p xxix

HEALTH OF ENGLISH TOWNS

In the 96 English and Welsh towns with populations *exceeding 50 000 persons* at the last census 8897 births and 6545 deaths were registered during the week ended Saturday, Jan 16th The annual rate of mortality in these town which had been 14·0, 21·3 and 19·4 per 1000 in the thr preceding weeks further fell to 18·8 per 1000 in the week under notice During the 13 weeks of last quarter th mean annual death rate in these towns averaged 1 against a corresponding rate of 15·3 per 1000 in Lon The annual death rate last week ranged from 7·2 i *Gloucester, 11·2 in* Tottenham, *12·9 in* Rhondda, 13·0 in Smethwick, and 13·2 in Northampton, to 25·1 in Linco *25·2 in* Ipswich *26·0 in Blackpool, 26·3* in Gillingham a 28·8 in Merthyr Tydfil

The 6545 deaths from all causes were 191 fewer than th number in the previous week, and included 454 which were referred to the principal epidemic diseases, against 5 and 487 in the two preceding weeks Of these 454 deaths 195 resulted from measles, 76 from whooping-cough, 7 from infantile diarrhœal diseases, 63 from diphtheria, 4 from scarlet fever, and 11 from enteric fever, but n one from small pox The mean annual death rate from these diseases was equal to 1·3, or 0·1 per *1000* less th in the previous week The deaths attributed to measles *which had been 175, 269, and 183 in the three* preceding weeks, rose to 195 last week and caused th highest *annual death rates of 2·1 in* Newcastle-on-Tyne 2·3 in Wigan, 2·5 in Plymouth, 2·6 in Enfield and in *Darlington, 3·1 in St Helens, 3·3 in Huddersfield* 4·5 in Grimsby, and 6·7 in Merthyr Tydfil The deaths *referred to whooping-cough, which had steadily increased* from 35 to 93 in the eight preceding weeks, fell to 76 last *week, and included 13 in London, 6 in Leeds,* 5 in Sunderland, 4 each in Willesden Bristol, and Liverpool and 3 in *Newcastle on Tyne* The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 70, 85, and 84 in the three preceding weeks further fell to 75 last week of which 20 were registered in London, 6 each in Birmingham *ham and Manchester, and* 4 in Bristol The deaths attributed to diphtheria, which had been 66, 89, and 77 *in the three preceding weeks* further fell to 63 last week, and included 15 in London, 5 in Liverpool, and 3 each in Birmingham *ham and Manchester* The deaths referred to scarlet fever which had been 30, 31, and 35 in the three preceding weeks were 34 last week, of which 10 occurred in London, 3 in Sheffield, and 2 each in Manchester and Preston The *fatal cases of enteric fever*, which had been 12, 20, and 15 in the three preceding weeks, further declined to 11 last week and included 2 in Portsmouth

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had declined from 5055 to 4153 in the seven preceding weeks, had further fallen to 3952 on Saturday last, 338 new cases were *admitted* during the week, against 348, 436 and 321 in the three preceding weeks These hospitals *also* contained on Saturday last 1641 cases of diphtheria, 82 of measles 61 of enteric fever and 34 of whooping-cough, *but* not one of small pox. The 1702 deaths from all causes in London were 36 less than in the previous week, and corresponded to an annual death rate of 19·6 per 1000 The deaths referred to diseases of the respiratory system, which had been 270, 562, and 497 in the three preceding weeks further fell to 477 in the week under notice, but were 72 in excess of the number in the corresponding week of last year

Of the 6545 deaths from all causes in the 96 towns, 211 resulted from different forms of violence and 463 were the subject of coroners' *inquests*, while 1742 occurred in public institutions The causes of 64, or 1·0 per *cent.* of the total deaths, were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly *certified* in Sheffield, Leeds Bristol West Ham Hull, Newcastle-on Tyne and in 66 *other* smaller *towns* *Of the 64* uncertified causes 13 were registered in Liverpool, 12 in Birmingham, 5 in Gateshead, and 3 in *London*

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated *at 2 344,400 persons* at the middle of this yea 1123 births and 1027 deaths were registered during *the week* ended Saturday, *Jan* 16th The annual rate of mortality in these towns, which had steadily increased *from* 17·7 to 24·5 *per 1000 in the five preceding* weeks declined to 22·8 per 1000 in the week under notice During the 13 weeks of las quarter *the* mean annual death rate in these towns averaged 16·8, against 14·9 per 1000 in the large English towns *The* annual death rate last week ranged from 14·1 in Kilmarnock 14·9 in Leith and 15·1 *in* Motherwell, to 27 in Greenock, 28·2 in Dundee and 29·5 in Ayr

The 1027 deaths from all causes were 73 fewer than in the previous week, and included 92 which were referred to the principal epidemic diseases, against numbers increasing from 77 to 117 in the three preceding weeks. O these 92 deaths, 56 resulted *from* whooping-cough 10 from infantile diarrhœal diseases, 7 from measles, 9 from scarlet fever, 7 from diphtheria and 3 from enteric fever, bu no

Correspondence.

"Audi alteram partem."

THE PRESS AND ANTITYPHOID INOCULATION

To the Editor of THE LANCET

SIR,—I notice in this evening's issue of the *Evening Standard* a full page advertisement (p 13) on behalf of the "British Union for the Abolition of Vivisection." The antivivisectionists can be ignored on account of their stupidity, but this particular advertisement deserves the most severe censure in that it is anti recruiting

The only way to deal with such a paper is on their own lines—commercial I hope, therefore, that all medical men, like myself, will in future refuse to buy it

I am, Sir, yours faithfully,

HUNTER TOD

Upper Wimpole-street, W Jan. 16th 1915

ANATOMY AT THE PRIMARY FELLOWSHIP EXAMINATION

To the Editor of THE LANCET

SIR—I have been asked repeatedly by other people than unsuccessful candidates to write to you about the questions being set in the anatomical part of the primary examination for the F R.C S The trouble is that this, which used to be a perfectly straightforward though difficult examination in topographical anatomy, seems now to be tending to become in addition a test of the candidate's knowledge of the more philosophical side of the science I hesitate to add to the troubles which I know surround the examiners for the Primary Fellowship at all times but I think that they may possibly bear with or even welcome the experience of one who has served a ten years' apprenticeship in the post which they now fill. It should be remembered that the primary examination is the point at which most candidates for the keenly sought diploma of Fellow are rejected, and the examiner's chief duty is to do his utmost to prevent men passing until they are well enough grounded in anatomy to be able to make the most of the higher teaching in surgery which they are to receive later

Anatomy has two sides Firstly, a working knowledge of all the parts

questions are to become a feature of this examination candidates will seek the aid either of small text-books, which they will try to learn by heart or of crammers whom they will trust to gauge quickly and skilfully the range of knowledge which each examiner has and the kind of questions he is likely to ask

The average time which a candidate presenting himself for the first time for this examination spends on learning his anatomy and physiology is, I think, from 20 months to two years This is not a bit too long for him to learn his way thoroughly and confidently about the human body But if morphology is expected in addition the technical pilot's knowledge of the body must suffer, and the subject is so vast that it must always be a chance whether a man happens to be able to do justice to a morphological question or not If he has had the question intelligently anticipated for him he, of course, scores heavily, and may thus make up for serious gaps in his knowledge of the real anatomy of man.

My point is that a surgeon should be at home in any part of the human body, and a clever man can just get this knowledge in two years or a little less To ask more is to endanger the acquisition of this real knowledge and to substitute for it, to some extent, an ill digested mass of theory derived from text-books and class notes Perhaps I am unduly hard on the value of the scientific side of anatomy, although it is my hobby, but I am only considering now the education of the young surgeon, and am anxious to remind myself and others that what we examiners ask the students will learn—usually in the easiest and least permanent way A practical knowledge of the body is so essential and so easily detected that I am loth to see candidates given the chance of substituting for it a second hand knowledge of the more interesting though less useful science of morphology

I am, Sir, yours faithfully,

St. Thomas's Hospital, Jan. 13th, 1915. F G PARSONS

THE PHARMACOPŒIAL DOSE

To the Editor of THE LANCET

SIR,—I am instructed on behalf of the pharmacists of Great Britain to solicit your aid in calling the attention of the medical profession to the wording of a portion of the preface to the new British Pharmacopœia In that preface the following statement is made —

Bennett, George B Hadden, Francis J Hallinan, Thomas P Inglis, William M Lansdale, Francis C Lapage, David S Martin, and Thomas Sheedy

TERRITORIAL FORCE

Army Medical Services

Lieutenant-Colonel Conrad T Green, from the Welsh Casualty Clearing Station, to be Assistant Director of Medical Services, Welsh Reserve Division, and to be granted the rank of Colonel (temporary)

Lieutenant-Colonel Harry T Challis, from the 3rd East Anglian Field Ambulance, to be Assistant Director of Medical Services, East Anglian (Reserve) Division, with the temporary rank of Colonel

Yeomanry

Yorkshire Hussars (Alexandra, Princess of Wales's Own) Surgeon Captain Walter Henry Cheetham to be Surgeon Major (temporary)

Royal Army Medical Corps

Surgeon Major Edward Herbert Myddelton Gavey (Retired List, Honourable Artillery Company) to be Major

3rd East Anglian Field Ambulance Captain William I Cowell resigns his commission on account of ill health

2nd Highland Field Ambulance Captain James Forbes MacIntosh to be Major (temporary)

1st West Riding Field Ambulance To be Lieutenants Edwin Samuel George Fowler and Henry Whitteron Robinson

3rd London General Hospital Stanley Herbert Warren to be Captain, whose services will be available on mobilisation To be Lieutenants John Bromley Rawlins and Cecil Rhodes Harrison

3rd Scottish General Hospital Captain Alexander J Archibald, from the 4th Scottish General Hospital, to be Captain

1st London (City of London) Sanitary Company Lieutenant Cresacre G Moore to be Captain (temporary)

2nd London Sanitary Company To be Lieutenants Patrick Albert Galpin, George Gordon Johnstone, George Leslie Eastes, Gerald Quin Lennane, George William Ellis, Walter Key Parbury, John H Wood, and Ernest B Pike

2nd London Casualty Clearing Station To be Captains George Herbert Hunt and Lionel Colledge

2nd North Midland Field Ambulance Lieutenant Horace Guy L Haynes, from Attached to Units other than Medical Units, to be Lieutenant

1st Northumbrian Field Ambulance The undermentioned Lieutenants to be Captains (temporary) Edward B Kitching and Joseph W Craven

2nd Northumbrian Field Ambulance William Craig Stewart to be Lieutenant

1st London (City of London) General Hospital Charles Ernest West to be Captain, whose services will be available on mobilisation

4th Northern General Hospital George Samuel Levis to be Captain, whose services will be available on mobilisation Plomer William Young to be Captain, whose services will be available on mobilisation

3rd Southern General Hospital James Frederick Robinson to be Captain, whose services will be available on mobilisation

South Wales Mounted Brigade Field Ambulance John Ambrose Cooke to be Lieutenant

3rd Home Counties Field Ambulance Henry John Brownrigg and Philip Theodosius Jones to be Lieutenants

1st East Lancashire Field Ambulance Lieutenant Stanley Hodgson, from Attached to Units other than Medical Units, to be Lieutenant

2nd East Lancashire Field Ambulance John James Hummel to be Lieutenant

2nd West Riding Field Ambulance William Herbert Smailes and Digby Wrangham Hardy to be Lieutenant

1st Northern General Hospital Major Frederick C Pybus from the permanent personnel to the list of officers whose services will be available on mobilisation Captain Daniel W Patterson, from the list of officers whose services will be available on mobilisation to the permanent personnel

3rd Northern General Hospital The undermentioned to be Lieutenants Arthur Robertson Wightman and George Ewart Martin

Notts and Derby Mounted Brigade Field Ambulance Frank Standish to be Lieutenant

West Riding Casualty Clearing Station Lieutenant Colonel William McGregor Young from the 2nd West Riding Field Ambulance to be Lieutenant Colonel

The undermentioned to be Lieutenants Charles Marsh Gozney and Arthur Stuart Hebblethwaite

Sanitary Service Albert Henry Bygott to be Captain whose services will be available on mobilisation

Attached to Units other than Medical Units —To be Majors (temporary) Captain Matthew B Ray, Captain Robert Thornton, and Captain Vincent Howard To be Captains (temporary) Lieutenant George C Jeaffreson and Lieutenant Richard V Favell Lieutenant Cecil W Rowntree is seconded To be Lieutenants Hugh Douglas McCrossan Harold Francis Lewis Hugo, and Thomas Rhind

TERRITORIAL FORCE RESERVE

Royal Army Medical Corps

Captain Edward P Minett, from the 6th London Field Ambulance, to be Captain

TEMPORARY COMMISSIONS IN THE ROYAL ARMY MEDICAL CORPS

It is notified by the War Office that there are several vacancies for temporarily commissioned officers in the Royal Army Medical Corps Candidates should be fully qualified medical men, under 40 years of age Applications should be made at once to the Secretary, War Office, Whitehall

OUTFIT ALLOWANCES

By a recent Army Order all officers granted permanent first commissions in the R A M C since August 4th and during hostilities will receive an outfit allowance of £50, to include cost of camp kit Officers granted temporary first commissions will receive £30 and £7 10s for camp kit

DEATHS IN THE SERVICES

Deputy Surgeon General George Alder Watson, I M S, Bengal Army, retired, at the age of 83, at his residence Hendre, Cheltenham, on Jan 12th He entered the Bengal Medical Service in 1855, and during the Indian Mutiny served with the 6th Battalion Bengal Artillery at Mhow in 1857, at the siege of Dhar, and also in the actions near Mundisore and Goorarea (medal and clasp) He served in the Afghan War of 1879 and took part in the advance on Kandahar and Kelat-i Ghilzai (medal) He retired in 1885.

The King has given to Temporary Surgeon James Charles Baggs, R N , late medical officer of health, Monthon Puket, authority to wear the Insignia of the Fourth Class of the Order of the Crown of Siam which has been conferred upon him by His Majesty the King of Siam, in recognition of valuable services rendered

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THE BEQUESTS OF THE LATE DR I BURNEY YEO —Dr I Burney Yeo, emeritus professor of medicine at King's College, whose death was recently recorded in our columns, left estate valued at £95 413 with net personalty of £94,366 By his will he left £3000 to the Royal Medical Benevolent Fund to found an annuity fund to be known as The Burney Yeo Bequest", £3000 to the Royal Medical Benevolent College, Epsom for a similar purpose, and £5000 to King's College (London) Hospital Medical School for a "Burney Yeo Fund' to be used for furthering the success of the school After making some personal bequests he left the ultimate residue of his estate, one moiety to the Royal Medical Benevolent Fund and the other to the Royal Medical Benevolent College. The work of the Royal Medical Benevolent Fund is regularly recorded in our columns, and our readers know how invaluable it is The medical foundation of Epsom College offers educational and pecuniary advantages of the highest sort to the sons of medical men The generous bequest to the College will materially help towards the £7000 a year which is required for the relief of urgent cases Dr Burney Yeo by his disposition of his fortune has become a great medical benefactor of the medical profession

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY —The usual monthly meeting of the executive committee of this society was held on Jan 15th Dr F J Allan in the chair The reports were considered on members permanently incapacitated of whom there are now 42 receiving annually over £4000 in sickness benefit The society provides practically, an annuity to age 65 of from £1 1s to £3 3s per week for each member so afflicted The year, as a whole has been highly successful About 120 members are serving either at the front or with their regiments at home and in the colonies So far only three claims have been made as a direct result of the war two being from illnesses contracted owing to exposure and overwork and one from a death resulting from wounds Applications are constantly being received from younger members of the profession taking temporary commissions in the Royal Army Medical Corps or serving in the various Red Cross and base hospitals All inquiries in respect of these should be addressed to the secretary Mr Bertram Sutton 300, High Holborn W C shows that the "vertebral" contact of the pancreas is almost as direct as the heart's "sternal" contact, whilst his statement confirms the experience of pathologists that swelling of the gland (sometimes much swelling) is the rule at the early stage The sequel, *qua* localisation, is largely governed by the decubitus, which is inevitably dorsal Any fluid collections, whether cystic, hæmorrhagic, or purulent, inevitably seek the dorsal plane of the thoracic and of the lumbar spinal groove, in close approach to the dorsal surface In that mechanical predicament, if we should have any use for evidence from physical signs, these might more probably be found in the safe exploration of the unconcerned dorsal field than in the danger zone of a tender and badly implicated abdomen, even though, as is sometimes reported, this should not be at first tumefied To that statement there is nothing this letter can add, but to ask, Why should we strain to percuss at a pericardial effusion, happily seldom now fatal, nay, often apt to be a merely ephemeral rheumatic episode? Why percuss the liver for congestion, or cyst, or abscess if the deadly risks of pancreatitis and of its operations are not an urgent appeal for physical signs when available? Granted that British medicine may not be singular in that lofty indifference for the aid of physical examination (where can this be harmlessly applied except at the back?), that safety "in numbers" adds none to the patient He is diagnosed—normally after death, not infrequently by the operation, rarely without it, but it would seem never by any examination for his dorsal physical signs, which keep faith with him to the grave

I am, Sir, yours faithfully,

Upper Brook-street W Jan 8th 1915 WILLIAM EWART

FROST-BITE

To the Editor of THE LANCET

SIR,—In Mr A W Mayo Robson's opportune article on Frost bite in THE LANCET of Jan 16th I note that he does not suggest any internal medication and that for prevention he only urges care of the feet and legs in various ways In view of the analogy, pointed out by himself between mild frost bite and chilblains I would like to ask whether he or any reader of THE LANCET has tried calcium salts for prevention or cure of frost bite Since two days' medication with liquor calcii chloridi, ♏ 60 in all, proves almost a specific for chilblains the fact suggests the possibility of its usefulness, either for prophylaxis or treatment of the graver trouble Moreover calcium favours the coagulation of the blood if wounds are also incurred The lactate would be more convenient under war conditions and is reputed about as efficacious if fresh

I am, Sir, yours faithfully

available to which the war will give rise but the matter is urgent, and the medical department of the army with its civil consulting surgeons will do well to give the matter immediate attention My object, however, is not so much to insist on the importance of a consideration of the general treatment of these serious conditions, but to express my personal opinion as to the undesirability of ever plating or wiring any of these compound fractures In civil practice, with all the facilities which are afforded by well found hospitals, it has gradually come to be recognised by most surgeons that compound fractures should never be wired or plated This opinion has been of only slow growth, for a long time it was felt that, as in a compound fracture the bone was already exposed, the surgeon was more readily justified in applying a plate immediately than in a simple fracture, but the results of this practice have shown that almost invariably compound fractures plated immediately do badly, and sooner or later the plate has to be removed If such unsatisfactory results are almost certain in peace time, how can we expect better results when the operation has to be performed under greater difficulties, and in wounds probably much more septic than commonly found in civil practice, and when, further, a greater length of time has elapsed since the infliction of the injury? Moreover, the need to remove the plate later is only the least of the evils which may follow this method of treatment It may lead to loss of the limb or even loss of life itself. I am writing with no personal knowledge of the work on the other side of the Channel, but I have heard that such attempts have been made, and I feel strongly that these heroic attempts to obtain perfect results may often lead to utter failure and loss of life or limb Will not some of those who have seen wiring and plating of compound fractures in this war tell us definitely what results have been obtained? We shall all receive the information gratefully, and, provided care is taken to make the statistics correct such information must prove of great benefit to us all

I am, Sir, yours faithfully,

Jan 18th 1915 F R C S

"TENDIMUS HUC OMNES"

To the Editor of THE LANCET

SIR,—Under this heading there appeared in THE LANCET of Jan 9th a letter from "A M D" criticising the prevalent impression that the loss of life among soldiers in war time greatly exceeds that which is experienced by non combatants in the civil population Your correspondent quotes a pharmacist to refer back a prescription to the prescriber

If it could be arranged as a *uniform* practice that where a practitioner orders an unusually large dose of any particular potent drug such dose should be initialled by the prescriber, all possibility of ambiguity would thereby be removed

I am, Sir, yours faithfully,
W J UGLOW WOOLCOCK,
Secretary, Pharmaceutical Society of Great Britain.

Bloomsbury-square, W C, Jan 15th 1915

NON - PANEL PRACTITIONERS AND INSURANCE ACT CERTIFICATES

To the Editor of THE LANCET

SIR,—Previous to the passage of the National Insurance Act, and since, I have been a very active and strong opponent of the "medical benefit" clauses of the Act I have always considered it to be, and still hold the same opinion, derogatory to the members of the profession to accept service on the panel on the terms and conditions under which service is rendered During the operation of the Act I have been consulted by large numbers of insured persons, and when necessary have given them certificates of illness as a non panel practitioner, which have always been accepted by the Approved Societies of which they were members, and their so called "sickness benefit" has been paid In consequence of the new scheme embodied in Memorandum 211/I C on the question of "certificates for sickness benefit," whereby all certificates have to be uniform, I, on the suggestion of the National Medical Union, wrote to the clerk of the London Insurance Committee requesting him to send me a supply of the "official certificates" for use in the case of insured persons who may consult me in the future The reply I received is given below

In view of the decision in the case of "Heard *v* Pickthorne" this appears to me an attempt to "bluff" non panel practitioners and to force them to place their names on the panel

I am, Sir, yours faithfully,
London, Jan 13th, 1915 JOHN MACKEITH

[ENCLOSURE]

With reference to your letter of Jan 3rd, 1915, I have to inform you that the Committee are able to supply forms *for medical certificates to practitioners who are on the panel* and also to those practitioners with whom insured persons have been granted permission to make their own arrangements As you are not on the London panel, and further, as no insured person has been allowed to make his own arrangements with you, it is not possible for the Committee to supply you with certificate forms as you request

I am, &c.,
(Signed) THOMAS BATEY,
Clerk of the Committee

To the Editor of THE LANCET

SIR,—The following are two incidents illustrating the latest attempts on the part of the Government to crush such of us as do not approve of the National Insurance Act One of our members has reported to me that an insured patient under his care complained that although her sick money had been paid up to the end of the year it was now being withheld owing to his certificate being of no use because not on the proper form He thereupon wrote to the clerk of the Local Insurance Committee requesting to be supplied with a book of the new forms, but was told that his request could not be entertained as such forms were only issued to panel doctors He has since forwarded the correspondence to the Insurance Commissioners with a request for the redress of this injustice, which seems to me about as hopeful as a complaint from the shepherd to the wolf would be, more particularly seeing that he has since found out that on receipt of his request the clerk wired to the Commissioners for instructions

In a second case of deadlock our member prompted the insured patient to write to the secretary of her approved society pointing out that as she had been regular in her subscriptions she expected them on their part to be prompt in their payments, seeing that she had complied with the law by presenting the certificates of a qualified medical man He wrote on his own account pointing out that the society's action was not only distinctly illegal, but also calculated to damage him, and that failing a retraction and apology within 48 hours he would *take the case into the law courts The retraction and apology were forthcoming within the time limit*

I forward these examples of injustice not as a plea for help from the powers that be or should be, for non panel men have learnt to be self reliant, but simply as a further example of the curious fact that in borrowing this national insurance scheme from its makers the Government have gone the whole hog in the assimilation of German methods of ruthlessness mixed with bluff It has never been easy to tell what the General Medical Council might or might not hold to be infamous conduct Had they so considered the tearing up of the pledge and undertaking they might have saved the profession much loss of dignity and the general public much monetary loss and suffering, but they *apparently had no foreknowledge* of the importance since attributed to "scraps of paper" Such is the part played by time and chance in the *affairs* of men

Of the unpopularity of the National Insurance Act there are many signs, not the least significant being the spectacle of the Minister on whose shoulders *the mantle of* Elijah has been unloaded wandering in search of a safe seat

I am, Sir, yours faithfully,
FRANCIS HEATHERLEY,
Honorary Secretary Liverpool Non panel Union
Rock Ferry Jan 18th 1915

THE DIAGNOSIS OF PANCREATITIS

To the Editor of THE LANCET

SIR,—One heading only is absent from Sir Frederic Eve's Bradshaw lecture published in THE LANCET of Jan 2nd—not *that there* is either gap in *its* exhaustive treatment of the subject or thought of under rating the importance of diagnosis the omission is plainly descriptive of the present status of that rather essential chapter The ground is partly covered by the lecturer's remarks, an important fraction of it too by his suggestive diagram to guide the *operator* I need not trespass at much length upon your space, as there is little I can add to previous statements to which the references are subjoined[1] The diagram

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[1] 1898 The Diagnostic Uses of Percussion of the Vertebral Spines wi h General *Remarks on* "*Pleximetric*" Bones and Viscera THE LANCET July 2nd p 23 1899 On the Clinical Uses of Dorsal *Percussion* &c Brit. Med Jour vol ii., p 1167 On the *Practical Aspects of* Dorsal Percussion, and in Particular of the *Percussion of the* Spl… 1912 C T … THE LANCET July 29th p 261 et passim utroque … Brit. Med. Jour., … Pre-operative Diagnosis of Appendicitis &c … ii., p 1741. 1914: *Dorsal* Examinations in Undiagnosed Abdominal Affections (with Special Reference to *Pancreatitis* and Appendicitis ibid vol. i p 453

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE subscriptions to the Fund during the week ending Jan 19th have been good They include, it will be seen, a cheque received through Mr A A Tindall for £137 10s, being money mainly collected by Dr H Macnaughton Jones, and acknowledged in the *Medical Press and Circular* Dr Macnaughton Jones's endeavours on behalf of the Fund have been strenuous throughout, while he was one of the first supporters of the movement

The support of the Liverpool Medical Institution, which was promised from the beginning, has been substantial The subscriptions already received amount to £300, and it is hoped that, in reply to the appeal of the institution, a sum of money may be raised "worthy of the history and position of Liverpool as a great medical centre" Subscriptions should be sent at an early date to Dr T R Bradshaw honorary treasurer, at the Liverpool Medical Institution Professor Jacobs has accepted an invitation from the council of the institution to address the members of the medical profession on the circumstances and needs of his Belgian *confrères* at the Medical Institution on Thursday next, Jan 28th at 8 45 P M Cards of invitation to medical practitioners who are not members of the body will be supplied on application

The local committee in Birmingham has already made a handsome collection, £148 having been sent this week to Dr Des Vœux

International interest in the Fund has been stirred up and will not be lessened by the following episode The Belgian Society of Medicine in London at a meeting held on Monday last passed a vote of sympathy with the Italian sufferers in the recent terrible earthquake and requested that the money so far collected in Italy for the needs of Belgian doctors and pharmacists should be employed in alleviating the distress among the Italians

The appeal by Professor Jacobs on behalf of the medical profession in Belgium is sympathetically discussed in *Ugeskrift for Laeger* for December 17th This Journal is the official organ of the Danish Medical Association and it announces that the secretary of the association will receive contributions and forward them to the committee in England

The subscriptions to the British Fund which have been received up to Tuesday evening last by Dr Des Vœux in addition to £3120 already acknowledged are as follows —

	£	s	d
Southgate Ward North Middlesex Division B.M.A (per Dr M. Stewart Smith Hon. Sec.)—			
Dr Gilfillan ..	1	1	0
Dr R. S Dickson ..	0	10	6
Dr A S Ransome	1	1	0
Dr W N Barker	0	10	6
Dr D Fairweather	0	10	6
Dr A. Armstrong ..	1	1	0
Dr A. D Macnair	1	1	0
Dr R T Vivian	1	1	0
Dr H S Vivian	0	10	6
Lieutenant C St A. Vivian R A.M.C	0	10	6
Mrs Westlake, M B	0	5	0
Dr J F S Weir ...	0	10	6
Dr A. Wells ...	0	10	6
Dr Goble	0	10	6
Dr Jamieson	0	10	0
Dr H Sewell Sims	0	10	6
Dr M Stewart Smith ...	0	10	6
Dr S Richards	1	0	0
Dr L. Grant ..	1	1	0
Dr G N Macdonald	1	1	0
Dr A. C Ta'Bois	1	1	0
Dr T Renell Atkinson	1	1	0
Sydenham Medical Club (per Dr Harold Low Hon Treas) ..	21	0	0
Mr Hermann Woolley	10	10	0
Part proceeds of Sale of Work held in Dublin for Relief of Belgians (per Mrs Wigoder Hon Treas) ..	16	0	0
Mr J Wheatley ...	1	0	0
Sir Henry Roscoe	2	2	0
Lieut Colonel Mond R.A.M.C ..	1	1	0
Miss K. M Wicks ...	0	10	0
Mr Charles Ryall ..	20	0	0
Sir Hugh R. Beevor Bart	10	10	0
Dr C Westbrook	1	1	0
Barnsley Division B M.A. (per Dr R. F Castle Hon Sec)	35	3	6
Mr R N Pye-Smith	3	3	0
Lieut. Col W H. Ogilvie I M S	10	0	0
Subscriptions received through *Medical Press and Circular* at the London Office of this Journal largely through the personal influence of Dr H Macnaughton-Jones ..	137	10	0
Messrs J T Davenport Ltd ..	3	3	0
Messrs [illegible] Ltd	0	10	6
Messrs A. Wulfing and Co	52	10	0
Mr A E. Tanner	1	1	0
Mr C J Miles	5	5	0
Dr C O Hawthorne	3	3	0
Dr J Hingston Fox	1	1	0
Northampton Division B.M A. (per Dr P S Hichens Hon Sec.) second donation—			
Dr Watson	0	10	0
Dr Pickering	0	10	0
Dr Kilpatrick	2	2	0
Dr J A. Brown	0	5	0
Dr Bensley	0	10	0

	£	s	d
Birmingham Pharmaceutical Association (per Mr F Smith Hon. Sec.)—			
Messrs. Cuxson Gerard and Co ..	5	5	0
Mr E Corfield ...	5	0	0
Mr H. Critchlow	5	0	0
Mr E W Mann ...	5	0	0
Mr Alfred Southall	5	0	0
Mr F Smith ..	2	2	0
Mr W Izon ...	3	3	0
Messrs J and E Sturge Ltd. ..	2	2	0
Mr H Buckingham	1	1	0
Mr J W Atkinson	1	1	0
Mr G H Buckley	1	1	0
Mr J H Griffin	1	1	0
Mr F H Alcock ...	0	10	6
Mr P Howard ..	0	5	0
Mr Dunscombe ...	0	2	6
Messrs Philip Harris and Co	10	10	0
Mr Jeffrey Poole	5	0	0
Mr J Wakefield ...	5	0	0
Mr S J Gittoes	2	2	0
Mr T W Peck	2	2	0
Mr A. Twiver	2	2	0
Mr S W Hall ..	2	0	0
Mr C S Birt	1	1	0
Mr T Ground... ..	1	1	0
Mr C Jennings ..	1	1	0
Mr F J Richards..	1	1	0
Mr F H Biddle ...	1	0	0
Miss H Robinson ..	1	0	0
R H P ..	0	15	6
Mr G F Cornhill	0	10	6
Mr S W Gateley ..	0	10	6
Mr J Palmer ..	0	10	6
Mr J H Whitehead	0	10	6
Mr E M Whiting ..	0	10	6
Mr H Pratt ..	0	10	0
Mr T F Thorpe ..	0	10	0
Mr G N Turner	0	10	0
Mr B Strachan ..	0	5	0
Miss F M Trinder	0	5	0
Mr J T White ..	0	5	0
Birmingham Local Committee (per Dr Robert Saundby) third list—			
Professor Peter Thompson	5	0	0
Professor Bennett May	3	3	0
Dr W H Wynn ..	3	3	0
Dr Leonard G Parsons	3	3	0
Professor Kauffmann	3	0	0
Dr S Ashley Smith	2	2	0
G P	2	2	0
Dr Stanley Barnes	2	2	0
Dr T D P Evans	2	2	0
Dr J B Spence	2	2	0
Dr Vincent Magrane	2	2	0
Mr W Billington	2	2	0
Dr J Furneaux Jordan	2	2	0
Dr T Stacey Wilson	2	2	0
Prof Leith ..	2	2	0
Dr G F Fosbroke	2	2	0
Dr G Tregelles Hingston ..	2	2	0
Dr H Ashley Beltin	1	1	0
Dr C T B Johnson	1	1	0
Dr L. Latimer Greene	1	1	0
Dr J B William	1	1	0
Dr Walter I Jordan	1	1	0
Dr J Whitford ..	1	1	0
Dr O F V			

comparability of the data involved is an indispensable condition, but in the present instance this precaution appears to have been neglected It is familiar knowledge that the army consists exclusively of picked men, chosen from their fellows after strict medical examination, the health and physique of the troops after enlistment having been raised as far as practicable by careful training as well as by suitable feeding and exercise and by hygienic environment We cannot compare the vitality of such troops with that of the general community, which includes large proportions of paupers, criminals, and other undesirable units, as well as of invalids and lunatics whose vitality and power of resistance to disease are manifestly inferior The common impression, which attributes exceptional loss of life to the forces engaged in modern warfare, is the right impression. "A. M D" concludes by offering helpful counsel to the host of probable sufferers from the present war in the event of its long continuance He emphasises the duty incumbent on every man, whether civilian or combatant, to make provision for his family against the possibility of his premature demise In a campaign of the present dimensions serious casualties are inevitable, but of the privation and distress thereby caused neither the incidence nor the intensity can possibly be foreseen The desirability of securing the needful protection by means of life assurance is one of the significant lessons of the existing European conflict

I am, Sir, yours faithfully,

Jan 18th 1915 MEDICAL STATISTICIAN

Obituary.

JOHN ROBINSON, L R C.P EDIN, L F P & S GLASG

THE recent death of Mr John Robinson, of Runcorn, removes a distinct personality He was greatly beloved and respected by those among whom he worked, and was typical of a class which would be styled old fashioned and out of date by the present generation Transfer Ian Maclaren's Dr Maclure from the Highlands to Runcorn, and substitute the bargees of Mr Jacobs for crofters, and the characters are identical His manner of dress would have been eccentric if worn by another, winter and summer a short, thick, double-breasted pilot cloth coat, buttoned up to the chin, afforded no opportunity for the display of linen, for which John Robinson had no use He wore no heels on his boots His head was covered with a shaggy thick crop of iron grey hair, and he was quite unconscious that his appearance differed from the man in the street

Having served an apprenticeship before commencing his scientific studies, he believed that the practical experience and knowledge of human nature acquired during this period was of infinitely more value than the preliminary scientific studies of the medical student to day His day's work, year in and year out, was not interrupted by week ends and holidays, for which he felt no need Busy morning and evening with surgery work and plenty of it, with long rounds in the afternoons Sundays and Bank Holidays not excepted, he was ready at any moment to tackle a case of difficult labour, to fight a pneumonia or perform an operation for strangulated hernia, for his clients could not afford the luxury of a specialist and his work had to be done with the assistance of a brother practitioner and the district nurse Instead of the appointments of an up to date surgical theatre, his operation room was often the bedroom in a cottage

A correspondent writes "He once showed me a knife carried among other miscellanies in his pocket with which he had done 20 hernias I asked him how many of the patients had died, he retorted not more than the average of a city hospital" His recreation was gardening and he regularly read his Greek Testament. Thus his life work was done day in and day out, assisting arrivals and easing departures, practising his profession as a vocation, not as a means of gaining wealth He used his power to help and his skill to advise those among whom his life work lay John Robinson would be more than content with the respect and affectionate memories of his friends, workers in humble spheres, rather than that of the so called upper classes

HUGH WARNOCK, M.R C P IREL, J.P

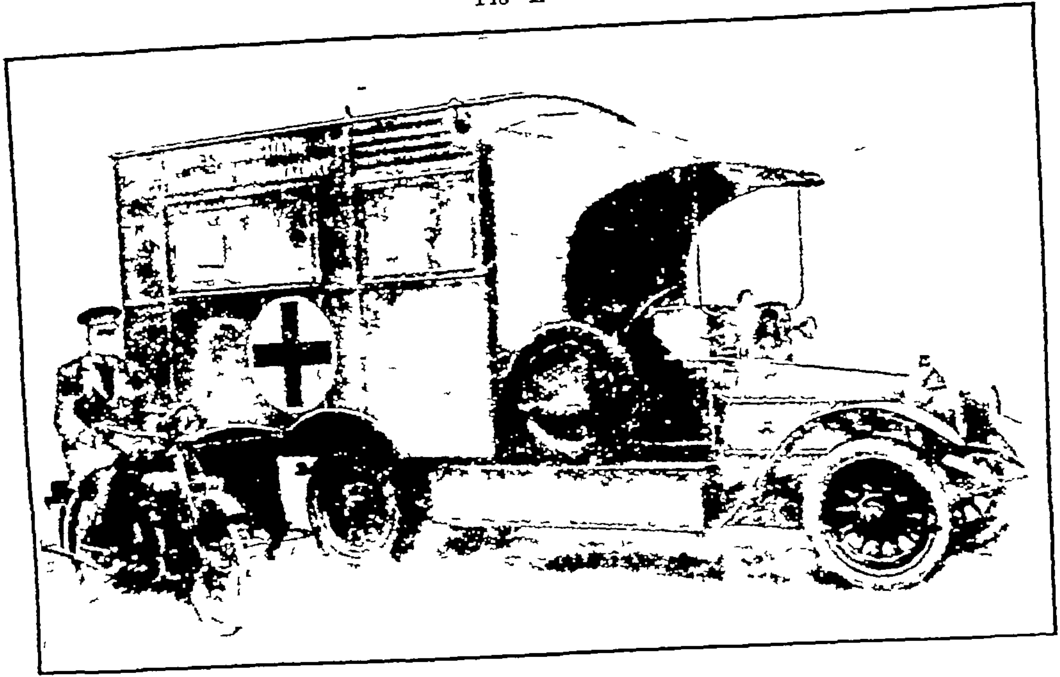
Mr Hugh Warnock, who died recently at his residence, Clogher, co Tyrone, as the result of an attack of cerebral hæmorrhage, was a native of the Dromore district of co Tyrone For the past 38 years he practised in Clogher, where he was dispensary medical officer and medical officer of health He was also medical attendant at the workhouse hospital for the past 13 years, and a magistrate for co Tyrone A skilful practitioner of medicine, a thorough man of business, and generally popular, Mr Warnock will be very much missed

ETHEL FRANCES LAMPORT, M.D BRUX, L S.A

WE regret to learn that Dr Ethel Frances Lamport died very suddenly on Dec 27th, 1914, whilst driving to church Miss Lamport entered the London Hospital as a probationer in 1884, and after completing her training was made sister of one of Sir Frederick Treves's wards, a post which she held for several years After leaving the London Hospital Miss Lamport took the diploma of sanitary inspector and then decided to study medicine, entering the London (Royal Free Hospital) School of Medicine for Women in 1891 On qualifying Dr Lamport at once returned to the East end of London and began to practise in Bow, where she worked unremittingly for over 11 years for the improvement of the physical and social conditions of the women and children who came under her care She also held the post of public vaccinator in Millwall (Isle of Dogs) for 10 years When failing health made it impossible for Dr Lamport to continue her arduous life of work amongst the sick poor, she retired to Well Manor, near Long Sutton, Hampshire, where she quickly endeared herself to her neighbours by her genial manner and the kindly interest she took in them Dr Lamport will long be remembered in Bow and Poplar for her unselfish devotion to the sick poor in those districts

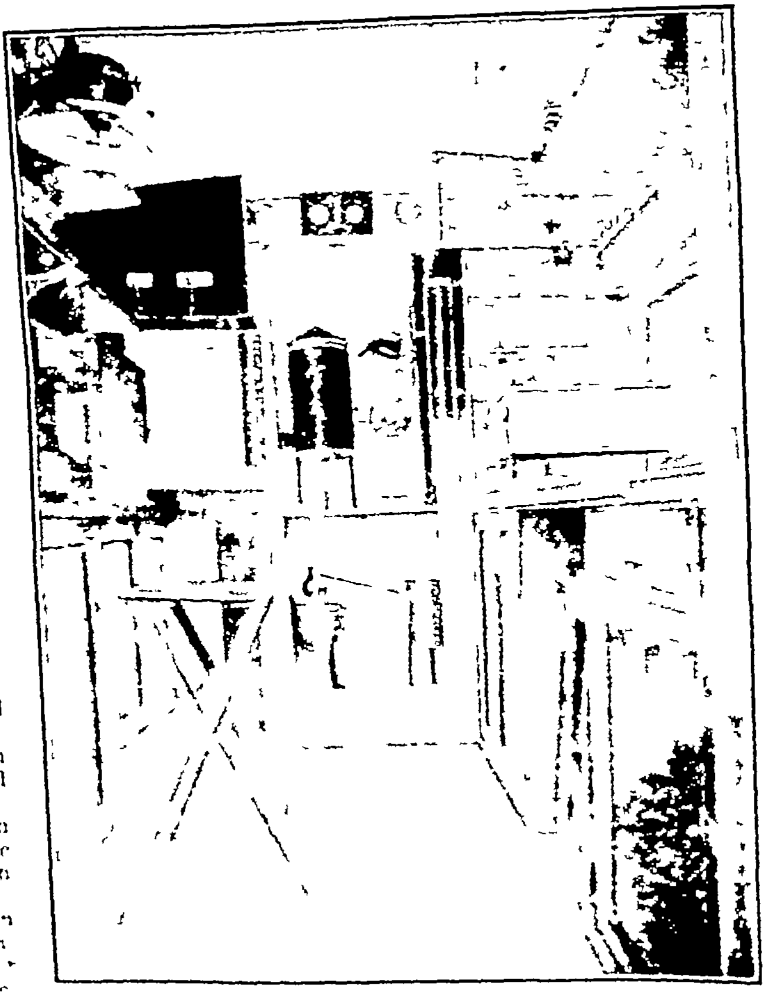
ROYAL COLLEGE OF SURGEONS OF ENGLAND — At a meeting of the Council of the College held on Jan 14th the diploma of M R C S was conferred upon Mr Stephen Abraham Liebson of Guy's Hospital and licences to practise dental surgery were granted to Mr Percy Gordon Burlo-Griffin, of Liverpool University and Mr Harry At[illegible] Hutson of Middlesex and National Dental Hospitals all of whom have complied with the regulations

FIG 1.



General view of field motor laboratory and side-car

FIG 2.



[illegible]

spent in providing compact storage space for breakable glass apparatus and delicate instruments without risk of damage from jolts and bumps when the car is on rough roads. The investigator indeed has everything he is likely to want for ordinary purposes almost immediately under his hands. Three previous laboratory cars which have been equipped by Messrs. [illegible] and Taylor for the War Office during the progress of the war are already in use with the Expeditionary Force and various improvements in design [illegible] which provides a mobile means of fetching pathological fluids and specimens from points nearer the firing line than the car itself would ordinarily reach. Captain A. C. H. Gray, assistant professor of pathology at the Royal Army Medical College, is in charge of the laboratory, which has already left for an oversea base. On Monday last Captain Gray was received by Princess Christian at Schomberg House and the laboratory car was inspected by Princess Victoria of Schleswig-Holstein. Our illustrations give an outside view of the laboratory car and side-car, and an interior view of the laboratory taken from the door at the back of the car.

	£	s	d
Mr H H Bailey	1	0	0
Mr A. Chapman (proceeds of dependants prescriptions)	0	5	0
A. J V	0	5	0
Mr W W Hole	0	10	0
Guy's Hospital Dispensary Staff (per Mr H Finnemore)	2	2	0

	£	s	d
Mr H I Stephens	1	1	0
Mr G E Butter	1	1	0
Mr G N C Last	1	1	0
Mr H S Adams	0	10	0
Mr J Fred Davies	1	1	0
Dr W Domett Stone	3	3	0
Major R C Lever R A.M C and Mrs Lever	3	3	0

The third list of subscribers in Ireland, published in THE LANCET last week, brought the amount of the Irish Fund up to £816

LIVERPOOL MEDICAL INSTITUTION

The following is a list of subscriptions received down to Jan. 16th, in response to an appeal made by the Liverpool Medical Institution —

	£	s	d
Dr T R Bradshaw	5	5	0
Dr Richard Caton	5	5	0
Mr G P Newbolt	5	5	0
Mr Frank Jeans	5	5	0
Mr Thelwall Thomas	5	5	0
Mr C Puzey	5	5	0
Mr R A Bickersteth	5	5	0
Mr Robert Jones	5	5	0
Mr Douglas Crawford	5	5	0
Dr W B Paterson	5	5	0
Dr Findlay Stevenson	5	5	0
Dr Hill Abram	5	5	0
Dr Collinson (Preston)	5	5	0
Dr T R Glynn	5	5	0
Dr Edgar Browne	5	5	0
North Western Society Medical Officers of Health	5	5	0
Dr Holland	5	5	0
Dr R C Brown (Preston)	5	5	0
Mr T H Bickerton	5	5	0
Dr J R Kerr (St. Helens)	5	5	0
Dr E W Hope	5	5	0
Dr George Johnston	5	0	0
Drs Joyce and Foley	3	3	0
Dr Leslie Roberts	3	3	0
Dr Warrington	3	3	0
Mr Charles Shears	3	3	0
Mr Hugh E Jones	3	3	0
Dr G Stopford Taylor	3	3	0
Mr R J Hamilton	3	3	0
Dr J M Hunt	3	3	0
Dr W B Bennett.	3	3	0
Dr J Ernest Nevins	3	3	0
Dr R W Mackenna	3	3	0
Dr Grossman	3	3	0
Mr T C Litler-Jones	3	3	0
Drs S and E Gill	3	3	0
Dr John Hay	3	3	0
Dr Edgar Stevenson	3	3	0
Dr Permewan	2	2	0
Mr R W Murray	2	2	0
Mr Frank T Paul	2	2	0
Dr Blair Bell	2	2	0
Dr J M Chisholm	2	2	0
Dr John Grimes	2	2	0
Dr Whitfield Little	2	2	0
Dr J H Willett	2	2	0
Dr Vereker	2	2	0
Dr George Oldershaw	2	2	0
Dr J E Dunn (Preston)	2	2	0
Dr C S Jago (Latchford)	2	2	0
Dr Maccall (Southport)	2	2	0
Dr E M Stockdale	2	2	0
Dr Hugh A. Clarke	2	2	0
Dr M G Garry	2	2	0
Dr Winstanley (Bryn)	2	2	0
Dr Butt (Chester) ..	2	2	0
Dr John Bark	2	2	0
Dr Walter T Clegg	2	2	0
Dr T R Armour	2	2	0
Dr McCann ..	2	2	0
Dr Lissant Cox (Preston)	2	2	0
Dr Thomas Guthrie	2	2	0
Mr Robert Kelly	2	2	0
Professor Ernest Glynn	2	2	0
Dr T F Pugh	2	2	0
Dr Ll Morgan	2	2	0
Dr Glynn Whittle	1	1	0
Dr Owen Bowen	1	1	0
Dr James Huskie ..	1	1	0
Dr H R Hurter	1	1	0
Dr N Percy Marsh	1	1	0
Dr J R Logan	1	1	0
Dr A. J McConnell	1	1	0
Dr Rawsthorne	1	1	0
Dr Adam Moss ..	1	1	0

	£	s	d
Dr J G Corkhill	1	1	0
Dr J B Edis	1	1	0
Mr A. A Bradburne	1	1	0
Mr Rushton Parker	1	1	0
Dr D Donnelly	1	1	0
Dr J W Hayward	1	1	0
Dr W T D Allen	1	1	0
Dr E T Davies	1	1	0
Dr Sanderson	1	1	0
Dr MacLennan (Runcorn)	1	1	0
Dr John Dunn	1	1	0
Dr John Grimshaw	1	1	0
Dr H T Nixon	1	1	0
Dr Peter Stuart	1	1	0
Dr N Caine	1	1	0
Dr H Harvey	1	1	0
Dr Phillips Hunt ..	1	1	0
Dr J C Unsworth	1	1	0
Dr W Thomas (Rhyl)	1	1	0
Dr J T Grierson	1	1	0
Dr J P Nixon	1	1	0
Dr Ashworth (Southport) ...	1	1	0
Dr G G Goodwin	1	1	0
Dr J Percy Hall	1	1	0
Dr Percy G Sheppard	1	1	0
Dr A. Frank Walker	1	1	0
Dr F A Pond ..	1	1	0
Dr Basil Murphy	1	1	0
Dr A. Bernard	1	1	0
Dr Buxton (Great Crosby)	1	1	0
Dr Blair (Wigan)	1	1	0
Dr Masson (St. Helens)	1	1	0
Dr Wilkins	1	1	0
Dr J D McFeely	1	1	0
Dr Burgess (Holylake)	1	1	0
Dr J Bryan	1	1	0
Dr Irvine (Birkdale)	1	1	0
Dr Mary Carr	1	1	0
Dr P Sheridan	1	1	0
Dr S J Palmer	1	1	0
Dr R A. Brannigan	1	1	0
Dr Waugh ..	1	1	0
Dr Hepworth Shaw	1	1	0
Dr Pantland Hick	1	1	0
Dr H S Lyle	1	1	0
Dr Joseph Walker	1	1	0
Dr Claude Rundle	1	1	0
Dr James H Allan ..	1	1	0
Dr Forrest (Southport)	1	1	0
Dr Hablot Browne	1	1	0
Dr Buxton ..	1	1	0
Dr F L Angior	1	1	0
Dr T M Angior	1	1	0
Dr Irwin Sellers (Preston)	1	1	0
Dr T E Jones	1	1	0
Dr A. Craigmile	1	1	0
Dr A. W German	1	1	0
Dr W R J Garson ..	1	1	0
Dr Peter Davidson	1	1	0
Dr Gerald Wallace	1	1	0
Dr Charles Sharp	1	1	0
Dr Frank H Barendt ..	1	1	0
Dr M T Stack ...	1	1	0
Dr A. S Parkinson	1	1	0
Dr J A. Howard	1	1	0
Dr R. F Carse	1	1	0
Dr S H House	1	0	0
Dr B Sumner ...	1	0	0
Dr E Hughes	0	10	6
Dr J A. Rigby (Preston)	0	10	6
Dr W C Carter (Southport) ..	0	10	6
Dr H J Knox ..	0	10	6
Dr J O Saunders	0	10	6
Dr J Leggate ...	0	10	6
Dr G Y Yardumian ..	0	10	6
W Jones	0	10	6

Medical men and pharmacists and other kind supporters of the Fund in the Liverpool area should send their subscriptions to Dr T R Bradshaw, at the Liverpool Medical Institute

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries acknowledges with thanks the receipt of surgical instruments kindly contributed by the following gentlemen since the publication of the last list —

Dr F R B Atkinson, Warwick street London S W Mr John W Orviss, Jersey, Dr Blair, Jedburgh, Dr Selwyn Edwards, West Bromwich, Dr Basil Hounsman, Tardebigge, near Bromsgrove, Dr R Anderson, Erdington Birmingham, Dr S Bodger, Studley, Warwickshire, Dr E Cautley Park street, Park lane London, W, Dr W H Lewis Llansantffraid, Mon

Subscriptions to the Fund should be made payable to the Belgian Doctors' and Pharmacists Relief Fund, crossed Lloyds Bank, Limited, and sent to Dr H A Des Vœux, 14, Buckingham gate, London, S W

The War.

THE PRINCESS CHRISTIAN MOTOR LABORATORY

THROUGH the generosity of an anonymous donor a fully equipped motor bacteriological laboratory has been placed this week at the disposal of the War Office for service at the front The car, which will be known as the "Princess Christian Motor Laboratory," consists of a large van shaped body divided into two compartments, with driver's seat in front, on a 20–30 h p Clement Talbot chassis The outside body work of the coach was built by Messrs Peters and Son, of Acton, and the internal construction, fittings, and scientific equipment have been devised and carried out by Messrs Baird and Tatlock, Limited, under the supervision of Mr Douglas Baird

The main laboratory—6 ft 6 in long by 6 ft wide—is entered through a door at the back, and is fully equipped with glass covered bench top, sink, centrifuge, balances, microscope, bookshelf, water cistern, and so on, with shelves, drawers racks, and cupboards containing reagents, microscopical stains, and all the necessary apparatus for bacteriological and cytological work. The smaller compartment—2 ft 10 in in depth by 6 ft wide—is separated from the laboratory by sliding doors, and contains two incubators, hot air and steam sterilisers, still and condenser, autoclave and water bath, together with a fume cupboard with electric fan beneath to drive out impure air and gases The necessary heat for these appliances is provided by Primus burners and intensive oil lamps, while a petrol incandescent lamp supplies enough heat to warm the laboratory in winter Electric current for general and microscopical illumination is obtained by a dynamo belt driven from the engine The height of the laboratory at the centre is 6 ft 6 in, and there is enough floor space in the middle of it to give impromptu sleeping accommodation for the bacteriologist if need arises The driver's platform can be closed in by screens, and a trap lets down above the seat, thus furnishing two bunks one above the other in which the driver and laboratory assistant can sleep The total weight of the car with driver, is 3 tons 8 cwt, and the cost has been upwards of £2000

The manner in which this travelling clinical laboratory has been designed and fitted up, so as to give the fullest working outfit in the smallest space consistent with freedom of movement, is deserving of high praise Much ingenuity has been desirous of enlisting as soon as their teeth are in order The Soldiers Dental Aid Fund, with offices at 36, Liecester-square, London, W C, has been established for a similar purpose and has the support of the Presidents of the Royal Dental and National Dental Hospitals

4TH LONDON (CITY OF LONDON) GENERAL HOSPITAL.—This Territorial General Hospital unlike its fellows in the London District, occupies buildings expressly designed and constructed for use as a hospital The original plan before war broke out, was that the site of the hospital on mobilisation should be at St Paul s School, but this idea was abandoned early in August in favour of transforming the greater part of the new King s College Hospital at Denmark Hill into a military hospital The whole institution in its double capacity as a military and civil hospital has now been in full working order since within a week of the order for mobilisation, the military side of it being under the able direction of Lieutenant-Colonel Nestor Tirard, the Commandant Although the entire hospital building, as designed, has not yet been completed the hospital authorities have been able to place at the disposal of the War Office sufficient accommodation to provide a fully equipped military hospital of 520 beds, and to these have been added 114 additional beds as the need for expansion arose A very large number of military patients are also received under the administrative control of the 4th London General Hospital authorities in five other London hospitals in the east the north and the west At King s College Hospital the casualty block and six wards on the first floor remain for civilian use and for the medical school The rest of the buildings are military, and the full use of the whole equipment of the hospital is at the disposal of the military medical authorities the War Office paying for the upkeep of those portions of the hospital which have been handed over to them The staff of the 4th London General Hospital is drawn from the medical and surgical staffs of King s College Hospital, St George s Hospital, Charing Cross Hospital and Westminster Hospital Colonel Tirard is assisted in his administrative duties by Major G N Biggs and the Quartermaster Captain J Boxall Of the a la suite staff of medical officers available for service on mobilisation the following have already been called up for duty Lieutenant Colonels Norman Dalton and Stanley Boyd, Majors A. H Tubby F W Mott W G Spencer A Carless W Aldren Turner and J Galloway, Captains A M Gossage, H F Waterhouse, Cyril Ogle Arthur Latham, William Turner, William Hunter, W C Bosanquet A H Evans J S Collier, H S Pendlebury J Purves Stewart E R Carling T Crisp English, R O Sibley W D Este Emery and R Knox The principal wards of King s College Hospital, which are built on the pavilion system are admirably suited for the use of military patients and the modern construction and equipment of the new hospital are of the greatest possible advantage to all concerned

BRIGHTON MILITARY HOSPITALS A TRANSPORT

evacuated of their usual inmates on Jan. 16th, when the keys were handed over to the Government representatives, and active preparations are being made for the reception of wounded Indian soldiers, elaborate alterations being necessary in both the sanitary and cooking arrangements The institution is now officially known as Kitchener's Hospital, and on Jan 12th there arrived from Bombay the personnel of five field hospitals and two hospital ships, comprising 25 English officers, 26 Indian officers, 41 warrant officers (Indians) and 544 men (Indian soldiers), the latter including attendants, cooks, &c, for both Mohammedan and Hindu The occupation of this hospital by wounded Indians is not expected for some time"

BRITISH HOSPITALS FOR THE BALKANS —The British Red Cross is sending out two hospital units one to Serbia and one to Montenegro The unit for Montenegro consists of Dr F G Clemow C M G, in charge, with Dr Virtue Tebbs and Dr Burnham as surgeons, two trained nurses two Voluntary Aid Detachment ladies, and four male orderlies The unit will proceed first to Malta, whence it will make every endeavour to reach Montenegro A large quantity of medical stores is being taken, and, owing to the conditions prevailing in Montenegro, the unit is compelled to carry with it food, &c, for six months, so as to be independent of local supplies A hospital unit for Serbia is also leaving London under the superintendence of Mr James Berry, senior surgeon to the Royal Free Hospital The unit has the direct authority of the Serbian Government, and the British Admiralty has consented to transport it free of cost A full medical and surgical outfit will be carried, while clothing and other comforts for the people of Serbia will also be taken, so far as funds permit The medical staff consists of Mr James Berry, senior surgeon and medical superintendent, Mr Laurence E Panting, surgeon, Mrs F May Dickinson Berry, physician and anæsthetist, Dr Ernest V Williams, radiographer, Dr Dorothy Chick, house surgeon, and Miss K M Parkinson, dresser, together with 8 nurses under Miss Irvine Robertson, 5 lady orderlies, 4 orderlies, and a cook

THE FRENCH AUTOMOBILE AMBULANCE NO 1 —Our Paris Correspondent writes that on Jan 13th Dr Hallopeau laid before the Société de Chirurgie statistics of the results obtained with automobile ambulance No 1, which was supervised by himself in conjunction with a surgical colleague of the Paris hospitals whose idea it was, and who acted as médecin chef of this new sanitary formation The object was to provide a surgical establishment in which operations could be done with as much certainty of surgical technique as in the most modern hospitals, and as near the firing line as possible This was accomplished in the most scientific yet simple manner imaginable The entire formation consists of three light wagons and an engine This last contains the most important part of the ambulance the steam generator, which assures at any hour of the day or night an adequate supply of perfectly sterilised

GERMANY AND AUSTRIA IN WAR TIME

A medical correspondent, writing from Switzerland on Jan 15th, sends us the following notes of scientific and professional affairs in Germany and Austria, gleaned from the medical press of those countries since the New Year

It might be of interest to try to form some idea of the way in which five months of war have affected the German medical world The medical papers all appear regularly and have their usual external appearance, although slightly decreased in size, especially in the advertisement columns Most have special military supplements, but the text of the journals is by no means exclusively military, and turning to the pages of the Munich journal one reads of complement reactions and of tuberculin, followed by a case of suture of the right ventricle from a sabre cut during a quarrel, an illustration of the seamy side of militarism The British journals naturally figure no longer in the summaries of current literature, although a Vienna paper continues to use American sources freely as well as the journal of the Royal Army Medical Corps It is unfortunate that, although prominence was given to the complaint of the Hamburg doctors against the conditions supposed to prevail among the interned Germans in England, no notice has been taken of the effective replies to this published in THE LANCET and *British Medical Journal* The medical societies continue to meet at the principal university centres, while the character of the communications is largely dependent on proximity to the fighting line A reunion at Lille (which is explained by the papers to be in France !) naturally discusses bullet and other wounds Explosive bullets still figure *ad nauseam* and it is refreshing to meet the following paragraph "The doctor can often help to set the soldier's mind at rest by correcting his frequently erroneous opinion that he has been wounded by an explosive bullet. To be wounded is hard enough, but the feeling of being the victim of the enemy's baseness is harder still, and when not justified by facts should be removed, if possible, in the interest of the wounded man himself" At the universities nearly the usual number of students have been enrolled, but a large proportion of these are away on war leave Here, again, the towns nearest the front are most depleted. At Strasburg, for instance, 535 out of 1155 students are at the front, at Bonn 1117 out of 4518 The new university of Frankfurt on Main, which was inaugurated by an Order in Council signed by the Kaiser on June 10th, 1914, was opened without ceremony in October, and although ten of the new professors were at once called to the front, the well known names of Quincke and v Noorden appear as professors and 80 medical students were enrolled Amid the shout of arms time has been found to celebrate the 400th birthday of Vesalius, the founder of anatomy, with an exhibition at Berlin, which might indeed now have been conducted at his birthplace, Brussels

The health of the German army continues to be reported as excellent, but certain grave risks are not far distant Typhus has broken out among the Russian prisoners at the camp at Cottbus with several hundred cases, prevented so far by rigid isolation from spreading outside the camp, but Professor Jochmann, of Berlin, fell a victim to the disease whilst conducting a Government inspection On the Eastern frontier the soldiers are recommended to carry 30 to 50 grammes of naphthalin to keep off body parasites in order to avoid possible infection, but it is doubtful whether the supply of this drug is sufficient to make the suggestion practicable In the last report there were 166 cases of cholera among the Russian prisoners in Germany, but only 1 Englishman, 10 German soldiers, and 2 German civilians have been infected. In Austria the disease appears to be less prevalent although during three months in a single Vienna hospital 2800 stool examinations were made, and vibrios were found in 250 persons Attention is called to the great danger of cholera carriers—i e, cases coming from infected areas with only slight symptoms In general the health of the prisoners is also reported to be good, but bitter complaint is made of the difficulty of sparing food for the number of these which is stated to be 600,000, and attention is called to the urgent need of sending the unfit ones home The food supply in general continues to give rise to anxious thought A medical writer discusses at length the practical aspects of the question remarking what a large part the food supply plays in the effectiveness of the army, regretting that the potato harvest was not so good as was expected, and emphasising the great advantage that the army is on enemy's soil whilst the family at home eats proportionally less He advocates the working out of the experience of both the productive and hygienic side of the nation's supply and the enforcing its observance by law In Berlin it has so far been impossible to persuade either the bakers to bake or the population to eat, the prescribed bread containing 10 per cent of rye flour, and the prospect of a shortage in wheat-supply is increasingly imminent. The lack of drugs in Germany has apparently not been severely felt so far, although morphia and other opium alkaloids have doubtless been replaced where possible by synthetic remedies in ordinary practice, morphia itself being left largely for the relief of the wounded Stress is laid on lack of drugs in Russia, where there is said to be no manufacture of pure chloroform for anæsthetic purposes nor of iodine and its derivatives, but an expedition is stated to have been sent to the White Sea to procure a stock of iodine from the seaweed there Another medical writer states with apparent seriousness "We must free ourselves from our exaggerated German reserve, solicitude and conscientiousness even bordering on pedantry" in order to ensure rightful demands The intellectual ability of the German doctor is further illustrated by a serious discussion of high medico-legal authorities as to the ownership of bullets extracted by operation from wounded men On the one side it is argued that after shooting a bullet the enemy surrenders his property in it without conferring it upon his opponent, in whose body it therefore remains as only lost, as it is not an integral part of his tissue But in no case can the doctor take possession of it without permission Another grave authority considers that the bullet still remains the property of the hostile side

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THE BRITISH RED CROSS SOCIETY —In its summary of work for the week ending Jan. 16th the British Red Cross Society states that during the past week there have been despatched to Boulogne 6 ambulances, 1 motor cyclist, and 1 lorry, to Dunkirk 4 ambulances and 2 touring cars, to Calais 1 lorry, and to various places in England 12 ambulances The number of auxiliary home hospitals accepted by the War Office up to Jan. 16th is 686 containing beds for 19,159, including 377 beds accepted during the past week. At present at Netley Hospital there are 145 British, 8 foreign invalids, 6 Belgians, and 240 Indians in hospital. One death has occurred among the Indians from pneumonia. The new hospital for nurses is being erected and the buildings of the Irish Hospital are progressing and will be brought into use at the end of the month. 1490 cases of stores were sent abroad during the week, of which 1259 were despatched to Serbia and Montenegro Fifty hospitals in this country were supplied with 252 cases of stores and garments The number of patients who have been treated in the British Hospital during the eight weeks it has been opened now total 873—namely, British, 50 officers and 816 of other ranks, and seven German prisoners. Two orderlies left for Serbia on the 16th, and one clerk for Boulogne, also three cooks for Boulogne. During the week 24 nurses were posted for home service and one despatched for foreign service

VACANCIES FOR MEDICAL OFFICERS —Major C M Fegen, R A.M C (T F), divisional sanitary officer of Reigate, asks us to state that medical officers are needed in his command both for field ambulances and for regimental work Applications for commissions should be made to Captain Cave, Officer Commanding Depôt (Medical Units), Duke of York's Headquarters, Chelsea London S W —In our Service column this week an announcement is made that the War Office has several vacancies for temporary lieutenants in the Royal Army Medical Corps

SIR WILLIAM OSLER, according to a telegram from Montreal, has offered his services to the McGill University base hospital which is now being organised for duty at the front.

DENTAL AID FOR SOLDIERS —The trustees of the late Sir William Dunn have made a grant of £1000 to Guy's Hospital to be applied for the treatment of the teeth of soldiers now serving with the British forces and of men

The resolution also provided for the sending of a circular to practitioners explaining and deprecating the delay thus arising in remitting payments and urging that an intimation of the regret of the Committee at their inability to make prompt payment should be conveyed to the Commissioners. The delay was denounced in strong terms in the course of the discussion and in connexion with the adoption of the minutes and reference was also made to another matter in which the medical profession was hardly treated. This arose out of a letter from the Commissioners stating that the concessions made to druggists with regard to the increased cost of drugs through the war were not applicable to practitioners on the panel who had arranged to dispense medicines to their insured patients on a capitation basis.

Medical Magistrate.—Dr. Frederick Wolverson has been appointed a justice of the peace for the county of Stafford.

Anthrax in Aberdeen.—A case of anthrax has occurred in Aberdeen, the victim being a woman who was engaged in mending bone meal bags. She returned from her work an hour earlier than usual on Dec. 3rd last complaining of feeling unwell. The glands of her neck were very much swollen. On the next day she went to her work but returned much worse. A medical man was sent for and her condition gradually became worse, death supervening on Dec. 8th. During the inquiry under the Fatal Accidents Inquiry Act the medical practitioner who attended her said that her mouth was in a septic condition and it was possible the germs might have found entrance by the septic gums or the disease might have been contracted through rubbing the bone dust into a scratch or broken pimple. The jury found that the woman had died from anthrax contracted accidentally.

Donations and Bequests.—Subject to the life interest of his wife the late Mr. Thomas S. D. Wallace of Brighton left by will £1000 each to the London Hospital, Guy's Hospital, the Homœopathic Hospital, the British Home for Incurables at Streatham, and the Cancer Hospital at Fulham.—The Royal Dental Hospital, Leicester-square, has received a donation of £100 from the Worshipful Company of Goldsmiths.—By the will of the late Mr. H. Mitchell of Birmingham the testator left £6700 upon trust to apply the income for the benefit of the Birmingham Athletic Club for the provision of annual lectures on health and hygiene during the 21 years following his decease and subject thereto this sum is to be divided as to one-third to the Queen's Hospital, Birmingham, one-fourth to the Birmingham and Midland Eye Hospital, one-fourth to the Birmingham and Midland Skin and Urinary Hospital, and one-sixth to the Birmingham Athletic Institution.—Among recent donations to the fund for the extension of the London (Royal Free Hospital) School of Medicine for Women are £262 10s. from the Mercers' Company and £50 from the Goldsmiths' Company.

Infectious Disease in Belfast.—At the January monthly meeting of the corporation of Belfast officer of health did not get a free hand or insist on his advice being acted upon. The necessity of weekly cleansing of every national school in the city was considered. A medical councillor having pointed out that there was a diminution in the number of scarlet fever cases even before the closing of the schools added that it would be interesting to find how far closing of the schools contributed to the diminution of the scarlet fever epidemic. It is a healthy fact to find the public health of Belfast being discussed by its civic fathers; it means that the public of Belfast are showing clearly that they are far from being satisfied with the present condition of the health of the city.

Medical Barrister.—Dr. W. E. St. Lawrence Finny, J.P., who is a member of the Inner Temple, has passed the Bar Final Examination, qualifying for admission as a barrister-at-law.

Leicester Royal Infirmary.—At a quarterly meeting of the governors and subscribers held on Wednesday last it was decided to build and equip a new and complete pathological and clinical laboratory and post-mortem department at an approximate cost of £3500.

Royal Meteorological Society.—The annual general meeting of this society was held on Wednesday evening last at the Surveyors' Institution, Great George-street, Westminster, when Captain H. G. Lyons, F.R.S., was elected president, and Mr. F. Campbell Bayard and Commander W. F. Caborne, C.B., secretaries for the ensuing year. The new members of council are Mr. J. S. Dines, Mr. A. P. Jenkin, and Sir J. W. Moore, M.D.

Hunterian Society.—On Wednesday, Jan. 27th, a visit will be made by the members to the Pathological Department of St. Bartholomew's Hospital, where tea will be served at 4 P.M. in the Kan back Library. The following demonstrations will be given: Dr. Mervyn H. Gordon, The Technique of Wassermann's Reaction; Dr. Mackenzie Wallace, (1) The Estimation of Blood Sugar in Diabetes, and (2) Abderhalden's Serum Diagnosis of Pregnancy; Dr. A. E. Stansfeld, The Projectoscope as a Method of Showing Pathological Specimens; Dr. J. W. Trevan, Recent Additions to the Hospital Museum; Dr. G. Graham, The Estimation of the Alveolar CO; Dr. Langdon Brown and Dr. A. Feiling, A Tumour of the Mid-brain.

Mr. William Hichens died at his residence in Redruth, Cornwall, on Jan. 15th, in his fifty-first year. He was a son of the late Dr. J. Harvey Hichens, and was educated at Epsom College and the London Hospital Medical School. He held several appointments at Redruth, being surgeon to the West Cornwall Miners' Hospital and Hospital for Women, and was also medical officer for the workhouse infirmary and public vaccinator. He was greatly interested in football and was for 15 years president of the Cornwall Rugby Union. When at the London Hospital he was captain of the cricket and football teams. He was extremely popular in Redruth and the district and much sympathy is felt there for his widow and the abdomen have been operated upon, of which three were cured The surgeons have operated in it for ten hours in succession

SOLDIERS' DREAMS —A correspondent in charge of an ambulance on the Continent, when his time was not fully occupied by surgical emergencies, has had the curiosity to inquire into the psychical consequences of the emotions inseparable from active fighting as shown in dreams and other subconscious manifestations Neurotic subjects, as one would expect, he says, react in a most striking fashion to the shock of explosions in their immediate vicinity Some develop a tendency to somnambulism and are met wandering about the premises with terror and anxiety depicted on their faces in anxious search of their regiments Short of somnambulism the dread of losing contact with their fellows seems to be felt with extreme frequency, and horror of isolation constitutes the commonest nightmare of men in the first fighting line They dream that they are wandering through endless trenches as complicated as an artificial maze, or are picking their way through lonesome forests whence all but they have fled The slightest noise during sleep calls up visions of exploding shells or the tramp of armed men, throwing them into a frenzy of shouting terror, to the indignation of their resting fellows Oddly enough, these men are as brave as the rest in face of real danger Another common night terror is the dream of a sudden call to arms and the inability to find some indispensable article of attire or combat, a conception productive of intense mental agony Live shells naturally occupy a large share of subconscious attention, and an exasperating nightmare is the discovery in one's bed of a shell ready and willing to burst, associated with the usual nightmare incapacity to execute the necessary movements to get rid of it Several men have had dreams centring round the inability to withdraw the bayonet from the enemy's body when urgently required for self defence Numerous instances of "traumatic hysteria" are met with in which men, suddenly roused from deep sleep by explosions, develop the characteristic paralyses and disturbances of sensation In one case there was marked limitation of the field of vision and inability to connect letters into words, the man could read the letters, but could not pronounce the word when spelled nor write the word when pronounced Insomnia and more or less troublesome restlessness are also common consequences of the strain on the nervous system of actual warfare

ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE WAR.—The President, Vice President, and Council of the Royal College of Surgeons in Ireland have decided to place in the College a permanent record of the names of all the students, Licentiates, and Fellows of the College who are at present serving with His Majesty's Navy and Expeditionary Forces and further to erect a suitable memorial to all such as fall in the war Relatives and friends are invited to communicate the names of such students, Licentiates, and Fellows to the Registrar of the College, Dublin

IRISH MEDICAL MEN AND THE TERRITORIAL FORCES —Dr J C McWalter, governor of the Apothecaries' Hall of Ireland, writes 'May I appeal through your pages to the army authorities to give Irish doctors the same facilities for serving their country as are enjoyed by our British brethren? In Great Britain a very large proportion of practitioners belong to the Territorial Forces It may not be possible for them to go to the front but they are doing active service and if an emergency occurred would doubtless be ready to go where wanted In Ireland we have no Territorial Forces and though a very large number of our younger men have volunteered and a great many are in the Officers Training Corps there appears to be no opportunity for medical men above the age of 45 of joining any branch of the Army Medical Service except in a few isolated instances

BRITISH PRISONERS IN GERMANY —A correspondent in Switzerland writes — 'An interesting report on the condition of the French and British prisoners in the concentration camps of Germany has just been presented to the International Committee of the Red Cross Society at Geneva by Dr Ferriere and M Gustave Ador The two Swiss delegates spent a considerable time in Germany where the authorities apparently did their best to make their task of investigation both pleasant and easy The report lays emphasis on the fact that the enforced confinement does not seem to be having any ill effects upon the health of the prisoners The moral sufferings which the régime of complete isolation occasions the officers are it is pointed out, considerable The inaction which now characterises their lives—as contrasted with the strenuous vivid life on the fields of battle—also weighs heavily upon them They are allowed no newspapers, very few books, limited and very colourless correspondence. From the point of view of sanitation and organisation it is stated the great concentration camps in the neighbourhood of Berlin are entirely admirable The wooden dwelling houses are well built, are provided with double walls, and are comfortably heated Long corridors suitable for exercise divide the rows of dwellings, and in the centre of the camps a canteen, where cigars, warm clothing and food and delicacies were sold, was generally found The delegates regret that unfounded reports, based probably upon individual cases which had no general significance in regard to the concentration camps in Germany have been given publicity The material conditions of captivity, their experience indicated, are satisfactory The ordinary diet of the prisoners is that of the German soldiers "

Count Lalaing, the Belgian Minister in London, has sent a letter to the Vice Chancellor of the University of Cambridge expressing grateful appreciation to the Senate of the University for their generous hospitality to professors from the Universities of Louvain, Liége, and Ghent, and to a number of students unfitted for military service with the Belgian army

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Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND —At the quarterly examination in Practical Pharmacy held on Jan 14th the following candidates were approved —

Willoughby Agar, B A. Oxon Oxford and Birmingham Universities Charles Milwyn Philip Ardern Ashcroft Manchester University London Hospital Burrell B A. Oxon. Oxford University and London Hospital Herman Gerald William John Dearden Manchester University Donald Charles Farquharson St Mary's Dresing Guy's Hospital Donald Charles Farquharson St Mary's Hospital William Vincent Gabe Middlesex Hospital and private study Sures Chandra Ghose St Mary's Hospital Geoffrey Dowson Gripper Guy's Hospital Denis Paul Guilfoyle St Bartholomew's Hospital Carl Gustavo Waldemar Hahr St George's Hospital Russell Walbancke Hodgson Jones Manchester University Lancelot Horsley Guy's Hospital Harold Leslie Hughes St. George's Hospital John Stuart Lewis St Mary's Hospital Eric Spanton Mawe B A Cantab Cambridge University and St Bartholomew's Hospital George Stanley Mitchell King's College and Westminster Hospital Ismail Mortada, B A. Cantab Cambridge University and University College Hospital Charles Cyril Okell, B A Cantab Cambridge University and St Bartholomew's Hospital Hoel Larry Price Guy's Hospital; Thomas Lord Price B A. Oxon Oxford University and St Thomas's Hospital Edmund Douglas Richardson Charing Cross Hospital Edgar Stanley Rowbotham Charing Cross Hospital and King's College Everard William Lewer Sharp London Hospital Edith Grace Sherwood Royal Free Hospital; Francis Henry Smith M A Cantab L D S Eng Cambridge University and St George's Hospital and Myles Denison Boswell Tonks London Hospital

EAST SUSSEX INSURANCE COMMITTEE —At a meeting of the East Sussex Insurance Committee protest was raised by medical men present at the delay taking place in the making of payments to practitioners on the panel final credits for 1913 as well as provisional credits for 1914 being still unsettled The Commissioners had issued a circular to medical men intimating that the Insurance Committee would make no further advance until the practitioner in question had furnished the required records and the making of proper returns had been recently rendered in many cases impossible owing to the war and the loss of cards in transmission A resolution passed by the Medical Benefit Subcommittee provided for the drawing and signing of cheques by the Committee after examination and approval of the amounts payable but recognised the intervention of the Commissioners by providing that his cheque should not be sent to a practitioner until the Commissioners notified the Committee that they had received the lower halves of his record cards from him

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.—Temporary Junior House Physician. Salary £100 per annum, with board and residence.

NEWCASTLE-ON-TYNE, [illegible] HOSPITAL FOR CONSUMPTION AND [illegible].—Assistant Resident Medical Officer. Salary at rate of £[illegible] per annum, with board and residence.

NEWPORT, MON., ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary for first six months at rate of £100 per annum, second six months £125, and third six months £150, with board, residence, and laundry.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £[illegible] per annum, with board, residence, and laundry. Also Assistant House Surgeon for six months. Salary at rate of £100 per annum, with board, residence, and laundry.

PADDINGTON INFIRMARY, [illegible], Harrow-road, W.—Two Assistant Medical Officers for six months. Salary at rate of £[illegible] per annum, with board, lodging, and washing.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Assistant House Surgeon for six months. Salary at rate of £[illegible] per annum, with board and residence.

PRESTON ROYAL INFIRMARY.—Assistant Resident Medical and Surgical Officer. Salary £[illegible] per annum, with board, residence, and laundry.

PUTNEY HOSPITAL, Putney Common, S.W.—Resident Medical Officer. Salary £[illegible] per annum, with residence, board, and laundry.

RICHMOND (SURREY), ROYAL HOSPITAL.—House Surgeon. Salary £[illegible] per annum, with apartments, board, and washing.

[illegible] AND DISPENSARY, [illegible].—Resident Medical Officer. Salary £[illegible] per annum, with free house partly furnished and garden.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL, [illegible], Great Portland-street, W.—Resident House Surgeon, unmarried. Salary £100 per annum, with board, washing, &c.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—Assistant House Surgeon. Salary at rate of £[illegible] per annum, with lunch and tea.

SALFORD ROYAL HOSPITAL.—Resident Surgical Officer and Casualty House Surgeon for six months. Salary at rate of £[illegible] and £[illegible] per annum respectively, with board and residence.

SALFORD UNION INFIRMARY.—Resident Assistant Medical Officer, unmarried. Salary £[illegible] per annum, with apartments, attendance, and rations.

[illegible] INFIRMARY.—Assistant House Surgeon, unmarried. Salary £[illegible] per annum, with apartments, board, lodging, and washing.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior and Junior House Surgeons. Salary £100 and £[illegible] per annum respectively, with board, residence, &c.

SHEFFIELD CHILDREN'S HOSPITAL.—House Surgeon. Salary £[illegible] per annum, with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £[illegible] per annum, with board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—House Surgeon and Assistant House Physician. Salary £100 per annum, with board and residence.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £[illegible] per annum, with rooms, board, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £[illegible] per annum, with residence, board, and washing.

STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY.—Resident Assistant Medical Officer. Salary at rate of £[illegible] per annum.

[illegible] UNION.—Assistant Resident Medical Officer. Rooms and rations provided.

[illegible] GENERAL HOSPITAL.—House Surgeon. Salary £[illegible] per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Senior House Surgeon. Salary £[illegible] per annum, with board, lodging, and laundry.

[illegible] HOSPITAL, [illegible], N.W.—Resident House Surgeon. Salary £[illegible] per annum, with board, residence, and washing.

[illegible] ROYAL [illegible] INFIRMARY.—House Surgeon, unmarried. Salary £[illegible] per annum, with rooms, board, and washing.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £[illegible] per annum, with board, residence, &c.

VICTORIA HOSPITAL FOR CHILDREN, [illegible], Chelsea, S.W.—House Physician for six months. Salary £[illegible], with board and lodging.

WAKEFIELD, CLAYTON HOSPITAL.—Senior House Surgeon. Salary £[illegible] per annum, with board, lodging, and laundry.

WALSALL AND DISTRICT HOSPITAL.—Junior House Surgeon and [illegible]. Salary £[illegible] per annum, with board, residence, and laundry.

[illegible] HOSPITAL FOR [illegible], [illegible].—Resident Medical Officer. Salary £[illegible] per annum, with rooms and board.

[illegible] AND [illegible] HOSPITAL.—House Surgeon and Assistant House Surgeon, unmarried. Salary £[illegible] and £[illegible] per annum respectively, with residence, board, and laundry.

[illegible] HOSPITAL FOR [illegible], [illegible], W.—[illegible].

[illegible] AND [illegible] HOSPITAL, [illegible].—Junior House Surgeon. Salary at rate of £[illegible] per annum, with board, residence, and washing.

[illegible] AND [illegible].—[illegible] House Surgeon. Salary £[illegible] per annum, with [illegible].

[illegible] HOSPITAL.—House [illegible]. Salary at rate of £[illegible] per annum, with [illegible].

[illegible]

[illegible] per annum.

[illegible]

[illegible]

Births, Marriages, and Deaths.

BIRTHS.

[illegible].—On Jan. 12th, at [illegible], Heene-road, Worthing, the wife of W. J. [illegible], M.R.C.S., of a son.

[illegible].—On Jan. 13th, at Manor-place, Edinburgh, the wife of John D. Comrie, M.D., F.R.C.P. Edin., of a daughter.

FOULDS.—On Jan. 14th, at Seaton-road, Edgbaston, the wife of Arthur Foulds, [illegible], of a daughter.

GRAY.—On Jan. 10th, at New Barn Cottage, West Malling, the wife of Harry Gray, M.R.C.S., of a son.

PHIPSON.—On Dec. 18th, 1904, at [illegible], Mrs. E. Selby Phipson, wife of Captain E. Selby Phipson, I.M.S., a daughter.

MARRIAGES.

THOMAS—[illegible].—On Jan. 12th, at St. Mary's, Rye, Martin Phillips Thomas, B.A., M.R.C.S., L.R.C.P., to [illegible], youngest daughter of William [illegible], of Rye [illegible].

DEATHS.

[illegible].—On Jan. 12th, at [illegible]-street, Gravesend, Surgeon-Major Edward Joseph [illegible], M.D., M.R.C.S., L.R.C.P., aged [illegible] years.

[illegible].—On Jan. 13th, at [illegible], Edward [illegible], M.R.C.S., aged [illegible] years.

WATSON.—On Jan. 16th, at [illegible], Cheltenham, Deputy Surgeon-General George [illegible] Watson, I.M.S., Bengal Army (retired), aged [illegible] years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London.

Synopsis of the British Pharmacopœia, [illegible], and of the Poison Laws of Great Britain and Ireland. Compiled by H. Wippell Gadd, F.C.S., Barrister-at-Law. Eighth edition. Price 1s. net.

Elements of Pharmacy, Materia Medica, and Therapeutics. By Sir William Whitla, M.A., M.D., LL.D. Tenth edition. Price 9s. net.

Aids to Pathology. By Harry Campbell, M.D., B.S. Lond., F.R.C.P. Third edition. Price 2s. 6d. net.

A Text-Book on the Diseases of the Nose and Throat. By Jonathan Wright, M.D., Director of the Department of the Laboratories, New York Post-Graduate Medical School and Hospital, and Harmon Smith, M.D., Surgeon to the Throat Department of the Manhattan Eye, Ear, and Throat Hospital. Price 21s. net.

BUTTERWORTH AND CO., London and the Colonies.

Butterworth's Workmen's Compensation Cases, October, [illegible]—October, 1904. Edited by His Honour Judge Ruegg, K.C., and Douglas Knocker, Barrister-at-Law, M.A. Lond., D.P.H., assisted by R. W. [illegible], Barrister-at-Law. Price 7s. 6d. net.

CASSELL AND CO., London.

Manual of Chemistry, Theoretical and Practical, Inorganic and Organic. Adapted to the Requirements of Students of Medicine. By Arthur P. Luff, M.D., B.Sc. Lond., F.I.C., and Hugh C. H. Candy, M.A., B.Sc. Lond., F.I.C. Fifth edition, enlarged. Price 7s. 6d. net.

OPEN COURT PUBLISHING COMPANY, THE, [illegible] Boulevard, Chicago.

The [illegible]. An Exact and [illegible] Description of the [illegible]. By [illegible], Member of the American Association for the Advancement of Science. With an Introductory Note by Professor [illegible]. Price [illegible].

CHURCHILL, J. AND A., London.

Anatomy of the Human Skeleton. By J. Ernest Frazer, F.R.C.S. Eng., Lecturer on Anatomy at the Medical School of St. Mary's Hospital. Price [illegible].

The Book of Prescriptions, with Notes on the Pharmacology and Therapeutics of the More Important Drugs and an Index of Diseases and Remedies. By E. W. Lucas, F.I.C., F.C.S. With Introduction by Arthur Latham, M.A., M.D., F.R.C.P. Ninth edition. Price [illegible].

The Book of Pharmacopœias and Unofficial Formularies. By E. W. Lucas, F.I.C., F.C.S., and [illegible]. Price [illegible].

[illegible], Washington.

[illegible]

[illegible] AND [illegible], London.

[illegible]

[illegible], London.

[illegible]

[illegible]

[illegible]

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BETTY MOORE, M., F.R.C.S. Irel., has been appointed Medical Officer to the Union Hospital, Enniskillen.

BUNTING, DORA E. L., M.D. State Med., M.B. Lond., D.P.H. Camb., has been appointed Temporary Tuberculosis Officer for Sunderland.

CLAPPERTON, T. J. M., L.S.A., has been appointed District Medical Officer to the Daventry Union.

GIBBINS, H. B., M.D. Lond., has been appointed Medical Officer of the Tuberculosis Dispensary established at St. Bartholomew's Hospital in connexion with the National Insurance Act.

GILMOUR, R. W., M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed District Medical Officer to the Droxford Union.

LAVERTY, T., M.B., B.S. R.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Rathfriland District of the county of Down.

MITCHELL, A. PHILP, M.D., Ch.M., F.R.C.S. Edin., has been appointed Temporary Assistant Surgeon at Chalmers Hospital, Edinburgh.

PAPADOPOULOS, T. G., M.B., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Miller General Hospital for South East London, Greenwich-road, S.E.

SHEPHERD, D. R. C., M.B., B.S. Lond., has been re-elected Resident Medical Officer of the Middlesex Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN DISTRICT ASYLUM, Newmachar.—Assistant Physician. Salary £200 per annum, with board.

BARNSLEY BECKETT HOSPITAL AND DISPENSARY.—Second House Surgeon, unmarried. Salary £120 per annum, with apartments, board, and laundry.

BARRY EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

BARRY URBAN DISTRICT COUNCIL ACCIDENT AND SURGICAL HOSPITAL.—House Surgeon. Salary £250 per annum.

BATH ROYAL UNITED HOSPITAL.—House Physician. Salary £120 per annum, with board, lodging, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary £100 per annum, with board and laundry.

BIRMINGHAM CITY EDUCATION COMMITTEE.—Radiographer on two and possibly three half-days per week. Salary at rate of £75 per annum per half day's service per week.

BIRMINGHAM CITY MENTAL HOSPITAL, Rubery hill.—Female Junior Assistant Medical Officer. Salary £2[illegible]0 per annum, with apartments, board, laundry, &c.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer, unmarried. Salary £240 per annum, with apartments, fire, lights, and attendance.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church-street.—Senior and Junior House Surgeons. Salary £110 and £100 per annum respectively, with residence and board, &c.

BIRMINGHAM MATERNITY HOSPITAL.—Female House Surgeon for six months. Salary at rate of £100 per annum, with board, residence, and laundry.

BIRMINGHAM UNION.—DUDLEY ROAD INFIRMARY: Third Assistant Medical Officer. Salary at rate of £170 per annum. Fourth Assistant Medical Officer. Salary at rate of £160 per annum. SELLY OAK INFIRMARY: Assistant Medical Officer. Salary at rate of £180 per annum. All with apartments, rations, laundry, and attendance.

BLACKBURN UNION WORKHOUSE AND COTTAGE HOMES.—Resident Assistant Medical Officer, unmarried. Salary £250 per annum, with apartments, rations, washing, and attendance.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon and Third House Surgeon. Salary £150 and £130 per annum respectively, with apartments, board, and attendance.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £120 per annum, with board, residence, and laundry.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

BRADFORD ST. LUKE'S HOSPITAL AND UNION HOUSE.—Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with rations, apartments, and washing.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried. Salary at rate of £125 per annum, with board, lodging, and washing.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BRISTOL GENERAL HOSPITAL.—Resident Obstetric Officer for six months. Salary at rate of £120 per annum, with board, residence, &c.

BROMSGROVE, WORCESTERSHIRE ASYLUM, Barnsley Hall.—Locum Tenens Medical Officer.

BURY INFIRMARY.—Junior House Surgeon. Salary £150 per annum, with board, residence, and washing.

CAMBERWELL INFIRMARY, Brunswick-square, S.E.—Temporary Female Assistant Medical Officer. Salary at rate of £250 per annum, with board, lodging, and washing.

CANTERBURY, KENT COUNTY ASYLUM, Chartham.—Third Junior Assistant Medical Officer. Salary £250 per annum, with quarters, board, washing, &c.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—Female House Surgeon for Ophthalmic and Ear and Throat Departments. Salary £140 per annum, with board, laundry, and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistant.

CITY OF WESTMINSTER UNION INFIRMARY, Fulham-road, S.W.—Second Assistant Medical Officer and Third Assistant Medical Officer. Salary £160 and £140 per annum respectively, with board, residence, and washing.

COVENTRY, COVENTRY AND WARWICKSHIRE HOSPITAL.—House Physician. Salary £110 per annum, with rooms, board, washing, and attendance.

DERBY EDUCATION COMMITTEE.—Temporary Assistant School Medical Officer. Salary £300 per annum.

DERBYSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

DOUGLAS, ISLE OF MAN, NOBLE'S HOSPITAL.—Resident House Surgeon, unmarried. Salary £150 per annum, with board and laundry.

DUDLEY GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £100 per annum, with board, residence, and washing.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

EXETER CITY ASYLUM.—Assistant Medical Superintendent. Salary £250 per annum, with apartments, board, laundry, &c.

FIFE DISTRICT ASYLUM, Cupar.—Senior Assistant Medical Officer and Assistant Medical Officer. Salary £220 and £170 per annum respectively, with rooms, board, and attendance.

FULHAM TUBERCULOSIS DISPENSARY.—Senior Medical Officer. Salary £500 per annum.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—House Physician for six months. Salary at rate of £60 per annum, with board, lodging, residence, and laundry.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £200 per annum, with board, lodging, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon. Salary £150 per annum, with board, residence, and laundry.

HALIFAX ROYAL INFIRMARY.—Second and Third House Surgeons, unmarried. Salary £120 and £100 per annum respectively, with residence, board, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Anæsthetist. Salary 50 guineas per annum. Also Assistant Resident Medical Officer. Salary £100 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Two House Surgeons, unmarried, for six months. Salary £30, with board, residence, &c.

HULL, VICTORIA CHILDREN'S HOSPITAL, Park-street.—Female House Surgeon and Female Assistant House Surgeon. Salary £60 and £50 per annum respectively, with board and laundry.

LEEDS PUBLIC DISPENSARY.—Female Resident Medical Officer. Salary £130 per annum, with board, residence, and laundry.

LEICESTER BOROUGH SANATORIUM AND TUBERCULOSIS DISPENSARY.—Assistant Medical Officer. Salary £300 per annum.

LEICESTERSHIRE EDUCATION COMMITTEE.—Temporary Assistant School Medical Officer. Salary at rate of £300 per annum.

LEWES, EAST SUSSEX COUNTY COUNCIL EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £320 per annum.

LIVERPOOL, CITY OF.—Female Assistant Medical Officer. Salary £350 per annum.

LIVERPOOL STANLEY HOSPITAL.—House Surgeons and Physicians.

LLANELLY BOROUGH EDUCATION COMMITTEE.—Ophthalmic Surgeon. Salary £50 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant House Surgeon for six months. Salary at rate of 100 guineas per annum.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Visiting Surgeon. Salary £100 per annum.

MANCHESTER, COUNTY ASYLUM, Prestwich.—Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, attendance, and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer for the Crossley Sanatorium, Delamere Forest, Cheshire. Salary £100 per annum, with board, apartments, and laundry.

MANCHESTER HULME DISPENSARY, Dale-street, Stretford-road.—House Surgeon. Salary £120 per annum, with apartments, attendance, coal, and gas.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park place, Cheetham Hill-road.—House Surgeon. Salary £120 per annum, with apartments and board.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board, and washing.

MANCHESTER ROYAL INFIRMARY.—Five Junior House Surgeons for three months. Board, residence, and laundry provided. Two Senior House Surgeons for six months. Five House Physicians for three or six months, and One House Surgeon to Ear, Eye, and Gynæcological Departments for six months. Salary at rate of £[illegible] per annum, with board, residence, and laundry. All to be unmarried. Also Two Medical Officers for Out-patients and Accidents for six months. Salary at rate of £100 per annum, with board and residence. Also Accident Room House Surgeon for six months. Salary £100 per annum, with board and residence.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Resident Surgical Officer at High-street Hospital. Salary £[illegible] per annum, with board and residence. Also House Surgeon for three or six months. Salary at rate of £70 per annum, with board and residence. Also House Surgeon at Whitworth-street West Hospital for three or six months. Salary at rate of £70 per annum, with board and residence.

MANCHESTER, VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham.—Female Resident Medical Officer for six months. Salary at rate of £100 per annum, with rooms, board, and laundry.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Two Assistant House Surgeons for six months. Salary at rate of £[illegible] per annum, with board and washing.

MIDDLESBROUGH COUNTY BOROUGH.—Temporary Chief Tuberculosis Officer.

MIDDLESBROUGH EDUCATION COMMITTEE.—Temporary Assistant School Medical Officer. Salary £300 per annum.

MILLER GENERAL HOSPITAL FOR SOUTH EAST LONDON, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary £[illegible] per annum, with board, residence, and laundry.

WEDNESDAY —10 A.M Dr Saunders Diseases of Children Dr Davis: Operations of the Throat Nose and Ear 11 A.M Mr Souttar Demonstration of Minor Operations 12 noon Lecture —Mr Souttar Abdominal Diagnosis 2 P M Medical and Surgical Clinics X Rays Mr Pardoe Operations Dr Simson: Diseases of Women Mr Gibb Diseases of the Eye

THURSDAY —9 A M Dr Bernstein Bacterial Therapy Department 12 noon, Lecture Dr G Stewart Neurological Cases 2 P M. Medical and Surgical Clinics X Rays Mr D Armour Operations. Mr B Harman: Diseases of the Eye.

FRIDAY —10 A.M Dr Simson Gynæcological Operations 10.30 A.M. Surgical Registrar Demonstration of Cases in Wards 12 15 P M Lecture:—Dr Bernstein Applied Pathology 2 P M Medical and Surgical Clinics X Rays Mr Baldwin Operations Dr Davis Diseases of the Throat Nose and Ear Dr Pernet Diseases of the Skin

SATURDAY —10 A.M. Dr Saunders Diseases of Children Dr Davis Operations of the Throat, Nose and Ear Mr B Harman: Eye Operations 12 noon Lecture:—Mr Souttar: Surgical Anatomy of the Abdomen 2 P.M Medical and Surgical Clinics X Rays Mr Pardoe: Operations

CENTRAL LONDON THROAT NOSE, AND EAR HOSPITAL Gray's Inn road W C

TUESDAY —3 P M, Lecture:—Dr Dan McKenzie: Endoscopy

THE THROAT HOSPITAL, Golden square, W

MONDAY —5.15 P.M., Special Demonstration of Selected Cases
THURSDAY —5 15 P.M Clinical Lecture

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street Piccadilly W

TUESDAY —3 P.M. Prof C S. Sherrington: Muscle in the Service of Nerve (*Lecture II*)
THURSDAY —3 P M Mr H G Plimmer Modern Theories and Methods in Medicine—Lecture II Immunity (Illustrated by experiments micro-photographs &c, and Cinematograph films)
FRIDAY —9 P M. Dr. D Clerk Gaseous Explosions

CHADWICK PUBLIC LECTURES Lecture Hall Royal Society of Arts, John-street Adelphi W C

FRIDAY.—5 15 P M Dr F M Sandwith: War and Disease—III, The Great European War

MANCHESTER HOSPITALS POST GRADUATE CLINICS

THURSDAY —ANCOATS HOSPITAL, Mill street.—4.30 P.M., Mr H Platt: Birth Palsies

For further particulars of the above Lectures &c see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

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We cannot prescribe or recommend practitioners

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We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title page to Vol. II of 1914 were given in THE LANCET of Dec 26th, 1914

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VOLUMES for the second half of the year 1914 are now ready Bound in cloth, gilt lettered, price 16s, carriage extra.

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a m by Steward's Instruments)

THE LANCET Office Jan 20th 1915.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb	Remarks.
Jan 14	30 080	W		55	52	45	47	50	Cloudy
15	29 830	W	0 10	69	52	47	45	47	Cloudy
16	29 320	N W	0·01	65	47	45	42	45	Cloudy
17	29 970	N W		62	40	35	34	37	Fine
18	30 364	N		57	41	35	32	35	Fine
19	30 470	W		47	45	35	37	38	Overcast
20	30 246	S W	..	51	48	38	42	43	Overcast

The following magazines journals &c. have been received —Clinical Medicine Bulletin of the Johns Hopkins Hospital Canadian Journal of Medicine and Surgery British Journal of Dental Science Saint Paul Medical Journal American Journal of Obstetrics Indian Medical Gazette Proceedings of the Royal Society of Medicine British Dental Journal Tropical Diseases Bulletin American Medicine Journal of Surgery Journal of Comparative Therapeutics.

Communications, Letters, &c, have been received from—

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C—Dr S D Clippingdale Lond;

[Acknowledgments continued on next page

Notes, Short Comments, and Answers to Correspondents.

CAMPAIGN LITERATURE AGAINST VENEREAL DISEASE

SPEAKING before the Royal Commission on Venereal Diseases, Sir Thomas Barlow expressed his belief that the public mind was now in a state of most promising preparedness to receive admonition and to recognise the moral obligation of dealing with these subjects In 1913 a declaration of leading members of the medical profession in the daily press protested against the "conspiracy of silence" on the subject. Mr F W Giles, M B Durh, a member of the council of the White Cross League, has published through Messrs P S King and Son, price 6*d*, a little pamphlet on "The Campaign against Syphilis, which seems a suitable contribution to the task of public enlightenment It deals with the nature and effects of venereal disease and with the importance to the community of its treatment and prevention It is dedicated by permission to Sir Thomas Barlow

THE "PERMUTIT" SYSTEM OF WATER SOFTENING

AN interesting demonstration of improved methods of water softening was given at the offices of United Water Softeners, Limited Imperial House, Kingsway, London W C, on Jan 12th The "permutit" system may be described first, as its simplicity enables it to be applied locally for domestic purposes Permutit is substantially an artificial zeolite, a compound of silica, alumina, and soda Its essential property is that known as base exchange In contact with hard water, for example (the calcium and magnesium salts constituting the hardness), permutit effects an exchange It abstracts these salts in exchange for a soda complement, so that hard water passed through it becomes soft because the lime and magnesium salts are left behind and the corresponding sodium salts go forward. The action is perfectly automatic, and when the soda permutit is exhausted it may be regenerated by passing through the permutit column or cylinder some salt solution, when the calcium and magnesium are eliminated as chlorides in favour of the retention of soda permutit ready again for the treatment of further volumes of hard water This method is capable of reducing a water of a high degree of hardness to one showing no hardness at all, and which therefore instantly forms a lather with soap In some cases the permutit system is employed to finish the work of well known economical softening methods, as, for example, those depending upon the addition of lime or of black ash (crude carbonate of soda). The utmost efficiency of these chemical methods in removing lime and magnesium salts is, however, reached when the treated water still retains some 5 degrees of hardness The water so far softened is reduced to an imperceptible hardness when it is passed through the permutit column By a combination of these processes, the "Lassen Hjort" and the permutit, an economical and complete softening of the water is effected For domestic work all that is necessary is a permutit cylinder, and a very favourable impression of its efficiency has been made upon those occupying houses situated in hard water districts where it has been installed. When treated with manganese permutit takes iron completely out of water The advantages of a softened water supply need not be set out In our own columns we have often drawn attention to the hardships of a hard supply, but we think that the consumer should not be called upon to remedy the evil and that this is a duty which should fall upon the supply company So long however, as that is not the case, permutit will effect a revolution of the utmost value to the householder

PERSONAL MEDICINE CASE FOR USE ON ACTIVE SERVICE

SINCE the commencement of the war medical men have frequently been asked for advice upon the selection of medical equipments for personal use whilst on active service and in view of this Messrs Burroughs Wellcome and Co have introduced 'Tabloid" Brand Medicine Pocket case, No 109 which is specially adapted to meet the requirements of those serving with His Majesty's forces The contents of this case may be varied to order so that the medical man may prescribe the particular products which he considers best suited to the individual needs of his patient The case itself is of polished black japanned metal In design it is flat and similar in shape and size to a large pocket cigar-case Consequently it fits conveniently into the pocket of the service jacket, its rounded corners preventing any risk of tearing the material The tubes of 'Tabloid" and "Soloid" medicaments are securely held in position by an aluminium framework, divisions of which come between the phials thus obviating the use of loose packing In the case of liquids each glass container is enclosed in a metal case rendering it impossible for any of the contents to leak out and soil other products. Further particulars may be obtained from Messrs Burroughs Wellcome and Co on application, together with a list of standard contents, which include both medicinal and first aid requisites

HOW TO PRESERVE HEALTH IN WAR TIME

THE Women's Imperial Health Association of 7, Hanover square, W, have issued a word in season to the women of Great Britain in the shape of a four page leaflet entitled "Health in War Time" It consists of useful information under the following heads Keep the Homes Clean; Keep Ourselves Clean, Get to Love Fresh Air, Eat the Right Food, Drink the Right Drinks, Cultivate Regular Habits, Help to Prevent Epidemics, and Take Care of Our Convalescent Soldiers How we may all do these things and thus help the Empire is explained in the leaflet

COMMUNICATIONS not noticed in our present issue will receive attention in our next

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY Burlington House London, W

THURSDAY —Papers:—Mr W W C Topley: The Influence of Salt concentration on Hæmolysis (communicated by Prof F W Mott)—Mr G Smith: The Life cycle of Cladocera, with Remarks on the Physiology of Growth and Reproduction in Crustacea (communicated by Mr E S Goodrich)—Mr T Goodey Investigations on Protozoa in Relation to the Factor Limiting Bacterial Activity in Soil (communicated by Prof F W Gamble)—Mr S Hatta On the Mesodermic Origin and the Fate of the so-called Mesectoderm in Petromyzon (communicated by Prof E. W MacBride)—Prof J C Bose: The Influence of Direction of Homodromous and Heterodromous Electric Currents on Transmission of Excitation in Plant and Animal (communicated by Prof S H Vines)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

TUESDAY.

SECTION OF PSYCHIATRY (Hon. Secretaries—Bernard Hart, G F Barham): at 8.30 P M

Presidential Address

Dr F W Mott The Application of Physiology to the Study of Mind in Health and Disease

THURSDAY

SECTION OF NEUROLOGY (Hon. Secretaries—T Grainger Stewart H Campbell Thomson): at 8.30 P.M

Presidential Address

Dr H. G Turney: Vasomotor Neuroses

MEDICAL SOCIETY OF LONDON 11 Chandos-street Cavendish square, W

MONDAY —8.30 P M., X Ray Evening Demonstration and Exhibition of Items of Interest connected with the War by Dr J Bruce Sir James M. Davidson Dr H Humphris Dr A C Jordan Dr H. Orton, Mr G Scott Dr S Melville Dr R. Knox and others.

MEDICO LEGAL SOCIETY 11 Chandos-street Cavendish-square, W

TUESDAY —8.30 P M. Exhibition of Specimens Resolution as to Donation to The Professional Classes Relief Fund Sir John Collie: Fraudulent and Neurasthenic Cases (discussion to be opened by Dr F O Arnold)

HUNTERIAN SOCIETY

WEDNESDAY —4 P M Visit to the Pathological Department of St. Bartholomew's Hospital. Demonstrations will be given of Wassermann's Reaction Estimation of Blood Sugar Abderhalden's Serum-diagnosis Estimation of Alveolar CO_2 Projectoscope Recent Additions to the Hospital Museum &c

HARVEIAN SOCIETY OF LONDON

THURSDAY —8.15 P M Clinical Meeting at Paddington Green Children's Hospital. Cases will be shown.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST GRADUATE COLLEGE West London Hospital Hammersmith road W

MONDAY —10 A M Dr Simson: Diseases of Women. 10.30 A M, Medical Registrar Demonstration of Cases in Wards 12 noon Dr Bernstein Pathological Demonstration 2 P M Medical and Surgical Clinics X Rays Mr D Armour: Operations Dr Pritchard Bacterial Therapy Department. Mr B. Harman and Mr Gibb Diseases of the Eye

TUESDAY —10 A M Dr Owen: Demonstration of Cases in Wards 12 noon Mr T Gray: Demonstration of Fractures, &c 2 P M Medical and Surgical Clinics X Rays Mr Baldwin: Operations Dr Davis: Diseases of the Throat, Nose and Ear Dr Pernet: Diseases of the Skin

An Address

ON

THE TELEPHONE ATTACHMENT IN SURGERY

Delivered before the Medical Society of London on Jan 25th, 1915

BY SIR JAMES MACKENZIE DAVIDSON,
M B, C M ABERD,

CONSULTING SURGEON TO THE ROENTGEN RAY DEPARTMENT
CHARING CROSS HOSPITAL

GENTLEMEN —My attention was first called to the possibility of using the telephone in surgery by a leading article in THE LANCET 32 years ago[1] The article was concerned mainly with the attempts which had been made to determine by electrical means the position of the bullet in the body of President Garfield during the two months which elapsed between the infliction of the wound and his death in the summer of 1881. These attempts were made with an induction balance, but Professor Graham Bell, speaking afterwards at a meeting of the American Association for the Advancement of Science, suggested, according to THE LANCET, that —

> Either for the detection of bullets or for the estimation of the depth of a ball already localised by the induction balance a simpler electrical contrivance may be employed It consists of a telephone, to one terminal of which a fine needle is fixed, and to the other a plate of metal of the same nature as the needle. The plate is placed on the limb to be examined and the needle is thrust in where the bullet is believed to be, and when it strikes the ball a galvanic battery is formed within the body This will cause a click to be heard in the telephone each time the bullet is struck This is a far simpler apparatus than the induction balance, and one far more easily procured and it would be well if surgeons called upon to treat gunshot wounds would test its practical utility Professor Graham Bell s efforts to apply electricity to surgery are most praiseworthy, and the results he has obtained merit the attention of surgeons

Possibly several workers carried out Graham Bell s suggestion For my own part, I saw immediately that this was a method which ought to be tried at the first opportunity, and a suitable case presented itself at the Aberdeen Royal Infirmary in 1887 A woman had been shot in the face by a revolver, and the bullet had gone into the antrum and had caused a good deal of destruction of bone The arrangement which I made for Dr Ogilvie Will, who performed the operation, consisted in the first place of a silver plate 6 in long and 4 in wide which was placed upon the patient s skin the skin being freely moistened with salt solution in order to make it as good a conductor as possible This plate was then connected to one terminal of the ordinary Bell telephone, and the other terminal was attached to a silver probe thus carrying out Bell s condition as to metals of the same nature On introducing the probe into the entrance wound no sound was heard until a considerable depth had been reached, when a distinct rattle became audible characteristic of contact with the metal, and the bullet was extracted without any difficulty Some years later a London Hospital physician, who was bringing me cases at a time when I was using the telephone probe to verify the results of early X ray localisations learned the use of this instrument, and subsequently showed it to Sir Frederick Treves, who used it, greatly to his satisfaction, in the South African War More particularly it enabled him to differentiate, as neither the common probe nor the finger could do, between a distorted and broken up Mauser bullet and a fragment of bone[2]

Until quite recently I took it for granted that the condition laid down by Graham Bell—namely, that the instruments used for exploration must be of the same metal as the plate placed upon the patient s skin—was essential to the success of the method It is only since the outbreak of the present war while assisting at various operations and noticing the considerable difficulty experienced by surgeons in finding the bullets, even after the most precise X ray localisation, that I began to experiment again with the telephone, with the result that I have now extended its applicability to any metallic instrument to which the surgeon chooses to attach it

THE PHYSICS OF THE TELEPHONE

Before describing in detail the procedure I recommend, which has been tried successfully in a number of cases, I should like to make a few preliminary remarks about the physical questions involved in the construction of the telephone, since a clear understanding on this point is necessary to an intelligent appreciation of the use of the telephone as a surgical instrument With the use of the telephone in ordinary life everyone is familiar, but perhaps I may be pardoned for reminding my colleagues of the nature of its construction and the principles upon which it acts The Graham Bell telephone consists of a permanent magnet, around one pole of which is a helix or coil of very fine insulated wire The fineness of the wire and the number of its turns decide the resistance of the telephone, and, incidentally, affect its cost If the currents for which it is to be used are very small while the voltage or electrical pressure is high, the number of turns in the coil must be correspondingly large On the other hand if the voltage is very small there should be fewer turns, and these of thicker wire, so that the resistance may not be too great The action of the telephone depends upon variable currents passing through the coil, which cause variations in the magnetic strength and lead to the attraction and release of a small, thin iron disc placed in front of the magnet This vibratory action of the disc results in the emission of sound waves. It is by far the most sensitive instrument for the detection, by sound, of the feeblest intermittent currents but it gives no sound during the steady passage through it of a continuous current This fact has the most practical bearing on the method of using the telephone in surgery, as I shall hope to demonstrate shortly

When two dissimilar metals are separated by an electrolyte they form the elements of an ordinary primary battery, and wires attached to them, on being joined together, convey an electric current The pressure or voltage depends upon several factors, but generally it can be stated that the difference of potential between various metals rarely exceeds two volts Until recently I entertained the idea that if dissimilar metals were attached to the terminals of the telephone the moment that these metals touched the human body the latter would act as an electrolyte and a click would be heard in the telephone, which might

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[1] THE LANCET Jan [illegible] p 1

[2] Brit Med Journ, March [illegible] 1900

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Unfortunately, if the lodged foreign body is of non magnetic metal, such as shot, for example, unless it is visible in the anterior part of the eye, its extraction is impossible, and the eye in consequence is lost. It might be well worth attempting the removal of such bodies with the telephone attachment, because a very distinct sound is produced in the telephone on contact with the minutest metal particle Indeed, particles so small as to be almost invisible would be quite appreciably audible The ideal procedure would be to have the foreign body precisely localised by means of X rays, as is being constantly done at Moorfields and other eye hospitals, and then to attempt its removal with the aid of the telephone I am afraid, however, that this method will not be of much assistance in cases where the foreign body is lodged in the vitreous and not firmly attached to the coats of the eyeball From experiments with the eyes of dead animals I find that a small shot, placed in the vitreous cavity, is not easily detected by means of a needle with the telephone attachment It has already been made plain that the whole success of this method depends upon an actual momentary contact with the metallic foreign body The vitreous is of so yielding a nature that the small foreign body is pushed away in front of the needle, and this intervening layer of vitreous prevents a good metallic contact from being made Should the foreign body happen to be between the needle and the fundus, then it can be readily heard, and of course if it is embedded in the coats of the eye there is no difficulty whatever in obtaining the usual sound on impact with the exploring needle In spite of the difficulty with the vitreous, I would suggest that, before enucleating an eye containing a non magnetic foreign body, the ophthalmic surgeon should first attempt the removal of the foreign body with the telephone attachment

CASES

Comparatively recently I have had two cases of small pieces of shell in the orbit The first of these was brought to me by Mr Cruise The case had been radiographed by Captain Howard Humphris, of the 3rd London (Wandsworth) Military Hospital, and the fragment was indicated at the upper and inner part of the left orbit Mr Cruise asked me to let him try the telephone for its removal At that time I had not ascertained that carbon was the best element to place upon the patient s skin, and I used a piece of platinum foil which I had in an old Grove s battery This was bandaged on a skin thoroughly moistened with salt solution (the position is of no consequence), and a long needle was placed in a holder and fixed to the other end of the telephone The patient having been anæsthetised Mr Cruise, with the double telephone at his ears introduced the needle in the direction indicated by the radiographs and at some considerable depth he heard the microphonic rattle Sir A Pearce Gould who was present on this occasion, held the needle in position while Mr Cruise cut down along it through a comparatively small incision The telephone was then attached to the forceps the rattle again being distinctly heard and the foreign body was removed immediately afterwards he whole operation being carried out with the least possible disturbance I think such a case very well illustrates the advantage which the surgeon gains by trusting to his hearing instead of making a large wound and retracting its walls and depending upon his finger and his sight for the detection of the foreign body

The next case, also in connexion with the orbit, was one in which Mr Armour removed a piece of shell which had entered the head above the right eye and had gone through into the left orbit, where it lodged Here again Mr Armour ran down a needle attached to the telephone, and heard the sound on contact with the foreign body before he made any incision Mr Herbert Menzies assisted him at this operation The foreign body was successfully removed, and the patient, whose eye is now normal, has had no subsequent trouble

The same arrangement has now been used successfully in quite a number of cases The latest of these may be cited, since it is especially interesting owing to the fact that the flattened casing of a German bullet was deeply embedded in the lumbar region of a very large and muscular man. The depth of the bullet in the tissues was between 3 and 4 inches, and Mr English, who successfully removed it after it had previously been localised very accurately by means of X rays, ran a long needle down on to it, and heard the contact through the telephone before making an incision He found the telephone most useful throughout the operation, which was made more expeditious in consequence

In view of these cases I would take the liberty of suggesting that the surgeon, now that the telephone is available, should go to the trouble of altering somewhat his technique Instead of trusting to his sense of touch through his rubber gloved fingers he should trust to his sense of hearing, and guided by this it ought to be possible for him not only to find the foreign body but to free it from its surrounding entanglements With the aid of the telephone he can always keep in touch with its boundaries, whatever the surgical instrument he may be using at the time, and finally, by means of his forceps he should be able to remove it through a comparatively small incision and with the least possible disturbance of the parts This necessarily implies some preliminary practice and, what seems to be still more difficult, some alteration of habits long since acquired The special value at the present moment of such a procedure as the use of the telephone, in view of the large numbers of operations which are necessary in cases returned from the seat of war, needs no insistence, and I believe that the time will come when no surgeon will attempt to remove a deeply embedded metallic body without having this telephone attachment at his command

MODIFICATIONS

Of the modifications which might be proposed in the general arrangement the most obvious is the introduction of a small dry cell into the circuit I have not found, however, any marked advantage to accrue, and on the ground of absolute simplicity the method as already described seems to be preferable At the same time the battery experiment is easily tried, with the small dry cells now used for hand lamps, and quite portable One objection to the battery is that if it is interposed the sound produced on contact of the instrument with the tissues is heard very distinctly, and it seems to me that with the battery there is a great risk of stray and misleading sounds occurring in the telephone In view of the fact also that one might be in districts where a battery was not available it seems better to keep to the arrangement outlined above especially now that the carbon plate is employed which is practically indestructible and requires no attention or renewals impair the value of the method for the subsequent detection of a bullet by contact On making the experiment, however, I found that this effect was in no way prejudicial It is true that a slight sound is sometimes heard when the instrument first comes in contact with the tissues, but not even the least experienced person could confuse it with the sound produced on contact with the embedded bullet or other metal

I have tried many pairs of ordinary metals in order to discover which would yield the best result The metals for which we have to search most frequently are lead, nickel, copper, iron, and some of the iron alloys used in shell manufacture The surgeon's metallic instruments are usually steel, silver, or nickel plated With any of these instruments attached to one terminal of the telephone I find that on contact with any of the above mentioned embedded metals the loudest sound is elicited when a plate of carbon, such as is used in an ordinary bichromate cell, is attached to the other pole and placed, in the manner described at the beginning, upon the moistened skin of the patient The result may be still further improved if a fine layer of iodine is interposed between the skin and the carbon plate, this is readily done by brushing the skin with the usual iodine solution employed as a disinfecting agent

The currents generated in these circumstances are, of course, small in amount, and of low pressure It is important, therefore, to reduce the resistance of the body as much as possible, and on this account it is necessary to use on the skin a plate of carbon of as large a size as is convenient, and to increase the conductivity of the skin by moistening it well with the usual salt solution. The resistance of the human body is high, varying from 3000 ohms through the skin when dry, down to 300 when the skin is moistened, and it appeared likely, as has proved to be the case, that the cheap telephones of low resistance would be best suited to detect these small currents A telephone of 60 ohms resistance, costing only a few shillings, gives a louder sound than the more expensive high resistance telephones used in wireless telegraphy I have here two telephones of 40 ohms resistance, and I am investigating as to how far the resistance may be lowered in order to obtain the most distinctive sound

THE SURGICAL PROCEDURE

Briefly put, the method I advocate for adoption is the use of a telephone, preferably with double receivers, connected together by means of a steel or elastic band, so that each ear has its separate receiver This not only increases the intensity of the sound, but also serves to cut off extraneous sounds which might interfere with the audibleness of the telephone Should the surgeon wish to have one ear uncovered so as to be able to attend to the remarks of anyone near him, it is quite a simple matter to move aside one of the receivers This double arrangement, however, is not essential, and a single telephone gives quite good results if the surgeon's hearing is acute The carbon plate is placed upon the patient's moistened skin, and plaster or bandage may be used for holding it in position tightly against the skin The other end of the telephone should have attached to it a bare wire, of silver preferably, which has been disinfected, by boiling or otherwise as the surgeon may direct One end of this wire being attached to the telephone terminal, which of course cannot be disinfected readily, the other end need be handled only by the surgeon or his assistant with the usual antiseptic precautions, and the wire can either be wound round any instrument it is desired to use or, as I have demonstrated this evening, a spring clip may be employed by means of which the wire can be conveniently brought into connexion with the knife, probe, needle, or forceps, as the case may be

Under these conditions, if the instrument is introduced into the body it will, on first contact with any metal, give rise to an unmistakeable click carried through the telephone, and then, if it be gently moved or slightly disturbed so as to make a rubbing contact with the foreign body, an equally unmistakeable loud rattle will be elicited By such means the metal can be dissected out (if the knife is used), or otherwise freed from the encircling tissues, because a constant control can be exercised over the foreign body by reason of the microphonic rattle it produces when the instrument comes into contact with it A very useful point to bear in mind is that in cases where a foreign body has been carefully localised by means of X rays a needle can be attached to the telephone in the manner stated, run down on to the foreign body, and, when the characteristic sound is heard, can be maintained in its position as a guide before any incision is made

The telephone attachment to forceps is particularly useful, because these can be used as a probe, and then, when opened to include the foreign body this action gives a characteristic sound which betokens when the foreign body is between the jaws I had a pair of bullet forceps made some time ago which were thoroughly insulated outside with vulcanite, the bare metal only remaining on the inner side of the jaws This modification has the advantage that the sound can only be heard when the bullet is actually between the jaws, otherwise an equal sound, and a quite misleading one, would be heard if the forceps were not grasping the bullet but were only touching it on their outer side

It is obvious that the surgeon must be careful when the telephone is attached to his instrument not to allow that instrument to touch any other metallic instrument which may be already in the wound, such as a retractor or artery forceps, because, of course, this will make an audible impression in the same way as the embedded metal itself As a rule, this is not difficult to avoid, but should he be exploring a narrow and deep wound where there is any difficulty in preventing possible contact with his instruments I would recommend him to place a rubber drainage tube over his exploring instrument, except in the neighbourhood of its point In this way he will conveniently insulate it from any of the surgical instruments which it might encounter along the walls of the wound Another simple plan is to cover the needle or probe with a thin layer of shellac, by heating and applying the shellac in the same way as with an electrolysis needle when the action is desired to be confined to the point By such means the bulk of one's instrument may be insulated

UTILITY IN OPHTHALMIC SURGERY

The telephone arrangement seems to me to have a special utility in ophthalmic surgery For many years ophthalmic surgeons have successfully extracted very small pieces of iron or steel from the eyeball by means of a powerful electro magnet

Syphilitic splenomegaly with anæmia appears to be due to congenital syphilis, and may persist despite antisyphilitic treatment, including the administration of salvarsan In the few cases I have seen recorded there is no mention of hæmorrhages occurring

My own experience of splenectomy for enlarged spleen with anæmia comprises three cases which I now describe, they were all referred to me from the medical wards by my colleague, Sir Robert Simon Two other cases with enlarged spleen are present for your examination So far neither of them is the subject of anæmia, but we hope to keep them under observation that we may learn what their future will be, especially as to whether at a later date they will develop anæmia and the other changes sometimes associated with it

CASE 1. *Banti's disease, splenomegaly anæmia, hæmatemesis, melæna, ascites, splenectomy*—The patient aged 19 was admitted to the General Hospital under Sir Robert Simon on June 19th, 1913, complaining of pain in the abdomen and of passing blood by the bowel. The patient was fairly well nourished but looked very anæmic and ill, the temperature was 101° F and the pulse 128 The past history showed that for about six years he had complained at times of aching pain in the upper abdomen generally coming on some time after a meal and relieved by the taking of food. The pain was not constant, it lasted only a few minutes as a rule, vomiting did not occur, and there were often intervals of freedom from pain which might last weeks Four days before admission when getting out of bed he suddenly felt very weak and could hardly get up He experienced no pain but stayed in bed all day, and noticed that the bowel action was dark red in colour, this continued until the patient came to hospital. On the night of admission he vomited 10 oz. of bright-red clotted blood, and this hæmatemesis with the past history suggested at first duodenal ulcer

The spleen was found to be enlarged, it extended inwards to the linea alba, it felt hard and rather uneven, but was not tender The only other point needing mention was the presence of soft bruits systolic in time heard over all the heart valves Bleeding from the bowel continued for three days and was treated by the administration of horse serum The blood examination on June 25th showed red cells 1,800 000, white cells 10,000, and hæmoglobin 20 per cent On July 8th the figures were—red cells 1 900 000 white cells 7500 and hæmoglobin 30 per cent On the 11th it was noted that the abdomen was becoming distended and the surface veins prominent On the 14th distension of the abdomen was more marked and the patient's colour did not improve On the 19th distension was marked and there was much fluid in the abdomen. The pulse ranged from 120 to 96 but very rarely was less than 108 The temperature varied from 98° to 101° but was usually from 99° to 100°, the respirations were from 24 to 36 The urine rarely exceeded 30 oz., its specific gravity was rather low but it contained no abnormal constituent

I saw the patient on several occasions with Sir Robert Simon and we arrived at the conclusion that he was suffering from Banti's disease Operation was discussed but postponed in the hope that as there were no fresh hæmorrhages the general condition would improve This hope was, however not fulfilled, on the contrary a large and increasing ascites developed and we felt that the prospect of a successful operative interference was diminishing rather than increasing and the patient was therefore submitted to operation on July 21st

Operation—The incision commenced in the middle of the epigastrium high up and extended outwards below and parallel to the left costal margin then down the linea semilunaris to the level of the umbilicus A large quantity of pale yellow slightly turbid fluid estimated at several pints escaped from the peritoneal cavity, this fluid appeared to be paler and thinner than the ordinary fluid of ascites due to cirrhosis of the liver The spleen was very carefully drawn out through the extensive incision it was fortunately found to be free from adhesions The pedicle contained enormous vessels all of which were free from thrombosis, and in the wall of the pedicle were numerous small masses of tissue which were evidently splenculi It was determined to tie the pedicle in sections with silk, when this had been partly accomplished some of the vessels tore owing to the weight of the organ The remainder of the pedicle was therefore clamped, the spleen cut away, and the vessels unsecured were tied individually, and finally a ligature was tied round the whole stump of the pedicle so that it was absolutely dry The liver was quite free from cirrhosis, and no thrombosis of vessels was recognised, but owing to the patient's feeble condition it was impossible to make any systematic investigation on this point The abdominal incision was closed, and whilst this was being effected 1½ pints of normal saline were transfused into one of the veins of the arm, as collapse was rather marked

The spleen with its contained blood weighed 4 lb, it was somewhat harder than a normal spleen and was practically free from perisplenitis Examination of the ascitic fluid showed that it had a specific gravity of 1011, its reaction was alkaline, it contained a heavy cloud of albumin, and was free from sugar from urea, and from blood Microscopically a few small round and oval cells were found

On the day following the operation the patient had completely recovered from the shock, and at the end of a week he looked decidedly better, the pulse was then generally below 100 The blood count was red cells 2 700 000, white cells 12 500, and hæmoglobin 50 per cent After this time improvement was slow, the pulse again quickened, and was often as high as 120 and over About the middle of August there was considerable abdominal pain, vomiting occurred several times and occasionally diarrhœa, a good deal of ascitic fluid was present, and the boy looked thin and anæmic. Soon after this he was sent to the Jaffray Hospital and on Sept 8th was allowed to get up, his pulse, however, was still quick generally 110 or higher, but he gained 3 lb in weight in eight days Becoming discontented he left the hospital on Sept 25th, and was lost sight of until recently

Subsequent condition—The patient was examined on Dec 9th, 1913 He had gained weight and felt well except that he tired easily It was thought that a little free fluid existed in the abdomen The red count was 4 000,000 hæmoglobin 40 per cent. and leucocytes 16,000 In May, 1914, the red count was 4 000 000 and white cells 12,000 The abdomen appears to be free from fluid and the patient is at work as a railway porter He occasionally has slight epistaxis

CASE 2—Male, aged 20 Shop assistant Admitted under Sir Robert Simon Feb 9th, 1914 Complaint on admission, jaundice four months ago, since which he had been confined to bed with intermittent pain in the left flank The patient stated that previous to this time his health had been good Father, mother, six brothers and three sisters are in good health

The present illness commenced in the middle of October, 1913 with an attack of jaundice lasting about three weeks Since this time he had felt weak though not very ill When admitted he was found to be muscular but distinctly thin, the face was pale and sallow, but there was no actual jaundice The temperature was 101° F., pulse 120, and respirations 24 The teeth were very bad, many molars missing and the incisors of the upper jaw decayed, the tongue was clean but rather dry The abdomen was relaxed, there was no pain or tenderness The spleen was found to be greatly enlarged, it reached downwards to the mid Poupart line and 2 inches to the right of the middle line of the abdomen The liver was somewhat enlarged, its lower border was felt 2 inches below the costal margin Heart, faint mitral systolic murmur No notable condition in the respiratory system Blood examination showed red cells 2 700 000 and white cells 2800 On Feb 12th the red cells were 1 010 000 white cells 2200 and hæmoglobin 50 per cent, on the 14th the figures were 1 587 500, 2000, and 60 per cent respectively On the 19th it was thought that the spleen was somewhat smaller and as there was a little expectoration this was examined for tubercle bacilli but none were found From time to time there seemed to be some slight variation in the size of the spleen The blood count on May 3rd showed—red cells 2 600 000 white cells 5900, and hæmoglobin 50 per cent The patient's condition was not satisfactory He looked ill was markedly anæmic and appeared to be losing weight His temperature was 103° or more at

Several attempts have been made over a number of years to apply electricity in some form to this surgical purpose The idea of using electricity for the detection of bullets embedded in tissues has been traced back to 1862, when a method was brought forward, apparently with no great success, by Professor Favre, of Marseilles Ten years later a civil engineer, named de Wilde, proposed the use of an electric bell as the signal for the presence of a metallic body in the tissues In the case of President Garfield, as I stated at the beginning of this paper, the induction balance was employed, this last I do not look upon as a practical method of locating bullets, all that it does being simply to reveal their presence The telephone, I believe, will be found the most simple and reliable method for aiding the surgeon in the removal of a bullet previously localised by means of X rays

If something other than the sound of a telephone were required—for instance, in the case of a deaf surgeon—it could be obtained by a modification of the method I have been advocating Instead of taking the current through the telephone it could be passed through a suitably wound galvanometer and the movement of the galvanometer needle would then indicate contact with the metal, or this arrangement could work as a relay and a bell would ring every time the bullet was touched by the surgeon's implements It seems to me, however, that these are less practical than the simple plan advocated in this paper, and I have every confidence in recommending it to the attention of the surgeon

SPLENECTOMY FOR ENLARGED SPLEENS WITH ANÆMIA[1]

BY GILBERT BARLING, M B LOND, F R.C S ENG,

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AT the risk of being regarded as elementary I would like in the first instance to recall to your minds very briefly something of the physiology of the spleen It has in part, as you will remember, a very slow blood current owing to the terminal arrangement of some of its arteries, which do not end in capillaries but in dilated spaces in the splenic pulp In this slow current the leucocytes pick up the damaged and worn out red corpuscles, digest them, break up their colouring matter, and with part of it produce some, at all events, of the colouring matter of the bile Beyond this main function it is probable that the spleen takes some part in the destruction of infections, again through the leucocytes in its meshes, and it may have a hormonal function which to some extent controls pancreatic secretion

For many years past the spleen has occasionally been removed for various conditions, for displacement with or without rotation of its pedicle, for cystic disease, for traumatisms, or for what has been called simple hypertrophy This last condition probably was an early stage of the splenic enlargement with anæmia, which we now operate on under the name of Banti's disease, acholuric jaundice, &c However that may be splenectomy for the conditions I have mentioned above proved to be a reasonably safe procedure and fully justified Unfortunately the ardour of some surgeons led them to remove the enlarged spleen for leukæmia with ghastly results I do not know a well authenticated case in which the patient recovered, and happily we are all agreed that the operation in leukæmia is quite unjustifiable Experience of splenectomy has shown that a patient whose spleen has been removed may live a perfectly normal life under *ordinary* conditions and that the expectation of life is not shortened The assertion has been made that therefore a patient is no worse off without a spleen than with one, but this seems to me hardly justified at present This may not be true if the patient is involved in a struggle for existence against an infection—pneumonic, typhoidal, pyogenetic, or similar poison—when the whole forces of the body may be necessary to carry the fight to a successful issue The only case I am acquainted with bearing on this point is one mentioned by French,[2] the patient a boy aged 6, survived both measles and scarlet fever after splenectomy It would be interesting to know if in other cases recovery has occurred after similar illnesses In the absence of the spleen other organs appear to carry out its work—the lymphatic glands, the bone marrow, and the liver

Under the title "enlarged spleen with anæmia," which I have taken as my subject, several conditions are grouped together, in all of them we find enlarged spleen, marked reduction in the number of red corpuscles and in hæmoglobin, with either some degree of leukopenia, a normal leucocyte count, or one that is somewhat increased The enlargement of the organ and the diminution in the red corpuscles appear to be due to great exaggeration of the chief normal function of the spleen This exaggerated function may be excited in different ways, in one case by the poison of syphilis, in kala azar and in malaria by the particular parasites associated with these diseases, perhaps in other cases a streptothrix as suggested by Gibson[3] may be the stimulation Further investigation is not unlikely to reveal other provocative agents of a similar kind

I said just now that under the title "enlarged spleen with anæmia' various conditions are described having certain common features Then comes divergence, and further knowledge is required to determine whether we have to deal with really different diseases provoked for instance by different forms of infection, or merely with accidental divergences due to the different reaction of individual patients tissues Under the names Banti's disease, acholuric jaundice hæmolytic jaundice, and syphilitic splenomegaly we find grouped most of the splenomegalies with anæmia at all events in this country Banti's disease implies in addition to enlarged spleen and anæmia a marked tendency to hæmorrhages chiefly from the gastro intestinal tract, ascites, and in some cases cirrhosis of the liver or thrombosis of some part of the portal system I propose to show you a typical example

Acholuric jaundice has additional features which the name implies, jaundice with an absence of bile in the urine The jaundice appears very early in life and has been described as congenital, there is in addition an unusual fragility of the red corpuscles, but this may entirely disappear after splenectomy

Hæmolytic jaundice resembles in many respects acholuric jaundice but the jaundice does not appear until, it may be, some years after birth The urine is deeply coloured but may not contain the ordinary bile pigments, the red corpuscles are unduly fragile, and cholecystitis with or without gall stones may occur

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[1] A lecture to a post graduate class at the Birmingham General Hospital

[2] Proceedings of the Royal Society of Medicine vol vii No 5, Clinical Section p 77

[3] Quarterly Journal of Medicine January 19[illegible] vol viii, No [illegible]

CASE 5—A male aged 37, was admitted under me on May 1st 1914, complaining of pain in the left side of the abdomen, duration six weeks The father and mother are healthy, 2 sisters and 4 brothers alive and healthy The patient is a moderate drinker and smoker No previous illnesses but he has occasionally suffered from epistaxis while bending over a basin washing himself The patient attributes his present condition to straining himself while at work six weeks ago, when he did three days of extra heavy work, following this he had severe pain in his left side There has been no vomiting of blood nor melæna

Condition on admission—A healthy looking man, complains of no pain at present nor of discomfort Temperature and pulse normal Abdomen On palpation the spleen is found to be markedly enlarged, extending downwards almost to the umbilicus It is of firm consistence but the edge is not well marked except at the lower part, it is not tender Liver not enlarged Urine normal Wassermann reaction negative Blood examinations on three consecutive days white cells 16,000 15 000 and 15,000, red cells, 4 400,000 4,200 000, and 4,300 000, and hæmoglobin, 80 per cent

The patient was discharged, but was made an out-patient to be kept under observation

In conclusion, may I remind you that the first case is a typical Banti's disease, the second is probably of the same nature, though we have positive evidence of a definite infection, tubercle As to the third, in which the patient died with an acute hepatitis after operation, the hæmorrhages suggest she too may have been an early example of this type Cases 4 and 5 both have considerably enlarged spleens without blood changes, and their future course will be watched with interest Case 5 was seen in December, 1914, when he appeared to be in good health, he had, however, found a lighter occupation The splenic enlargement had not altered, no opportunity offered of examining his blood At present it is impossible to determine the meaning of the splenomegaly of which they are the subjects

Birmingham

A CRITICAL STUDY OF THE BASIS OF ABDERHALDEN'S SERUM REACTION

BY W E BULLOCK, M D EDIN,

IMPERIAL CANCER RESEARCH FUND

THE great mass of literature dealing with the subject of this paper has been reviewed so recently by Abderhalden,[1] by Lange[2] and others that it is unnecessary here to do more than to refer to special points and to emphasise the division of opinion as to the value of the reaction in the diagnosis of pregnancy and of disease On the one hand, numerous writers[3] support Abderhalden's results and conclusions completely, one observer declared it to be possible to distinguish between a gastric and a duodenal ulcer[4] On the other hand a few writers[5] on the subject totally deny the existence of specific protective ferments Between these extremes there are some who partially confirm Abderhalden's work, and others who corroborate the experimental results but offer another explanation of them[6]

The chief object of the work to be described was to test the reliability of the reaction as applied to the diagnosis of cancer But before carrying out the routine empirical tests devised by Abderhalden the experimental results on which the whole method is based were examined The experimental results claimed are briefly 1 By injecting animals with solutions of sucrose maltose or other sugars strange to the economy of the animal employed protective ferments are developed in the body which decompose the strange sugars and render them useful or at least innocuous to the animal. The evidence adduced that such ferments are produced is as follows The blood serum of the normal animal is mixed with a solution of the sugar to be injected and the mixture examined with the polariscope, no alteration in the rotatory power of the solution takes place When now the blood serum is obtained after the animal has received an injection of the sugar and is mixed with the sugar solution as before, the rotatory power of the solution gradually changes, indicating a splitting up of the sugar 2 When an animal is injected with a foreign protein a similar phenomenon is said to be observed Ferments are produced which are able to break up the protein into peptones and amino acids, acting in this way in a protective capacity The optical method was again employed, in this case allowing the blood serum to act upon solutions of peptones prepared from the protein used to inoculate the animal

These are the essential experimental results, and they are extended by speculation and reasoning by analogy to practical ends In the case of pregnancy, for example, it is said that since cells of the placental villi may break off and pass into the maternal blood stream, and as these cells are made up of proteins strange to the mother, protective ferments may be produced But pregnancy may be diagnosed very early (in the first month) by the method, and it is obvious that the total weight of placental cells which may in this time get into the maternal blood stream is excessively small, it is, therefore, unreasonable to assume that this process can be solely responsible for the production of the protective ferments Further, in some animals—e g, the mare—the relationship of the placenta to the mother precludes the possibility of cells of the villi escaping into the blood stream Hence a long theory, based on endless assumptions, of the relationship between the maternal and fœtal metabolism is elaborated to show how protective ferments may be produced in the mother by simple products of the fœtal metabolism.

By a similar process of reasoning the experimental results already mentioned have been made a basis for researches on practically every subject within the scope of medical science It is all the more important, therefore, to repeat and consider carefully the experiments by which the existence of specific protective ferments is considered to have been established

The optical method of demonstrating the ferments does not, on the surface, appear to be very satisfactory In the first place, the maximum rotations observed by Abderhalden are very small, in fact, only just outside the limits of error of the polariscope employed In the second place, blood serum is chemically such a complex liquid that small changes in its optical activity are not necessarily significant In this connexion it should be observed that Abderhalden states that blood serum may be kept indefinitely at 37 C without any alteration in its optical activity, and it will be shown later that this statement comes into direct conflict with evidence obtained by the dialysis method For these and other reasons the fundamental experiments with sugar as the substrate have not been repeated In the last number but one of the *Journal of Biological Chemistry* Hogan has published a paper on the parenteral utilisation of disaccharides in which he comes to the conclusion that his data 'yield no evidence whatever night, the pulse varied from 112 to 128, and the respirations were generally 24 There was no evidence of free fluid in the abdomen

Splenectomy was determined upon and was carried out on March 9th An incision was made in the left semilunar line, and this was prolonged upwards, the seventh and eighth costal cartilages near the bony ribs being divided, thus giving considerable addition to the operating space The abdominal cavity was free from fluid, there was much perisplenitis, and fibrous adhesions above attached the spleen to the under surface of the diaphragm and to the posterior abdominal wall These adhesions were divided, several vessels were tied here, and the rest of the oozing was stopped by packing, whilst the splenic pedicle was ligatured in detail The liver looked quite healthy except for a localised patch of perihepatitis on the upper surface of the right lobe, this area was not as large as the palm The abdomen was closed, the divided rib cartilages being sutured with catgut The spleen was found to weigh 3 lb 5 oz There was moderate shock, as the operation had been rather prolonged owing to the time spent in dividing the adhesions mentioned above, but half an hour after the operation the patient's condition was quite satisfactory

The wound healed per primam, and at first it seemed as though the patient were going to make a complete and satisfactory recovery The temperature fell to normal and remained so for five days, it then slowly began to rise again, and eventually returned almost to its old level, being on an average one degree lower than before the operation The blood counts after operation were as follows —

	Red cells	White cells	Hæmoglobin
March 12th, 1914	2 260,000	8 000	50%
,, 14th, ,,	2 250 000	7 000	60%
,, 26th, ,,	3 200 000	7,000	90%
,, 31st, ,,	3 690,000	7,800	90%

On April 24th a number of carious teeth were extracted as the patient was not doing well, and it was thought wise to extirpate any possible infective focus During the next few days he was losing condition, complained of discomfort in the abdomen, he had bronchitis on both sides of the chest, and he looked thinner and more ill The abdomen began to swell, the legs became œdematous, the eyelids puffy, and there were some slight petechial spots observed The patient's relatives getting discontented with his want of improvement took him home on May 16th At that time he had a large ascitic collection, his legs were swollen, his temperature was about 103° at night, his pulse, always quick, ranged from 110 to 120, and he looked as though he were steadily losing ground [I am unable to trace the patient — G B]

The immediate improvement after splenectomy gave ground for believing that speedy restoration to health would ensue, the subsequent relapse was therefore the more disappointing The improvement in temperature following operation suggested that the extirpation of the spleen had removed the great source of infection The subsequent rise came on very gradually, and eventually the evening rise was as great as before the operation

CASE 3 —A girl aged 6 was admitted under Sir Robert Simon on Jan 21st 1914 with a history that on the day previously she had vomited a pint of brownish fluid mixed with blood clots Six weeks before the child had had a severe hæmatemesis, she vomited several times at school and three times after she reached home The previous history showed that she had been under treatment for four years for paralysis of the left arm which had practically recovered Scarlet fever and measles with bronchitis had attacked her in the first 18 months of life The spleen was enlarged and quite mobile, its upper border reached to about three inches below the left costal arch Blood examination showed red cells 3 300 000, white cells 26 000 and hæmoglobin 70 per cent Further examination showed about the same amount of red cells and a diminishing white blood count, which eventually was as low as 7000 Later the white blood count rose to 18 000 the red cells being then 3 600 000 and the hæmoglobin 60 per cent A general examination of the cavities revealed no other evidence of disease

On Feb 25th the child was remitted to me for splenectomy, with the diagnosis of early Banti's disease Incision was made in the left semilunar line The spleen was very sessile to the stomach, and there were some adhesions below the pedicle, but these were easily ligatured piece by piece, and the operation of removal was a comparatively easy one. It was noted at the time that the liver presented an absolutely healthy appearance, it was perfectly smooth, its capsule was not thickened, and its colour was typical of a healthy liver, there was no ascitic fluid Shock was moderately severe and saline was given by the rectum with speedy improvement The pulse however, remained persistently quick, it had been about 100 before the operation Immediately afterwards it was 176, it, however, dropped to below 120 There was persistent vomiting at first, and the patient was very restless On the third day after the operation the pulse had quickened up to 160–180, the respirations were over 40 the temperature was as high as 105° F for some hours, and the child died the next day

The necropsy showed a satisfactory condition of the wound area, there was no peritonitis, and the only condition found to explain death was the state of the liver, the naked eye appearance of which suggested delayed anæsthetic poisoning The anæsthetic given was a mixture of ether and chloroform The note of the examination of the liver by Dr Logie, visiting pathologist, is as follows —

Macroscopically the liver was enlarged and pale, its surface smooth and glossy It cut easily and appeared to be in a state of acute hepatitis with cloudy degeneration On microscopical examination the portal tracts showed well marked cellular increase and in many cases marked proliferation of bile ducts The intralobular capillaries were dilated and well filled with blood The vessels generally were engorged and there were some small hæmorrhages The parenchyma showed atrophy of the liver cells which were opaque more or less necrotic, and all in a state of fatty degeneration The nuclei were obscured and stained badly The cells in the neighbourhood of the portal tracts showed some fatty infiltration Those more remote were degenerate and in some parts quite destroyed

Dr A G Gibson has been kind enough to examine the spleens removed from these patients and in one of them, the organ from Case 2, tubercle bacilli were found, in the other two cases no infective organisms were recognised *At the operation on Case 2 no tuberculous condition was recognised in the abdominal cavity, and the question arises whether the primary condition in the spleen was one of tubercle or whether this was superimposed on some pre existing change*

CASE 4 —A male aged 12 was admitted on April 25th, 1914, under Sir Robert Simon, complaining of pain in his ankles The patient is one of a family of ten, of whom three died in infancy, the mother has had two miscarriages The other members of the family are all healthy except one boy, aged 15, who is always rather pale and whose feet are "flat" The patient has had no previous illnesses Three years ago last March he complained that the right foot was painful His mother states that this condition first came on after the boy had been kicking a ball about The foot was rested, but the pain continued and he has never been able to use his foot since He had his foot put up in a plaster of Paris case 15 months ago and this case he wore for ten weeks Six weeks ago his left foot also became painful and since then he has not been able to use either foot For the last fortnight his ankles have been tender and swollen

Condition on admission —A well nourished and fairly intelligent boy unable to walk but can lie in bed comfortably Both feet show well marked pes planus There is considerable œdema of both ankles Abdomen Full and rather flat, the spleen is large and palpable as low down as the umbilicus, a distinct notch can be felt The liver is not palpable There is a soft systolic murmur at the apex of the heart, this is not propagated towards the axilla. The murmur can also be heard to the left side of the sternum the pulmonary second sound sharp and rather accentuated Lungs normal Two blood counts at intervals of a few days gave the following results red cells 6 400 000 and 5 200 000, white cells 9600 and 8500 and hæmoglobin 90 per cent

The condition of the ankles improved under treatment and the patient was discharged as an out patient so that the condition of his spleen and his blood might be kept under observation of the inoculated rabbits gave the precipitin reaction against solutions of egg white, and in the three cases tested anaphylactic shock was induced

It will be noticed that in the tests with serum alone a positive ninhydrin reaction, progressively stronger with increasing doses of serum, is obtained This result may be due either to the presence of amino acids in normal rabbit blood or to a production of these substances by an autolytic enzyme Abderhalden has demonstrated that amino acids in minute amounts are normally present in blood serum[10] Working with very large quantities of blood—e g, 50–100 litres—he was able to isolate glycocoll, alanin, prolin, leucin, &c, but owing to the energetic chemical methods employed there is a possibility that the amino acids obtained were produced by the reagents used in the process The question was therefore investigated by a new and simple method

20 c c of blood were drawn from a rabbit's ear vein and rapidly centrifuged in order to obtain clear serum The serum was pipetted off into a strong large sterile test-tube, which was immediately immersed in boiling water and kept there for 20 minutes in order to inactivate any enzymes which may be present and to kill any organisms which may have contaminated the serum The serum clotted, and a clear watery fluid separated This fluid was pipetted off into sterile test-tubes, and again heated and then placed in two sacs and dialysed for 18 hours against 20 c.c of distilled water in the usual way The dialysates reacted faintly with ninhydrin and were negative to sulphosalicylic acid, it was therefore concluded that blood serum does normally contain amino-acids The experiment was repeated twice with rabbit's serum and with dog s serum with the same results

In order to determine whether the blood content of amino acids is increased during digestion an experiment was carried out in which rabbits which had fasted for 24 hours, and rabbits which had received a meal of oats and green stuff within three hours of the experiment, were bled and equal volumes of the serum obtained were treated in the manner already indicated. The dialysate from the fasting animal's blood serum gave a slightly fainter tint than the other dialysate, and from this result it is probable, considering the quantities of serum used, that any increase in the amino acid content of the blood after a meal is too small to be detected in 2 c c of serum. It is possible, of course, that in an animal like the rabbit, with a great length of intestine and a large cæcum almost invariably loaded with partially digested food, the difference between a fasting animal and one in a state of digestion is very small It was very noticeable that the dialysate from the serum of the animal in a state of digestion gave a temporary red colour when boiled with ninhydrin, this being due, probably, to glucose

A further experiment was made to determine the influence of a previous bleeding

An animal was bled and the serum obtained was sterilised as before and the clear watery fluid pipetted off, and after being heated placed in the ice chest Four hours later the animal was again bled and the same volume of serum obtained and heated in the water bath The clear watery fluid was pipetted off heated cooled in the ice chest and 5 c c placed in a dialysis sac and dialysed against 20 c c. of distilled water In the same way 5 c c of the watery fluid from the first bleeding was dialysed against 20 c.c. of distilled water After 18 hours the dialysates were tested with ninhydrin and the reaction obtained with the dialysate from the serum of the second bleeding was much deeper than the other

It may be concluded that amino acids are washed from the tissues by the fluids which flow into the vascular system after a bleeding These results do not preclude the possibility of a ferment action taking place in normal unheated blood serum Indeed, it was observed that the depth of the ninhydrin reactions with fluid from 10 c c of serum was not more than equal to that usually obtained in an ordinary experiment with 1 c c of serum In order to test for an enzyme action the following experiments were made

An animal was bled aseptically at least 30 c c of blood being taken, the blood immediately centrifuged, and the clear, watery, hæmoglobin free serum was pipetted off into a sterile test tube Into each of half a dozen or more sterile dialysis sacs 2 c c of blood serum was placed, and the sacs dialysed at different temperatures for 18 hours against distilled water The temperatures chosen were as nearly as possible as follows 5° (in chest), 20°, 30°, 40°, 50°, and 60° C It was not always possible to set the baths at exactly these temperatures, but practically the temperatures employed were round about those stated The baths used maintain the temperatures at which they are set to within half a degree during the 18 hours of the experiment

The dialysates were tested in the usual way with ninhydrin, and the tints obtained gradually increased up to 40° C and then diminished at the higher temperatures The maximum was, in every experiment but one, round about 40° C The results were compared by the method of dilution already described,[9] and the dilution numbers plotted against the temperatures as shown in the curves below The following are examples of the experiments —

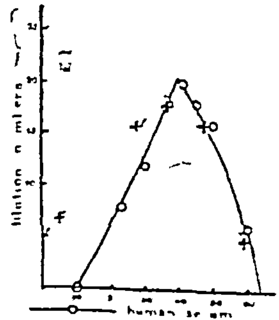
1 A dog was bled and the serum obtained by centrifugalisation In order to be quite certain of the sterility of the serum it was filtered through a Berkefeld filter The accompanying experiment was carried out (Table IV) The curve for the dilution numbers is given in Fig 1 From this experiment, in which in addition to using toluene every precaution was taken to exclude organisms, it is clear that an autolytic enzyme has been active

TABLE IV

Sac	Serum	Temperature of incubation	Duration of incubation.	Ninhydrin tests	Dilution numbers	S S.A. test
2	2 c c	4 5°	18 hours	+	0 7 c c	–
32	"	27 1°	,	++	1 6 ,	–
1		30°		+++	1 8 ,	–
13	,	47°	,	++	1 65	–
6	,	52°		+(+)	1 4	–
12		58°		+	0·5	–

S S A test = sulphosalicylic acid test

FIG 1



The dotted line shows the gradation in the depth of the ninhydrin reaction obtained with dog serum incubated at different temperatures The dilution numbers give the volume of water added to 1 c c to bring the tint of the liquid to the degree of faintness of the weakest reaction

2 The curve (Fig 2) for the dialysis of a solution of peptone was obtained by dissolving 0 4 g of Witte's peptone in 20 c c of distilled water, and dialysing at different

that any enzyme or any useful protective factor hitherto described is regularly developed in the animal body by the parenteral introduction of lactose or sucrose "

Turning now to the part of the experimental work in which albumins are used as the substrate, it is essential first to refer to the dialysis method which was employed to demonstrate the ferments The technique adopted has been described in a previous paper[5] In order, however, to prevent any misunderstanding it is necessary to emphasise several parts of the process In the first place asepticity was observed throughout The dialysis sacs, elongated Petri dishes, and pipettes were sterilised in the autoclave and used immediately they were cool The substrate was sterilised before use by boiling for several minutes in distilled water, the blood was drawn off aseptically into sterile centrifuge tubes, and after centrifuging the blood serum was pipetted off into fresh sterile tubes The contents of the dialysis sacs and the distilled water in which they were placed were both covered with a layer of pure toluene In testing the dialysate with ninhydrin 10 c c of the liquid, to which 0 2 c c of 1 per cent ninhydrin solution had been added, was boiled over the Bunsen flame for one minute

It is essential, according to Abderhalden, to use antigen and blood serum free of every trace of hæmoglobin. In experimental work with animals it is easy to obtain hæmoglobin free serum In order to do this the blood is collected quickly and centrifuged at 6000 revolutions per minute before coagulation occurs The serum obtained is almost colourless and quite free of hæmoglobin If the blood is allowed to coagulate before being centrifuged it is necessary to break up the clot, otherwise the serum will be mixed with fibrin in which red blood corpuscles are entangled With human blood it is more difficult to obtain serum which is quite free of hæmoglobin owing to the fact that, as a rule, at least several hours elapse before the blood is centrifuged The process by which the substrate may be obtained free of blood is fully described by Abderhalden in his book "Die Abwehrfermente "

Lange[2] states that in his experience the presence of hæmoglobin in the blood serum or in the substrate has no influence on the result of the reaction, and this opinion has been confirmed in the course of this work by numerous experiments For example, a human placenta was taken and divided into two parts, one of which was washed free of blood and prepared according to Abderhalden s directions, the other being boiled at once Two ecimens of placental substrate were thus ob ed, the one white and free of hæmoglobin, the other dark brown owing to the presence of altered blood Blood was now obtained from a woman in labour and the experiment described in Table I carried out.

TABLE I

Sac	Serum	Substrate	Ninhydrin test.	Sulphosalicylic acid test.
80	0·5 c.c.	HbO free placenta.	–	–
81	1·0 ,		–	–
71	1·5 ,		+	–
74	0 5	Nil	–	–
72	1·0 ,	,	–	–
82	1 5 ,		(+)	–
70	0 5 ,	Bloody placenta	–	–
83	1·0		–	–
75	1 5		+	–

The reverse experiment, in which hæmoglobin free blood serum is obtained and divided into two parts, hæmoglobin being added to one part and both now incubated with and without placenta, was also performed In this case also the presence of hæmoglobin exerted no influence on the reaction. Similar results were obtained with the blood and various substrates of the dog and rabbit These experiments, though of the nature of preliminary investigations, were not carried out until a considerable proportion of the work described in this paper had been completed Consequently in all the experiments to be described it is to be assumed that, unless stated to the contrary, the blood serum and substrate were hæmoglobin free

Aberhalden's experiments, on which the whole theory of protective ferments is based, were repeated in the following manner

Half a dozen large healthy rabbits were taken, and the blood serum of each animal was allowed to act on coagulated egg albumin The result of each experiment was negative, as the accompanying example shows (Table II)

TABLE II

Sac.	Serum.	Saline	Substrate	Ninhydrin test	Sulpho-salicylic acid test.
81	1·0 c c	1·0 c c.	Egg white	–	–
82	1 5 ,,	0·5		+	–
80	2 0 ,	0		++	(?)
76	1 0	1·0 c c.	Nil	–	–
73	1 5 ,	0·5	,	+	–
77	2·0 ,	0	,	++	(?)

Thus the serum is without action on coagulated egg white Following Abderhalden s method of procedure the rabbits were now injected intravenously (the second injection two days after the first, and the third one day after the second) three times with egg albumin diluted with normal saline The dose administered on each occasion was 2 c c of a 50 per cent solution of albumin The rabbits were bled as follows 2 on the fourth day, 2 on the fifth and 2 on the sixth day after the last injection The sera obtained were tested against coagulated egg white and in each case the result was negative The accompanying table (No III) is typical —

TABLE III

Sac	Serum	Substrate	Ninhydrin test	Sulpho-salicylic acid test
76	0·5 c.c. rabbit No 1	Egg white	–	–
73	0·75	,	(+)	–
72	1·0 ,		+	–
79	0 5 ,, ,	Nil.	–	–
83	0·75 ,, ,		(+)	–
78	1 0 ,		+	–
71	0 5 c c rabbit No 2	Egg white	–	–
75	0·75 ,	,,	(+)	–
82	1·0		+	–
77	0·5 ,	Nil.	–	–
83	0·75 ,		(+)	–
81	1·0 , ,,		+	–

A similar series of experiments was carried out, inoculating other sets of rabbits subcutaneously and intraperitoneally, and with the same results In no case was any evidence obtained of the production of a protective ferment The blood serum dialysable ninhydrin reacting substances than the serum of the dog, the rabbit, the guinea pig, or rat

TABLE VIII

Sac.	Serum.	Temperature	Ninhydrin test. (Dose 0 4 c.c.)	Dilution numbers	S S A. test
93	2 c c.	10°	+	0 c c	–
84		23°	++	0 8 ,	–
85		30°	+++	1 2 ,	–
90		41°	++++	2 0	–
83		45°	+++ (+)	1 8	–
86		50°	+++	1·6 ,	–
97		60°	++	0·6	–

These results enable one to conclude that an autolytic ferment exists in the blood serum of rabbits, dogs, and human beings, and that it is responsible for some of the amino acids indicated by the ninhydrin test It does not follow, however that it is impossible to diagnose pregnancy by Abderhalden's method This requires to be tested directly, and for this purpose it was determined to use animal material owing to the ease with which blood serum can be obtained and male controls set up Rabbits and dogs were tested Blood was obtained from female animals both during the early days of pregnancy and immediately before or during delivery In every case blood serum from a male was used as control Altogether over 20 tests were made, and the results obtained were concordant and invariably negative, as the following examples illustrate

A pregnant rabbit and a buck were starved 18 hours and then bled The serum was filtered through unglazed porcelain and the following tests made (Table IX) —

TABLE IX.

Sac.	Serum	Substrate.	Ninhydrin test	S S.A. test
21	½ c c doe	Nil	–	–
2	1		–	–
32	1½	,	+	–
12	2		++	–
5	½	Rabbit placenta.	–	–
4	1		–	–
20	1½		+	–
27	2		++	–
13	½ c c buck	Nil	–	–
10	1	,	–	–
1	1½		+	–
43	2	,	++	–
7	½	Rabbit placenta.	–	–
22	1	,	–	–
42	1	,	+	–
[illegible]	2	,	++	–

Similar experiments, in which, however, the blood serum was not filtered, gave the same result An example of a test with dog serum and dog placenta has already been given

The difficulty of obtaining blood serum from human patients for the purpose of experimental work is very great, and renders it practically impossible to test the method as thoroughly as has been done for animals It was however, essential to make some experiments, and this was rendered possible by the kindness of Dr Kettle of St Mary's Hospital, who procured four samples of blood obtained during delivery As a control to these tests in one experiment the blood serum of a healthy adult male was used. In each test (including that with serum from male) it was found that the ninhydrin reaction of the dialysates of serum plus placenta was deeper than in the case of the dialysates from serum alone The results here are therefore quite different from those already detailed above The serum (from male and female) does break down placenta protein or in some way liberate amino acids But since this result had already been obtained in connexion with tests in cases of cancer in animals to be described later, it was decided, in spite of the small number of cases examined, not to continue the work

The following example is typical Blood obtained during labour was centrifuged and the serum, yellow in colour but free of hæmoglobin, was pipetted off (Table X)

TABLE X

Sac	Serum	Substrate.	Ninhydrin test	S S A. test
85	1 c c. from woman on delivery	Human placenta.	–	–
86	2 , ,		++	–
84	1 ,, ,	Nil.	–	–
100	2		(+)	–
93	1 c.c. male serum.	Human placenta.	–	–
90	2		++	–
97	1	Nil	–	–
84	2	"	(+)	–

In the published work dealing with the diagnosis of cancer by this method human material exclusively has been used Here, again, the difficulty of providing sufficient controls has not been met Where animal material is employed the difficulty does not arise The following tables illustrate the results obtained in numerous experiments with rats, guinea pigs, and rabbits

1 Nine rats bearing tumours—rat tumour 9—which were growing progressively were starved for 20 hours and then bled and the blood centrifuged The serum obtained was free of hæmoglobin pale yellow in colour and clear (Table XI)

TABLE XI

Sac.	Serum.	Substrate	Ninhydrin test.	S S.A test
116	0 65 c.c	Rat tumour 9	(+)	–
117	1 5	,	+++	–
113	1 55		++++	–
114	0 65	Nil.	?	–
112	1 15		+	–
115	1 55	"	++	–

Incubated 20 hours

2. Five normal rats were starved for 20 hours, bled and serum obtained (Table XII) Incubated 20¼ hours. The same dialysing sacs were used as in the preceding experiment and in the same order

TABLE XII

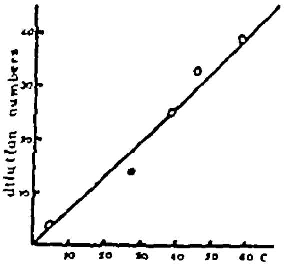
Sac	Serum	Substrate	Ninhydrin test.	S S A. test
116	1 0 c c.	Rat tumour 9	++	–
117	1·5	"	++++	–
113	2·0		++++++	–
114	1 0	Nil.	+	–
112	1·5		++	–
115	2 0		+++	–

temperatures 2 c c of the solution against 20 c c of water thus (Table V) —

TABLE V

Sac	Temperature	Duration of dialysis	Ninhydrin test.	Dilution numbers
13	4 5°	18 hours	+	0 3 c c
6	27°	,	++	1 4 ,
2	38°	,	+++	2 5 ,,
32	45°	,,	++++	3 3 ,
12	55°	,,	+++++	3 5 ,
1	58°	,,	++++++	3·9 ,

FIG 2



Shows the effect of increasing temperatures on the dialysis of a dilute solution of Witte s peptone

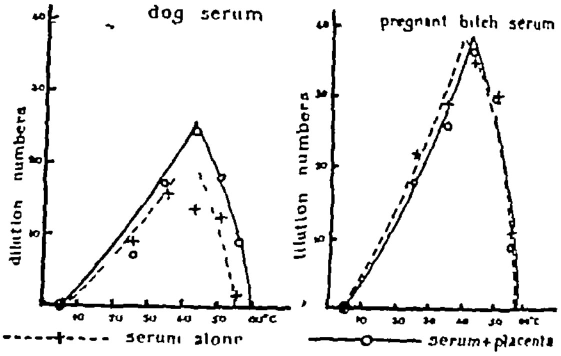
3 A bitch, three weeks pregnant, and a dog were bled and sera obtained Aseptic precautions were taken, but the serum was not passed through a Berkefeld filter The following tests were made (Table VI) The curve is shown in Fig 3

TABLE VI

Sac	Serum	Sub-strate	Temperature	Ninhydrin test	Dilution numbers	S S A. test.
16	2 c c. dog serum	Dog placenta.	5° C	(+)	0 c c	–
112	,	,	25°	+	0 7 ,	–
42	,	,	34 5°	++	1 7 ,	–
20	,	,	42 5°	+++	2 4 ,	(+)
27	,	,	50°	++	1·8 ,,	–
4			55°	+	0 2 ,	–
7	,	Nil	5°	(+)	0	(+)
117		,	25°	+	0 8 ,	–
43	,		34 5°	++	1 6 ,	–
116	,		42 5°	++	1 4 ,	–
113		,	50°	++	1 3	–
115			55°	+	0·2	–
24	2 c.c bitch serum	Dog placenta	5°	(+)	0	–
25		,	25°	++	1 8	–
28	,		34 5°	+++	2 6 ,	–
9			42 5°	++++	3 7	–
1		,,	50°	+++	3 0	–
40	,		55°	+	0·9	–
26		Nil	5°	(+)	0	–
36		,	25°	++	2·2 ,	–
12			34 5°	+++	2·9 ,	–
13			42 5°	++++	3·5	(+)
5			50°	+++	3·0	–
2			55°	+(+)	1 1	–

It will be noticed from the curves (Fig 3) that (1) There is no evidence of digestion of the substrate either by the serum from the pregnant bitch or by that from the dog, (2) the serum from the bitch yielded a greater amount of amino acids than that from the dog, and (3) the curve for dog serum alone is distinctly more irregular and rises to a smaller height than the curve for dog serum plus placenta This is due to the fact, as has been shown in the previous paper,[9] that sacs 117, 116, 113, and 115 were made at a later date than the sacs used in the rest of the experiments (except sac 112), and had been autoclaved fewer times In connexion with (2) above, it may be stated that my colleague, Dr Compton, estimated the content in the ferment maltase of both these sera and found a difference corresponding to that noted above In view of the findings of Bertrand and Compton[11] the agreement between the maltase and proteolytic ferments in the two lots of serum is of considerable interest

FIG 3



Showing that no degradation of placental tissue occurs either with dog or with pregnant bitch serum

4 Blood serum of rabbits was examined in the same way with similar results A normal Belgian hare was starved for 26 hours and then bled, the blood was centrifuged and the clear, hæmoglobin free serum pipetted off The serum was divided into two parts to one of which 0 5 c c of hæmolysed red blood corpuscles was added The sera were now filtered through separate Berkefeld candles and the following experiment carried out (Table VII)

TABLE VII

Sac	Serum.	Temperature	Ninhydrin test	S S A test.
78	1 c.c. of HbO free	13 5°	–	–
80		28 5°	++	–
83		38·5°	+	–
79		41 0°	–	–
73	,	50 5°	–	–
82	,	61·0°	–	–
76	1 c c containing HbO	13·5°	–	–
81		28·5°	++	–
77		38·5°	+	–
74	,,	41·0°	–	–
72		50 5°	–	–
75		61·0°	–	–

It was not possible to obtain dilution numbers The optimum temperature is here about 30° C

5 About 40 c c of blood was drawn from the median cephalic vein of a healthy man (B R G R) and hæmoglobin free yellowish serum obtained This was dialysed in lots of 2 c c against water at different temperatures for 18 hours (Table VIII) Fig 1 shows the curve The double dose of ninhydrin is required owing to the fact that human serum yields do c for dose, a smaller amount of

ELECTROTHERAPY AT A BASE HOSPITAL

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VERY little attention has hitherto been drawn to the value of electrotherapy in the treatment of the sick and wounded in war time The only published references to this subject of which I am aware occur in a paper, "Le Service de Physiotherapie de l'Hôpital Militaire du Dey a Alger," by Dr Hertz, Medecin Major de 1re Classe[1] and in a paper entitled "La Physiotherapie des Blesses de Guerre," by M Miramond de Laroquette[2] Both these papers are concerned with the work at the military base hospital at Dey in Algeria, where a department of physiotherapy had been established to meet the needs of the wounded soldiers during the war in Morocco Before reaching this department the primary lesions of the soldiers had been cured, and the department was solely concerned with the secondary troubles, often very severe, such as paresis and paralysis following on nerve lesions, 16, ankylosis or articular stiffness, 43, functional incapacity or atrophy, 3, total, 62

In the 41 cases in which a definite result was obtained there was a complete cure in 51 per cent, marked improvement in 24 per cent, and no result in 24 per cent Of the remaining cases 8 were invalided out of the service and 3 were placed on half pay The writers claim that without the aid of physiotherapy the number of those permanently disabled and in receipt of State pensions would undoubtedly have been much increased. The methods employed were, in the cases of neuritis and wasting, the continuous current of high intensity with long seances, and sometimes in addition a current of rhythmically interrupted galvanism For the arthritic lesions radiant heat and mechanotherapy were used The chronic effusions were treated by radiotherapy, in pastille doses, every fortnight

At the Radcliffe Infirmary, which forms one of the subsidiary hospitals attached to the Third Southern General Hospital, a very complete electrical installation has recently been added The installation comprises Nagelschmidt s diathermy apparatus with a high frequency attachment, a powerful American Baker 8 16 plate static machine, a Bergonie apparatus for obtaining electrically provoked exercises, a 500 candle power leucodescent lamp for radiant heat, an electric light bath of 48 incandescent and four arc lamps a Kromeyer mercury vapour quartz lamp, two pantostats, and batteries, &c, for rhythmically interrupted and reversed currents

Of the 78 cases which have already been electrically treated 31 have been cases of frost bite Of these 24 have been discharged cured and 7 remain under treatment (See Table) It is not suggested that these cures would not have occurred under other forms of treatment or perhaps without any treatment, or even in spite of treatment But it is claimed that by adopting electrical methods the most acute pain is speedily relieved, the stasis and swelling of the affected parts are reduced, the vitality of the tissues is increased, and in the necrotic cases the tissues are kept dry and aseptic whilst separation is hastened by the increased hyperaemia which follows the application of the treatment.

In frost bite cases the form of electrical treatment is selected on the following principles If the pain is very severe diathermy is found to give the best results When the pain is very acute the treatment is commenced as soon as possible after the patient s arrival at the hospital, and in the more severe cases two treatments are given daily In cases of slight frost bite electrical treatment is not usually given, any slight pain which may exist usually subsiding with one or two days' rest and warmth, occasionally, however, cases with no pain on admission develop a neuritis of the feet requiring electrical treatment a few days after admission Cases which have lost sensation to heat are not suitable for diathermy, as there is a risk of the heat blistering them

Table showing the Number of Patients Treated, the Methods of Treatment adopted, and the Results to the Middle of January

Nature of complaint and number of cases		Method of treatment					Result			
		Diathermy	Morton wave current	Static breeze	High frequency vacuum tube	Galvanism (continuous, interrupted and reversed current), faradism, ionisation, radiant heat	Cured	Improved	Still under treatment	Unimproved
Frost bite	31	20	1	12	7	1	24	—	7	—
Nerve lesions	22	11	2	3	2	11	7	5	7	3
Rheumatism sciatica neuritis	10	3	5	—	—	2	3	2	4	1
Stiff joints, synovitis	8	1	6	1	—	3	3	1	4	—
Strain of muscles	4	2	2	—	—	—	3	1	—	—
Eczema of leg	1	—	—	1	—	—	1	—	—	—
Gout	1	—	—	—	—	1	—	1	—	—
Sycosis menti	1	—	—	1	—	—	1	—	—	—
Totals ..	78	37	16	18	9	18	42	10	22	4

The following are the notes on a case in which diathermy was given in consequence of the pain disturbing the patient's sleep —

CASE 1 —The patient was admitted on Dec 17th, 1914 Was frost-bitten about the end of November, whilst on active service in the trenches He stayed in the trenches till Dec 11th, when he was unable to endure the pain in his feet and reported sick The pain had continued every night, disturbing his sleep On the night of Dec. 18th there was considerable pain Dec 19th Diathermy 10 by 5 c m electrodes 0 9 ampère, for 10 minutes yesterday There has been no pain since treatment and the patient had good night Dec 20th Diathermy repeated on the 19th There is now no pain in the feet. The patient can walk well and is recommended for sick furlough

Captain C A Coventon has kindly supplied me with the following notes of two of his cases which were treated by diathermy for severe pain in the feet following frost bite

CASE 2 —The patient was admitted on Dec 31st, 1914 Frost bite in both feet, very painful preventing sleep On Jan 1st 1915, he was admitted to Radcliffe Infirmary for electrical treatment On the 5th there was much less pain he slept well and there was more movement On the 6th he continued to improve, was now quite well, and was discharged to sick furlough The electrical treatment in this case seemed to cause immediate improvement the pain ceased, and convalescence went on uninterruptedly

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[1] Archives d'Électricité Médicale, March [illegible] 1913
[2] Paper read at the Congress of the French Association for the Advancement of Science held at Tunis in 1913

3 Two rabbits, one a normal buck and the second a doe with an absorbing tumour, decreasing in 49 days from a size of $2\frac{3}{4} \times 2\frac{1}{4}$ inches to a size of $1 \times 1\frac{1}{2}$ inches at the time of the experiment, were starved for 18 hours and then bled The sera were both free of hæmoglobin, the normal serum was clear, that obtained from the tumour bearing animal was opalescent (Table XIII) It will be observed that though the dialysates from tumour serum reacted to ninhydrin more strongly than the dialysates of normal serum, yet the differences between serum alone and serum plus substrate corresponded in the two sets of the experiment

TABLE XIII

Sac	Serum	Saline	Sub-strate	Ninhydrin test	S S A test
80	0·5 c c. tumour animal	1·0 c.c.	Rabbit tumour	(+)	–
76	0·5 ,, , ,,	1 0 ,	,,	(+)	–
70	1·0 ,, ,,	0·5 ,	,	++(+)	–
82	1 5 ,,	0		++++(+)	–
83	0·5 , , ,	1 0 ,,	Nil	–	–
74	1 0 , ,	0 5	,	++	–
75	1 5 , ,,	0	,,	++++	–
81	0 5 c.c normal animal	1 0 c c	Rabbit tumour	–	–
75	1·0 , , ,	0 5		+	–
79	1 5 ,	0		++	–
71	0 5 , ,	1 0	Nil.	–	–
72	1 0 , ,	0 5 ,	,	(+)	–
77	1 5 , ,	0	,,	+	–

4 A guinea pig tumour was washed free of hæmoglobin until the tissue was white, and was then extracted with chloroform to remove the large amount of fat usually found in this tumour The product was then boiled in distilled water acidified with acetic acid, and again in distilled water until the water failed to react with ninhydrin A guinea pig bearing a tumour and a normal guinea pig were bled from the heart and sera obtained The animals were not previously starved (Table XIV) In this experiment the reverse of what was shown in the last experiment is obtained, the serum of the normal animal produced a greater ninhydrin reaction than the tumour serum but again in both sets of tests there is an indication of a degradation of tumour protein or of some physical action liberating amino-acids

TABLE XIV

Sac	Serum	Sub-strate	Saline	Ninhydrin test	S S A test
72	0 5 c c. normal animal	Guinea pig tumour	0·5 c c	–	–
74	0 75 ,, ,,	,	0·25 ,	++	–
71	1·0 , ,,	,	0	++++	–
83	0 5 , ,	Nil	0·5 c c	–	–
73	0 75	,	0·25 ,	–	–
80	1 0		0	+	–
76	0 5 c c tumour animal	Guinea pig tumour	0·5 c c	–	–
82	0 75 ,,	,	0·25	+	–
70	1·0		0	++	–
77	0 5 ,	Nil	0·5 c c	–	–
79	0 75 , ,		0 25	–	–
75	1 0	,	0	+	–

Incubated 21 hours

5 Two guinea pigs were inoculated in the right axilla with an emulsion of mouse tumour 63, the dose in each case was 0 5 c c Sixteen days later these animals and two normal guinea pigs were bled, and the sera allowed to act on mouse tumour 63 as substrate as indicated (Table XV)

TABLE XV

Sac.	Serum.	Substrate.	Ninhydrin test	S S A test
4	0 5 c.c immune serum	Tumour 63	–	–
5	1·0	,,	+++	–
24	0 5 ,	Nil	–	–
40	1 0 , ,,	,	++	–
20	0 5 c c normal serum	Tumour 63	(+)	–
1	1·0		+++	–
21	0·5	Nil	–	–
9	1·0 ,		+(+)	–

Incubated 19 hours

Up to the present it has not been possible to obtain materials necessary to carry out similar experiments in cases of cancer in the human subject

Results and Conclusions

1 It was found impossible to cause the production in rabbits of a ferment which digests coagulated egg white by the injection subcutaneously, intraperitoneally, or intravenously of raw egg white

2 A minute quantity of amino acids is present in 10 c c of blood serum of rabbits and dogs, and it was found (in rabbits) that after a bleeding these substances are increased in amount

3 An autolytic ferment is found in the blood serum of rabbits, dogs, and in human serum

4 The serum of the pregnant rabbit is unable to break down rabbit placenta, and the serum of the pregnant bitch is unable to break down dog placenta Human blood serum from the pregnant female and from the healthy male, incubated with human placenta, produced by chemical or physical action amino acids

5 Rat blood serum ("normal" and "tumour") breaks down rat tumour (J R S A Rat 9) Guinea pig serum ("normal" and "tumour") breaks down guinea pig tumour and mouse tumour 63 The blood serum of the guinea pig was not rendered more active in this property by a previous inoculation of the animal with mouse tumour 63

The method devised by Abderhalden, even with the technical improvements described, is thus seen to be inadequate to distinguish normal from pregnant or cancerous sera The fundamental experiments adduced by Abderhalden do not, on repetition, give the results stated by him, and a proteolytic ferment normally present in the serum of mammals acting on tissue substrates of varying lability, prepared in accordance with his directions in all probability accounts for his results and their confirmation by others

Bibliography—1 Abderhalden: Abwehrfermente fourth edition 2. Lange: Biochemische Zeitschrift, 1914 vol lxi p. 19[illegible] 3 Wegener: Münchener Medizinische Wochenschrift No. 1 1914 p 15 Brockman: THE LANCET Nov 15th 1913 p 13[illegible]5 and many others for references see Abwehrfermente pp 35[illegible] 4 Oeller and Stephan Münchener Medizinische Wochenschrift No. 1 191[illegible] p 12. 5 Michaelis and Langermarck Deutsche Medizinische Wochenschrift No 7 1914 6 H de Waele Comptes Rendus No 1 1914 p 627 7 Abwehrfermente English translation pp 62, 63 8 Hogan: Journal of Biological Chemistry vol xviii No 3 p [illegible] 9 Bullock: THE LANCET July 25th 1914 10 Abderhalden Zeitschrift für Physiologische Chemie Band 83, 1913 473 11 Bertrand and Compton Annales de l'Institut Pasteur vol. xxiv, 1910 p 931

by electrically provoked exercise to the back (positive) and seat and thighs (negative) After the treatment the patient walked back to the ward by leaning on his wheeled chair, on the following day he walked to the electrical department with the aid of sticks, and after a repetition of the exercises he walked without assistance On the third day the Morton wave current was applied to the back to clear up any remaining stiffness No further treatment was required, and the patient was discharged on sick furlough

Oxford

FEAR AND DISEASE

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TOXIN formation and the physical effect of toxins on the organism have been investigated both bacteriologically and dietetically as the cause of alimentary toxæmia, but we are still searching for that fundamental factor which allows the toxins to enter the blood in excessive quantities I wish in this paper to put forward a hypothesis showing that this fundamental factor is, either partly or entirely, the direct result of a mental state Dr E Mellanby raises this question when he says[1] —

> The key to the situation is not held by a consideration of the bacteria of the intestine, nor of the chemical end products of bacterial action but rather by knowledge as to the normal methods of intestinal absorption and more particularly of *the mechanism which prevents the passage of toxic substances across the mucous membrane* into the blood stream [Italics are mine] The important question is What is the cause in acute intestinal disturbance which brings about the breakdown of the defensive mechanism and allows the entry into the blood stream of toxic substances ?

Dr Murray Leslie seems to emphasise the same question when he says[2] —

> It seems to me that sufficient stress has not been laid by previous speakers on the first factor—namely the power of resistance on the part of the individual. It is true that reference has been made more than once to the fact that there is no necessary relationship between the amount of stasis and the degree of toxæmia. It is a matter of daily clinical observation that some persons can remain constipated for days and even weeks without apparently suffering any ill effects while in other instances the missing of the usual after breakfast evacuation is invariably followed by headache malaise, and inability for physical or mental exertion Habit-tolerance, important though it may be does not altogether account for such phenomena. There seem undoubtedly to be individual idiosyncrasies in respect of liability or resistance to toxæmia. The importance of the personal factor is exemplified by the well-known liability to bacterial invasion (including bacillus coli infection) of persons debilitated by injury disease, over fatigue senile tissue degeneration and other conditions leading to diminished vital resistance Thus for instance, it is known that shortly before death when the vital protective forces are more or less in abeyance, the bacillus coli and other bacteria can freely pass through the intestinal mucous membrane and so into the circulation while their toxins not being neutralised or destroyed, accumulate in the circulating blood and are no doubt responsible for many of the symptoms preceding dissolution including ante mortem pyrexia. Metchnikoff indeed believes that such absorption is the primary cause of death in most cases of senility while any check to such absorption tends greatly to prolong life

I am led to believe that in some of these cases at least nervous worry and all the emotions of an unpleasant character which I summarise generically as fear are frequently a direct cause of alimentary toxæmia Under the heading of "fear I group broadly all such emotions as may contain an element of fear, such as anxiety, sorrow (a present loss, with fear of unhappiness in the future), over work, anger (fear of another), exaggerated self consciousness (fear of criticism), and pain, with its milder varieties of malaise and fatigue Fear, in its generally accepted sense, or any excitement of an intense and unplesant nature, will commonly result in pallor with a feeling of faintness, while gastro-intestinal and vesical disturbances frequently ensue

What are the physical causes of these effects and, if these causes persist, how is the organims affected ? Compare the physical signs of fear with the results of shock During abdominal operations shock effects are sometimes manifest and have often been described Here the intestines become deeply injected, increase in volume, and may finally emerge from the body cavity This distension is not due to the formation of gas, it is paralytic The vaso constrictor fibres of the splanchnic area are paralysed, and similarly those whose function is to maintain visceral tone The face becomes pallid from the fact of the blood leaving the head to fill the vessels of the mesenteric area, blood pressure is lowered, and if shock is severe or continued the heart may stop Short of this last, the following conditions, by reason of this dilatation, then obtain (1) The absorption area of the inner intestinal surface is greatly increased, (2) the absorbing area of the blood vessel wall is also increased, (3) the intestinal wall is thinned, (4) the walls of the blood vessels are thinned, (5) they contain more blood, and (6) the blood stream is slowed, remaining longer in the absorption locality Now we have on the one side of the intestinal wall blood (and lymph), and on the other side food and toxins All these six factors tend, by the law of osmosis, to favour absorption of the intestinal contents into the blood Is it not therefore probable that the same condition, to lesser degree but for longer duration is induced by the shocks and resultant fear complexes incidental to most lives ? Truly more food may at the same time be absorbed, but prematurely, in that case, further increasing the waste products to be afterwards eliminated In any event, the toxin rather than the food question here holds the field.

I submit that the effect of fear will produce to some extent the same condition of intestinal collapse observed in surgical shock, slight possibly in degree, but sustained if the cause persists, and further that this loss of visceral tone tends, in the erect posture, to cause a drag on the visceral nerves (which cannot stretch as much as the gastric and intestinal muscles) and enhances the shock effect We note that in order to diminish this factor and lessen the heart s work the subject prefers to lie down.

A patient describes how the sight of an accident affects his stomach He develops wind immediately and his heart becomes embarrassed He has an all gone ' sensation in his abdomen Here again one can only believe that a sudden paralysis of gastric and probably of intestinal muscular fibres allows the expansion of gases already present, and that dilated viscera now press on the heart As the emotion passes the tone of his intestinal tract returns, and the expulsion of wind from the stomach often completes his recovery A man bracing himself for an ordeal instinctively tightens his belt (girds up his loins) He feels a vague need of abdominal tone and has a sense of power (courage) when this manœuvre has been carried out Atony and flatulence may, I believe, be

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[1] Proceedings of the Royal Society of Medicine 1913 vol vi p 2[illegible]

[2] Ibid p 27

CASE 3 —Frost-bite in both feet The patient was admitted on Dec 31st, 1914, with great pain necessitating morphia, there was no great discolouration and very slight movement On Jan. 3rd, 1915, he was admitted to Radcliffe Infirmary for treatment by Captain Turrell On the 5th the pain was much less, he slept through the night, and had much more movement in the toes On the 12th he continued to improve On the 14th he was discharged to sick furlough The remarks on the improvement of the other case equally apply to this one

The so called cases of trench pain or trench feet usually have no tissue destruction, no blebs, and not even any discolouration of the skin, they would appear to be due to acute neuritis of the feet excited by cold and exposure The most acutely painful case we have treated was of this nature The day after admission the patient was writhing in bed with agonising pain, his hands clenched, his face buried in the pillows, his face and feet covered with perspiration, there were no physical signs of any lesion This patient was the only one we have treated who derived little or no benefit from diathermy, on the third day of his treatment the diathermy apparatus was temporarily out of order, so he was treated by the static breeze instead He was immediately relieved, slept the whole of that night, and only had a slight recurrence of pain on the following day and this was relieved by a repetition of the treatment The patient had no further relapse, and two days afterwards was walking about the ward The other patients who have been treated by both methods have always stated that their pain has been more relieved by the diathermy than by the static This patient was suffering from considerable nervous exhaustion, and probably a great part of the benefit he derived from the static breeze was due to the constitutional effect of this treatment

Cases with no ulceration, but with blebs, and cases with loss of sensation to heat, we find respond best to the high frequency vacuum tube It is remarkable how quickly the blebs dry up under this form of treatment Where there is ulceration and necrosis the static breeze with the patient negatively charged is the best form of treatment The worst case of frost bite which has been admitted to the hospital has been under treatment for about six weeks by this method On admission the toes were hard, dry, and withered, the sole of the foot was covered by a large black bleb, on the dorsum of the foot a line of demarcation was already appearing about one inch from the base of the toes The static breeze has been applied daily, and pain, whenever it has occurred, has been relieved by the treatment The toes are now separating at the metatarso phalangeal articulation The granulations are very healthy in appearance, the wound has kept perfectly aseptic, and only on one occasion has the temperature risen to 99° F The patient's general health has much improved The œdema and induration on the dorsum of the foot have nearly disappeared

The rationale of the static breeze in the treatment of frost bite is apparent from the following description by Dr Benham Snow of the therapeutic action of this modality "The effect upon local stasis   where swelling and induration are present is to generally soften the tissues This is due to the action of the discharges producing recurrent contractions of the tissues, thereby inducing an onward movement of the blood current through the vessels Over superficial œdema and where ecchymosis is present the effect of these applications systematically applied is remarkable in its results   To ulcerated surfaces the application of these modalities is one of the most valuable in therapeutics Applied over the indurated margin, where it has a positive effect in relieving stasis, it proves to be of the greatest value for the relief of those conditions The circulation is restored throughout the zone of induration, which surrounds the ulcer, when a reparative process is immediately instituted '[3]

Several patients have been treated on account of very severe pain in the extremities following crushing or partial division of a nerve It has been found that diathermy has always afforded marked relief, after the first treatment the pain is usually absent for four or five hours and subsequent treatments result in a longer period of relief In treating patients with very severe pain two applications of diathermy are administered daily, the second one being given as late as possible in the evening Treated in this way patients who previously had only experienced brief relief from hypodermics of morphia sleep through the night without pain Diathermy does not appear materially to shorten the period of convalescence in these cases, nor does it prevent the occurrence of trophic changes in the skin In order to keep the patient free from pain the treatment has to be continued in some cases for two or three months Often when the treatment is omitted for one day the patients complain that they have missed it and have had more pain

In cases of nerve degeneration, if the mischief is slight, and the muscles react to faradism, the rhythmically reversed faradic current is used Where the faradic reaction is lost, when there is no pain associated with the lesion, rhythmically reversed galvanism is used, when pain exists rhythmically interrupted galvanism is selected For testing electrical reactions the condenser method is used and is found to be not only much quicker, but also to give more information in regard to the degree of nerve degeneration than the faradic and galvanic methods

Sprains of muscles and synovitis of joints usually yield readily to the Morton wave static current, and the patient's stay in hospital is generally materially shortened by this treatment The Morton wave current, either alone or in association with ionic medication, is used for the treatment of stiff joints

The following interesting case of "spinal concussion" speedily yielded to the persuasive influence of Bergonié's machine for electrically provoked exercises The rapid cure will probably be attributed to electrical suggestion, but in view of the vigour and amplitude of the muscular contractions excited by this apparatus "electrical demonstration" might be a better term

CASE 4 —The patient, whilst serving at the front was driving an ammunition wagon when a shell exploded under the wagon, killing one horse and severely wounding the other The patient states that he was blown several feet into the air, and on falling dragged himself to the shelter of a hedge where he remained all night The following morning he could neither walk nor stand On being taken to the medical officer the patient states that pins were pushed into both his legs without producing any sensation On admission to the Third Southern General Hospital the patient appeared to be unable to draw up or move his legs or to stand up The reflexes, sensation and electrical reactions were normal. After a few days' rest in bed the patient could walk a few steps with assistance, he was then transferred to the Radcliffe Infirmary for electrical treatment He was there treated directed to the restoration of this tone has seemed to cut the vicious circle, presumably by allowing purer blood to repair damaged tissue or organs which by their inefficiency have shown themselves to constitute weak points. Particularly prominent are cases in which the nervous organisation has broken down and where I believe the fear, acting through the splanchnic nerves, has paralysed the intestine, causing absorption of toxins into the blood. This toxæmia affects the nerves, intensifying the symptoms and possibly establishing and confirming a fear complex, while at the same time it impairs the vitality and contractile power of the visceral muscle. I will not attempt to apportion the improvement in these cases between the renewal of the patient's confidence and the arrest of toxic absorption. The two coöperate. Synchronising with this improvement increase of tone often becomes evident in a firmly contracted or contractile colon being now palpable instead of a gurgling unresponsive one, while the abdominal wall, once flabby or rigid and tender, has become supple and elastic. Prominence of gaseous distension has disappeared, and the abdominal muscles now exercise their function of holding the viscera back in position.

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[3] Benham Snow High Potential and High Frequency Currents

Loss of tone in voluntary muscles has been noted by various authorities, and Professor Geddes draws particular attention to the slackness in these cases of the abdominal muscles. This seems naturally to follow the general loss of control shown in all asthenic conditions, particularly noted in neurasthenia and psychasthenia. In this connexion the effect of continuous fear—i.e., worry—is easily explainable. Worry is a succession of fear states causing a loss of tone which becomes chronic. Further than this, we have to take into consideration the gradual establishment of a general affect tone, built up from successive experiences of a like nature. As the process of worry continues, the worry habit is formed and experiences of a neutral tone are coloured by the general outlook of the patient, converted into definite asthenic affects which aid the lowering effect on the mental energy, and lead to further loss of tone and the establishment of a psycho physical vicious circle. In the development of atony in the alimentary tract (leading to visceroptosis) the fear or worry factor has often been a long time active before definite physical effects become evident. It follows, then, that the most rapid and efficient course is not always to direct the treatment to the physical condition alone, but to try at the same time to cut the psycho physical vicious circle in another place by attacking it on the psychic as well as on the physical planes and so to ease that tension of the mind which tends to keep up the condition of atony with its toxic sequelæ.

Thus, to summarise, apart from the consideration of the eliminating capacity, which may here be assumed to be more or less constant for the individual toxæmia from the alimentary tract has always two factors—the chemical, comprising the toxins themselves, and the vital dealing with the resisting power of the individual. This resisting power depends, I believe, on tone of the viscera and is powerfully influenced by the subject's state of mind. Further, this tone may well be part of a condition which should be normally shared by the entire musculature of the body. This explains incidentally, I think, why the active are, as a class, more healthy than the sedentary.

I add a corollary to the foregoing. If fear can paralyse the hollow viscera, it must follow that happiness and courage can, to some extent at least, cause them to contract and check toxic absorption. This would constitute a link between mind and body by which the power of suggestion is transmitted to the organism. Thus may some of the cures by Christian and allied "sciences" be explained, and improvement in health follow improvement in circumstances, be these affairs of heart or pocket.

Harley street W

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION FOR THE STUDY OF DISEASE IN CHILDREN

Exhibition of Cases and Specimens

A MEETING of this section was held on Jan 22nd, Mr T H KELLOCK the President, being in the chair.

Dr F D SANER showed a case of Congenital Syphilis in a girl. The child was apparently quite healthy until just over two years ago when she had some pain and stiffness in the left elbow and ankle-joint. Some months later a small hard lump appeared about the centre of the forehead which gradually enlarged and finally ulcerated. The left leg became very deformed and for nine months before admission the child was unable to walk. No specific treatment had been given until the child was admitted to hospital on Nov 11th 1914. She was then extremely wasted and anæmic, and did not eat or sleep. There was a large circular foul smelling ulcer with a sloughy base in the centre of the forehead quite half as large again as the present condition. The eyes were almost closed from œdema of the upper lids. The liver and spleen were distinctly palpable. Wassermann's reaction was positive. Since admission hyd c. creta 1 gr had been given three times a day and an inunction of ung hydrarg ¼ dr once daily. In addition pot iod. 5 gr c inf. gentian co ad 2 dr, t.d.s had been given, and sanitas fomentations to the forehead. A hydrogen peroxide mouth wash had been used, and the treatment had been very well borne. The child had gained 12 lb in weight since admission, and her general condition was satisfactory.

Dr H W BARBER and Dr F D SANER showed a case of Enlarged Liver in a boy, admitted to hospital on Dec 27th 1914, for pain in the right side, which had only been present for a few days. The boy was of average development for his age and there was no history of any previous illnesses. On examination the liver was considerably enlarged, on the right side its lower border nearly reached the iliac crest, in the mid line its lower margin was just below the umbilicus and it could be traced to the left costal margin at the level of the ninth costal cartilage. The spleen was not enlarged. The Wassermann reaction was positive. There was no eosinophilia.

Mr SYDNEY STEPHENSON reported a case of Hæmatoma of the Lower Lid (an unusual manifestation of infantile scurvy). A female infant aged 5 months, was brought to hospital on Jan 7th. She had been well until the middle of last December when she developed "thrush," diarrhœa and vomiting symptoms from which she made a fair recovery in the course of about a fortnight. On Jan 3rd a small black spot or line was noticed in the skin of the right lower eyelid. There had been no injury to the parts. On the following morning the eyelid was swollen and discoloured. For the first two months of life the baby had been breast fed and after that Swiss milk was given exclusively. Since recovery from the attack of December last nothing had been given in the way of food except albumin water. No patent foods had been used in bringing up the infant. On admission the right eye was completely closed by the pressure of the lower lid which was enormously distended with blood. The swollen parts were almost chocolate-brown in colour. The upper eyelid was not swollen and exhibited merely a few insignificant patches of cutaneous ecchymosis. The eyeball was not protruded. The cornea was clear. The temperature was 99° F. The child had some colour in her mutually dependent on one another, and the presence of a gas producing micro organism favours absorption of visceral content by causing stretching and thinning of the gastric and intestinal walls I deem it likely that flatulence can directly cause constipation, a lacuna of gas in an over distended section of gut producing a block in the peristaltic wave

Dryness of the mouth is another symptom of fear which is due, I suggest, to a general re absorption of fluid from the tissues in a compensatory endeavour to help to fill the vascular area, which has become enlarged owing to splanchnic paralysis, and thus to restore the vital equilibrium by raising the lowered blood pressure The disappearance of thirst after a saline injection for shock illustrates the effect of our artifice in the supplying of material to assist a natural process The evacuation symptom, which frequently results from fear, may be due to a falling of fæces, on paralysis of the previously emptied and contracted pelvic colon and rectum, to the point in the rectum where the evacuation reflex is obtained Should the ileo cæcal valve not be exempt from this suggested paralysis the small intestine, pouring liquid chyme into the colon, could give rise to the diarrhœa which is so often noted A micturition reflex from fear may be explained in the same way The sphincter is relaxed and escaping urine stimulates the reflex point in the posterior part of the urethra followed by urgent contraction of the bladder

A nursing woman is said to produce toxic milk after an outburst of anger or receiving a fright This circumstance would be difficult to account for otherwise than on some absorption theory like the above, and I suggest that abortion and miscarriage brought on by fear may be attributed to spasmodic uterine contraction (preceded possibly by an emotional paralysis of the os uteri, analogous to that suggested as affecting intestine and sphincter vesicæ) induced by toxic blood circulating in the uterine vessels or in the central nervous system

Sea sickness, it is well known, may be favoured and sometimes caused prematurely by fear[3] In other cases I think it likely that the movement of the waves gives rise to shock with gastro intestinal paralysis and toxæmia Perhaps the vitiated blood stimulates the vomiting centre in the medulla Dilated viscera now press on a heart already hampered by low blood pressure, until some temporary relief is obtained by vomiting or eructation. The practice of tightly binding the abdomen and the success as prophylactic of pituitary extract, which raises blood pressure and causes intestinal contraction, appear to support this view Causes originating in the eye or semicircular canals could initiate the same sequence of events

I believe that slow convalescence after any infective illness is, partly at any rate, due to delay in the recovery of visceral tone Many a patient can, with precision, date his improvement from the moment when he made a resolution to get well On the contrary, it is generally accepted that nervous people are much more liable to the diseases and disasters they fear than are those whose courage is at a high level These results would seem to follow naturally, if we can accept the theory that fear induces atony with resulting toxæmia Nervousness sufficient to elicit a blush contains a small element of fear, and here a vasomotor paralysis alone is effected while the gastro intestinal tract escapes After shock prolonged for a considerable time it is likely that the "defensive mechanism will suffer and that absorption will become habitual on the establishment of the vicious circle For even when the fear is removed or diminished, the stomach and intestine, long fed by vitiated blood, may not at once recover their tone if the absorption of waste products has been overbalancing the eliminating capacity Also the stomach tends to remain dilated and the colon to become the seat of accumulations consisting of fæces, possibly hardened, and mucus (which latter sometimes becomes organised into fibrous tissue) with sandy deposits of urates or phosphates Now all these factors prevent the restoration of colonic tone and peristalsis and induce constipation If, however, obvious constipation does not result the liquid content of the small intestine, propelled by the *vis a tergo*, can pass easily through a furred colon (to borrow a simile from a water pipe) in which circumferential layers of fæces move more and more slowly the nearer they lie to the wall of the colon till, at their periphery, stasis to a variable extent will obtain Diarrhœa may characterise this condition

The reason why some constipated persons are not obviously poisoned is, I believe, because (1) they are generally young and may have become constipated through habit and dietetic error, though other causes are not excluded, (2) their eliminating apparatus and toxin destroying agents, working at high pressure, are still efficient, and (3) they have not yet lost intestinal tone, having no fear or anxiety state Given time, their intestinal stasis aided or not by fear, will eventually impair the tone of the hollow viscera and toxæmia will result Tone is partly independent of peristalsis, though loss of the one may influence the other In how many cases are people over 40 with constipation well?

So far I have mainly considered the circular muscular fibres of the hollow viscera. If these can be paralysed by fear, so, we may reasonably presume can the longitudinal fibres and bands The effect of this will be to lengthen the stomach and intestine, and, with the paralysis of the circular fibres, to increase their entire capacity in every dimension Lengthening a hollow viscus, which is securely fixed at certain points, must infallibly produce sagging between those points, and this factor I consider at least as important as a prime cause of visceroptosis as that attributed by Sir Arbuthnot Lane to the weight of a loaded colon only An atonic colon would become sooner and more heavily loaded than one tonically contracted Thus ptosis would not be caused by, but would cause stasis Surgeons have noted a collapsed state of the appendix sometimes occurring when this organ is inflamed Such an appendix would more readily admit and retain accumulations than one active in peristalsis and tone

Mr Lockhart Mummery describes a case which seems to bear out my theory of the relation of atony to toxæmia He says[4] —

> *The whole of his intestines were much dilated and extremely thin, but no other lesion was found* [Italics are mine] Appendicostomy was performed in the hope of clearing the toxins from the colon The wound refused to heal at all though it remained antiseptic, and in spite of treatment the dilatation of the bowel persisted The bowels at last refused to act even when the colon was filled with water and although the small bowel was opened, he died apparently from complete inactivity of the intestines and extreme toxæmia some three weeks later

Acting on the belief that intestinal tone will check absorption I have found, when an attack on the intestinal content has partly or entirely failed (often without this preliminary), that treatment the observation that the early bullous manifestations of the disease were sterile.—Dr A. M H GRAY mentioned the recovery of a possible case of the disease and the PRESIDENT replied.

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[3] R W Milligan THE LANCET Dec 31st 1881 p 1152.

[4] Proceedings of the Royal Society of Medicine 1913 vol vi p 1

Dr PERNET showed a case of Erythema Centrifugum which corresponded to the disease originally described by Hebra as seborrhœa congestiva.

Dr H W BARBER brought forward a case of Pityriasis Rubra Pilaris typical as regards its elementary lesions and distribution on the hands feet scalp and trunk, in a woman aged 41, in the seventh month of pregnancy She had previously given birth to seven children —The PRESIDENT thought that the association of the skin disease with pregnancy was fortuitous —The case was discussed by Dr WHITFIELD and Dr PERNET

Dr SEQUEIRA exhibited a case of Dry Gangrene of Several Toes of Obscure Etiology in an Infant.—Dr PERNET suggested the possibility of the existence of Raynaud s disease dependent upon congenital syphilis and this view was emphasised by Dr F PARKES WEBER and Dr A. DOUGLAS HEATH —Dr WHITFIELD and Dr BARBER also discussed the case —Dr SEQUEIRA replied that the case would be further investigated as regards congenital syphilis, of which he saw no evidence

Dr MACLEOD presented a woman with Eczematoid Ringworm of the Hand, presumably contracted from her children, who were suffering from small spore ringworm of the scalp He had reason for thinking that the infection was originally of feline origin and cited Dr Colcott Fox s observations on the subject.—The PRESIDENT and Dr SEQUEIRA referred to the frequent discovery of epidermophyton fungus in lesions of the hands which without microscopic examination would have passed as dysidrosis or vesicular eczema —Dr S E DORE referred to the frequency of cat ringworm in this country as compared with its rarity in France —Dr PERNET alluded to a case of feline microsporon ringworm which he had reported some years ago

Dr SEQUEIRA showed a Bristle from a Hair brush bearing numerous Ova of the Pig Louse (Hæmatopinus suis) which was however, not communicable to man

Dr ALFRED EDDOWES brought forward a case of Recurrent Circinate Erythema in a child

Mr T P BEDDOES showed a case of Extreme Hyperidrosis of the Hands of lifelong duration in a young woman —The PRESIDENT, Mr H C SAMUEL and Dr SEQUEIRA discussed the case

Dr E G GRAHAM LITTLE showed the following cases 1 A case of Typical Lichen Spinulosus in a child, which supported his contention that the disease had no relationship to lichen planus 2 A case of Parapsoriasis en Plaques 3 A case of Unusually Inflammatory Pityriasis Rosea.—Dr SEQUEIRA and Dr EDDOWES agreed as to the occurrence of an epidemic of pityriasis rosea at the present time and the PRESIDENT while agreeing with the exhibitor s diagnosis pointed out the difficulty of differentiating it from acute seborrhœa of the body

MEDICAL SOCIETY OF LONDON

Radiography in its Relation to the Present War

A MEETING of this society was held on Jan 25th, Sir J BLAND SUTTON the President being in the chair

Dr W IRONSIDE BRUCE demonstrated and read a paper on an X Ray Director for the Removal of Foreign Bodies in the Tissues which will appear in an early issue of THE LANCET —Sir J MACKENZIE DAVIDSON complimented Dr Ironside Bruce on his apparatus describing it as ingenious and remarkably accurate —Mr DONALD J ARMOUR said that he could bear out all that had been said with regard to its value.—Mr S MAYNARD SMITH said that he always used an X ray screen during the actual extraction of foreign bodies and had never experienced any difficulty from the point of view of sepsis being introduced He welcomed the improved method demonstrated by Dr Ironside Bruce

Sir JAMES MACKENZIE DAVIDSON gave an address on the Telephone Attachment in Surgery, and demonstrated the use of the telephonic probe His address is published in full on p 217 of our present issue —Mr ARMOUR described a case in which he had used this method for the removal of a piece of shrapnel which had lodged within the orbit. It was 3 mm. in width and lay 12 mm from the surface The operation which might have been a difficult one was thus rendered easy

Dr F HOWARD HUMPHRIS exhibited lantern slides of Injuries occurring among the Wounded at the 3rd London General Hospital Among the radiograms were some showing that bullets had penetrated through bone, producing little injury to it. Two other radiograms showed bullets lying against the pericardium The patient who had been wounded by one of these, had returned to the front with the bullet still *in situ*

The meeting was adjourned until Feb 22nd, when further contributions will be made by Dr A. C Jordan, Dr G Harrison Orton Mr S Gilbert Scott, Dr Stanley Melville, and Dr Robert Knox.

LIVERPOOL MEDICAL INSTITUTION

Pityriasis Rubra —Treatment of Displacement of Uterus —Incoördination of Function in Relation to Disease

A MEETING of this society was held on Dec 17th, 1914, Dr E W HOPE the President being in the chair

Dr F H. BARENDT read a note on Pityriasis Rubra and showed a patient. He referred to three cases, discussing one in detail.—The PRESIDENT and Dr R W MACKENNA discussed the note, and Dr BARENDT replied.

Dr A. STOOKES described a new electro-cautery for intra uterine work, and read a note on the Treatment of Displacement of the Uterus. He believed in the existence of discomfort in cases of uncomplicated retroversion, and he described several forms of operation

Dr C J MACALISTER submitted an interesting paper on Incoördination of Function in Relation to Disease He defined the subject and then described the interdependence of the organic functions showing that disease of one kind may produce symptoms referable to another In his opinion gastric ulcer was possibly associated with defective chemical coördination due to the climacteric of puberty, Raynaud s symptoms being prodromal in nature He instanced psychoses in children which in his opinion depended upon the chemical incoördination He gave several instances of marked improvement under thyroid —The PRESIDENT emphasised the value of education as a therapeutic agent —Major T R BRADSHAW Captain W B WARRINGTON and Dr A S PARKINSON discussed the paper, and Dr MACALISTER replied

At the annual meeting of this society, held on Jan 21st, the following list of office bearers and members of council was adopted —President E W Hope Vice-Presidents R J M Buchanan Alexander Stookes, R J Hamilton, and W J Fleetwood Treasurer Llewellyn Morgan General Secretary Frank H Barendt Secretary of Ordinary Meetings John Hay Secretary of Pathological Meetings D Moore Alexander Librarian Nathan Raw Editor of the Journal R. W Mackenna Council V C De Boinville James Huskie Robert Jones W McAfee A C Ransome, J H Willett, Claude Rundle Reginald T Bailey, Thomas Guthrie F M Gardner Medwin, W Allen Daley W C Oram and Gerald Wallace Auditors V C De Boinville and P F Tinne

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METROPOLITAN HOSPITAL SUNDAY FUND—At a council meeting of this Fund held at the Mansion House on Jan 20th under the presidency of the Lord Mayor the various committees were re-elected, with the addition of the Rev Hardy Harwood to the distribution committee, the Rev H. A. Hall to the general purposes committee and Mr John Robarts to the finance committee Sir Ernest Tritton Bart was appointed vice-chairman of the Fund and the honorary secretaries and the auditors were re elected During the course of the proceedings sympathetic reference was made to the death of Mr Thomas Bryant who had been a member of the council for 22 years and on the motion of Sir Ernest Tritton it was unanimously agreed to send a letter of condolence to members of the family In replying to a vote of thanks the Lord Mayor said that he would do everything possible to assist the Fund, which was one of the most excellent movements in the country cheeks, and although somewhat wasted (weight 11 lb 6 oz) yet looked tolerably well There was no tenderness on handling and no swellings about the legs or arms There were no teeth, and the gums were in excellent condition A provisional diagnosis of infantile scurvy was made, and the child admitted as an in patient She was placed on equal parts of "raw" milk and water One teaspoonful of raw meat juice was given every three hours, alternatively with a similar quantity of orange juice The affected eyelid was treated with compresses of hydrogen peroxide The improvement in the state of the eyelid was striking Two days after admission the condition was less marked A couple of days later the baby could open the eye somewhat, and seven days after admission the eye could be widely opened, and the lower lid, although blood stained like a "black eye," was not swollen In fact, in the course of a single week under antiscorbutic diet changes had taken place that in ordinary cases would have been spread over three weeks or a month The infant's general health, unfortunately, did not improve *pari passu* with the local condition and the child died on Jan 18th from pneumonia and pneumococcal meningitis

Mr SYDNEY STEPHENSON and Dr SYDNEY A OWEN showed a case of Polio encephalitis Inferior of the Oculomotor Type in a girl aged 8 years She had gone to bed in her usual health, and the next morning "the eye was turned" and she complained of pain over her right brow Examination three days later showed slight ptosis of the right eye which was deviated outwards and upwards There was a defect in the downward and inward excursions of the eye The secondary deviation was outwards and a little downwards Diplopia was crossed, the false image being at a lower level than the true its upper end inclined outwards The signs therefore indicated a paresis of the inferior rectus of the right eye The right pupil measured 6 5 mm and the left 5 mm The latter responded actively to light but the former was sluggish There were no other signs of nervous disease

Dr SHEFFIELD NEAVE showed a case of Infantile Paralysis with Excessive Knee jerk in a boy aged 2 years The right leg showed flaccid paralysis deficient response to electrical stimuli, wasting of the calf muscles, excessive knee jerk and extensor plantar response

Dr J D ROLLESTON reported a case of Congenital Heart Disease and Ulcerative Sore Throat. A male infant aged 11 months, was admitted to hospital on Dec 6th, 1914, certified to be suffering from diphtheria, on the eleventh day of disease The father had always been healthy, but the mother had been an in patient at the Brompton Hospital on several occasions for rheumatism with cardiac complications The child had always been delicate and blue from birth Clubbing of the fingers had been noticed since he was aged 2 months On admission the child appeared to be very ill There were membrane on the tonsils, pillar, and uvula and a profuse nasal discharge The heart sounds were clear but rapid There was a trace of albumin in the urine. A large dose of antitoxin was given on admission and on the following day A few organisms resembling diphtheria bacilli were found in the cultures but cocci were predominant On Dec 8th a loud systolic murmur was audible all over the præcordium There was marked ulceration of both tonsils No Vincent's organisms were found in the throat smears The ulceration gradually spread over the uvula and palate On the 13th stridor and a hoarse cough developed, and there was much difficulty in swallowing The symptoms persisted and the general condition became worse until death took place from bronchopneumonia on the 20th The heart showed the following anomalies (1) Transposition of the great arterial stems the aorta arising from the infundibulum of the right ventricle and the pulmonary artery from the left ventricle, (2) marked deficiency of the interauricular septum which was represented by a narrow band 1 5 cm long by 0 5 cm broad (the foramen primum lay anterior to it and posteriorly there was a widely patent foramen ovale), (3) an interventricular foramen 1 2 cm in diameter in the 'undefended space', and (4) stenosis and hypoplasia of the pulmonary artery, the valve of which had only two cusps The fauces and larynx showed ulceration of the tonsils frenum epiglottis right aryteno-epiglottidean fold and deep ulceration of the laryngeal portion of the pharynx on each side especially on the left exposing the muscular tissue and eroding the thyroid cartilage

Dr J PORTER PARKINSON showed a specimen of Acute Atrophy of the Liver The patient a girl aged 5¼ years, had had jaundice for five weeks At first the liver was enlarged, and had gradually got smaller till it could no longer be felt The urine contained bile pigment and acetone, but no albumin, leucin, or tyrosin Delirium set in and death took place Post mortem the liver weighed 1¼ lb, was pale yellow and very friable On section it showed yellow areas between which were small dark red spots The gall bladder and ducts were normal Microscopically there was general staining with bile pigment The cells were distended with fat but the nuclei were well marked There was no distension of the bile ducts and no actual necrosis of the cells No micro-organisms were found in the specimens

Dr E B GUNSON showed specimens from a case of Suprarenal Hæmorrhage in an infant The child was first seen on the sixth day after birth There was a slight discharge from the umbilicus the cord having separated On the eighth day the temperature rose suddenly to 102° F and cellulitis of the forearm developed The stools became frequent, loose, and offensive The child was collapsed and died on the ninth day, 30 hours after the onset of symptoms Post mortem the right suprarenal was greatly enlarged and on section was found to have been converted into an almost black hæmorrhagic pulp The left suprarenal was similarly affected but to a less extent A culture from the heart's blood gave a pure growth of streptococcus A Gram stained preparation of the left suprarenal showed the presence both in the cortex and medulla of streptococci

Dr GUNSON also showed a photograph of a case of Purpura complicating diphtheria The purpura appeared at the site of an antitoxin rash and persisted till death Before death the purpuric patches on the cheeks and ears became confluent Superficial ulceration occurred, but there was very little loss of substance Hæmorrhages occurred into the gums and an extensive subconjunctival hæmorrhage appeared in the right eye There was old standing constipation, the stools resulting from the administration of castor oil and turpentine being very copious and markedly offensive for many days Palatal palsy carditis with "cardiac paralysis," arthritis, and albuminuria developed before death on the twenty eighth day

Dr F J POYNTON and Mr T T HIGGINS showed specimens illustrating a Persistent Pharyngeal Rudiment occurring in an infant aged 5 months Some difficulty in swallowing, associated with coughing and occasional dyspnœa, had been noticed for five weeks A pearly white rounded polypoid tumour was discovered in the pharynx and under anæsthesia was demonstrated to spring from the left supratonsillar fossa, being attached in this position by a narrow fibrous stalk After removal it proved to contain a narrow bar of cartilage embedded in fibrous connective tissue, exactly resembling subcutaneous tissue, and covered by perfectly formed skin

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SECTION OF DERMATOLOGY

Exhibition of Cases

A MEETING of this section was held on Jan 21st Dr J J PRINGLE the President, being in the chair

The PRESIDENT showed a case of Pemphigus Vegetans in a soldier aged 28 The disease began in September 1914 and presented the characteristic bullous lesions on the skin and mucous membranes in abundance and vegetative condylomatous lesions in the armpits The serum obtained from the recent blebs was sterile but pus infection rapidly ensued and the case presented marked evidences of sepsis throughout its duration Remarkable improvement had taken place under treatment by vaccines of four varieties of coliform bacilli found in the fæces and of staphylococci and bacillus proteus from his bullæ, but probably much of his improvement was due to prolonged baths and other local antiseptic measures —Dr G PERNET commented on the unusually benign course of the disease contrasting it with others he had observed —*Dr A* WHITFIELD referred to a case of pemphigus vegetans in which the bullous element was very imperfectly developed —Dr J H SEQUEIRA related the history of a severe case of the disease which had apparently recovered despite his unfavourable prognosis, he discussed the relationship of the condition to dermatitis herpetiformis —Dr J M H MACLEOD confirmed that there is something profound and absolute in it, quite apart from the mere sequence of one moment upon another—is an empty simile, from which no genuine concept arises Indeed, it is not possible to understand Bergson's theory unless we visualise time as though it were space, and the theory falls to the ground the moment we abstract from his conception of time those spatial attributes without which that conception could never have been attained Mr Carr, taking a cross section through time, is clearly visualising, not time, but space, and what he and Bergson choose to call time is really a sort of hyperborean space conjured up by an alert imagination

Whether or not we agree with Mr Carr—and in philosophy that is largely a matter of temperament —we are bound to admit that his book is able, remarkably lucid, and conspicuous throughout for its sincerity and honesty of purpose If it is true of philosophy, as Gibbon suggested, that "her gentle hand alone is able to eradicate from the human mind the latent and deadly principle of fanaticism," then we may affirm that Mr Carr's book is wholly worthy of this exalted ideal Especially at the present time we cordially wish it the wide success which it deserves

The Book of Pharmacopœias and Unofficial Formularies

By E W LUCAS F I C, F C S, and H B STEVENS, F I C F C S London J and A. Churchill 1915 Pp 524 Price 7*s* 6*d* net

THE compilation of this book must have entailed considerable labour and much industrious research It is an attempt to present in a simple comparative form the formulas contained in the pharmacopœias of Great Britain, the United States, France, Germany, and Italy It also includes copious extracts from the unofficial formularies of these countries, as well as from the pharmacopœias of the leading London hospitals As a work of reference this book will certainly be of far more value to the dispensing and manufacturing chemist than to the medical man, by the former class many valuable suggestions may be gathered from a careful consideration of the reasons which determine the differences between the formulas of the various countries It is to be feared, however, that prescribers, especially at the present time, may maintain the attitude of Gallio, and pass by numerous small points which might improve their prescriptions

An initial difficulty was apparently experienced in the nomenclature, and the authors have wisely made the arrangement under the "commonly used Latin name, regardless of the question whether the name selected is that which is officially recognised in this country Under the title a series of synonyms is placed, and here again there is no indication of the countries if any, in which these synonyms are official The geographical range of employment has to be gathered from the reader's ideas of foreign languages, the synonyms may be those familiar in this country they may be alternative titles used to conceal the true composition, or they may be the official names from one or other of the foreign pharmacopœias to which reference is made The actual comparison of the composition and mode of preparation is facilitated by arrangement in parallel columns under the headings of abbreviated titles of the source, while the process employed is shown by affixing an arbitrary letter, which is explained in an appendix It is thus easy to see at a glance that extract of opium is of the same strength in the five pharmacopœias, that in all the same quantity of opium is used, but that in one instance the process of extraction differs from that adopted in the other four

In a book published subsequent to the new British Pharmacopœia, it is to be regretted that the metric system has not been adopted, the authors state that the imperial system of weights and measures has been adhered to, since it is the system still in general use by medical men and pharmacists It may be true that this procedure will save time and trouble involved in making the necessary calculations when a few ounces of any preparation are required, but the whole point of the introduction of the metric system seems to have been overlooked—viz, the facility of dealing with foreign prescriptions, which are invariably written in metric terms The avoidance of the metric system is the more surprising since temperatures are expressed in degrees Centigrade, instead of Fahrenheit Throughout the book, under sectional headings, there are numerous valuable directions about methods of preparation, these are most detailed in connexion with the extracts, which should be easy to prepare from the information afforded. For the tinctures the same amount of care has not been expended. Reference is made to the processes of solution, maceration, and percolation, but under the individual preparation we find no clue to the special process to be adopted, though the strength of alcohol is noted, and clear indication is given as to when the liquid should be weighed and when it should be measured A materia medica table, consisting of a dozen pages, gives the French, German, or Italian names of plants or parts of plants, together with their English equivalents These tables will save much trouble in enabling the pharmacist to identify strange names with familiar articles Although considered by the authors to be a table of vegetable materia medica it includes lard, honey, and leeches, but the foreign equivalents are so unlike the English terms that we ought not to cavil at finding them in such strange company

Viewed as a whole this book is likely to be of great service to pharmacists, especially to those who are called upon to dispense foreign prescriptions The probability of the early need of a new edition has led us to indicate directions in which it may be improved by the removal of minor blemishes or by the addition of further detail

Physiological Principles in Treatment

By W LANGDON BROWN M A., M D Cantab, F R C P Lond, Assistant Physician to St Bartholomew's Hospital, &c Third edition London Baillière, Tindall, and Cox. 1914 Pp 408 Price 5*s*

IN reviewing previous editions of this book[1] we called attention to the fact that advances in physiology often fail for many years to find themselves reflected in clinical work, and indicated that the task set himself by the author was to bridge the gulf between the experimental laboratory and the sick ward, and to reconcile physiology with therapeutics, offering to the general practitioner, to whom the work is addressed, a physiological reason for the therapeutic faith

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[1] THE LANCET Dec 26th 1908, and Feb 18th, 1911

Reviews and Notices of Books.

Tuberculosis of the Bones and Joints in Children

By JOHN FRASER, M D, Ch M Edin., F R C S Edin, Assistant Surgeon, Royal Hospital for Sick Children, Edinburgh With 51 plates and 164 illustrations London Adam and Charles Black 1914 Pp 352 Price 15s net

Mr John Fraser's monograph is inscribed to Mr Harold Stiles If it is thus to a certain extent "placed," it will be generally admitted that it is well placed, and at the same time there is internal evidence that the author has spared no pains to form an individual opinion upon theory and practice Mr Fraser is canny His cautious "conclusions" on p 91 as to the value of tuberculins in treatment might strike the vaccinist as an exercise in the gentle art of damning with faint praise Throughout, too, there may be discerned a reserve in dogmatising which is natural enough when associated with such an extensive study of the literature as is implicit in the text, even if, in view of a modest disclaimer in the preface, it may not be deduced from the extensive and valuable bibliographies at the end of each section

The book is divided into two main sections "general," dealing with etiology and pathology, clinical features and diagnosis of bone and joint tuberculosis, X ray appearances, prognosis and the broad lines of treatment, and "special," dealing seriatim with regional lesions in their more particular aspects and detailed treatment The special section is thoroughly well done, with a wide and at the same time a distinctive outlook, but there is little in it that may not be found in other recent works on the subject It is the general section, and more particularly the extensive study of bone tuberculosis, its etiology, morbid anatomy, and histology, which will be read with attention by all interested Mr Fraser's arguments are rendered more cogent and lucid by the numerous and successful microphotographs and photographs With the general lines of vascular access and spread and close dependence on the distribution of vessels most readers will be familiar and in agreement, whether the latter factor has quite the degree of dominance here accorded will need further consideration in relation to similar phenomena of the more acute infections The footnote on p 26, in which Mr Fraser records a modification of his textual opinion as to the hypertrophic bone lesions of tuberculosis, is of great interest for several reasons it indicates his frank attitude of scientific doubt, it hints at the probably not infrequent association of the syphilitic with the tuberculous virus, whether simultaneous or sequential, and it may lead to an inquiry whether the hypertrophic lesion may not be, at least very often, the indication of association of another organism—for example, the staphylococcus—and not the product of the tubercle bacillus alone It was to be expected, but cannot be too often reiterated, that the bovine bacillus should be found responsible for a large proportion of the cases of infection in children —Mr Fraser found 60 per cent of a series of 70 examined bacteriologically, and that the milk supply is to be held ever suspect Hyperæmic treatment is praised somewhat lukewarmly, a distinction as to efficiency being drawn in favour of the upper as against the lower limb, and the positive statement is made that the formation of cold abscesses is hastened by it With regard to aspiration of abscesses and the injection of medicaments, whilst the various methods are indicated the reader is left to deduce that the author either does not practise them or has no high opinion of their utility, his attitude is somewhat similar towards the employment of injections for sinuses

The special section is uniformly good on conventional lines, here and there it is possible to pick holes—for example, in the paragraph "diagnosis," on p 299, of dactylitis, but the faults are venial and the merits considerable The whole monograph will repay reading and must prove of value both to students and surgeons of experience

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The Philosophy of Change a Study of the Fundamental Principle of the Philosophy of Bergson

By H WILDON CARR London Macmillan and Co 1914 Pp 216 Price 6s 8d net

THIS book is founded upon a course of lectures delivered by the author in the University of London It deals, as the title indicates, with the philosophy of Bergson It is, however, much more than a mere commentary upon that philosophy The author's main preoccupation is with the relation of mind and body, matter and spirit, and it is this problem which he seeks to interpret in the light of what he calls the philosophy of change The view now prevalent among physiologists is that which regards all conduct and activity as depending exclusively on the material processes taking place in the brain and nervous system No active efficiency is attributed to mind, which is regarded as a mere phosphorescence, or "epiphenomenon," occurring in conjunction with certain cerebral processes, but having no power to affect their evolution in any way This view is attacked by Mr Carr Although he is unable to offer any valid arguments against the all sufficiency of cerebral processes in accounting for human activities —a theory which, indeed, is rapidly becoming an axiom of physiology—yet he does advance weighty reasons against the view that mind is a passive accompaniment of another order from the brain The argument, which is of metaphysical character and too long to reproduce here, does not, however, seem to us to have any force against what is called the double aspect theory—namely, that mental and cerebral processes are not two different things, but two different aspects of the same thing This, as Mr Carr is well aware, is much the most powerful position of the mechanists, and it would have been preferable if he had directed his analysis against that rather than against an older and less tenable hypothesis, already widely abandoned What he does is to refute the earlier and more easily refuted theory, and then to announce that the more developed theory "comes to grief on the same rock"—a statement which many will regard as wholly unjustified

As regards matter and spirit, Mr Carr takes, of course, the Bergsonian view as to the special connexion of mind with time and of matter with space "A simultaneous cross section through space would reveal all the matter existent in the universe but would not reveal mind On the other hand a cross section through time would reveal mind but would not reveal body" It has often before been urged that Bergson's apotheosis of time—his view is a decided gain to secure a good groundwork, and this is well provided for in this book, which is clearly written and well arranged

Artrocaces (Artritis Tuberculosas) Por el Doctor D RICARDO LOZANO MONZÓN, Zaragoza Tipografia de G Casañal Pp (circa) 600 Price 15 pesetas —Dr Monzón divides his work on tuberculous arthritis into two parts, general and special In Part I he opens with a brief introduction dealing with the history of the subject, in which four periods are recognised, an archaic period of confusion, a middle period of rudimentary differential diagnosis between tuberculous and other arthritic affections, a modern period commencing with the discovery of the tubercle bacillus by Koch and its demonstration in scrofulous joints, and the present period of "therapeutic controversy" The remaining chapters of this division deal with etiology, pathological anatomy, symptomatology, prognosis, and treatment, general and local To the chapters on treatment are appended statistical tables summarising the operative work of the author and of Dr Rollier, of Leysin, up to the end of 1913 Parts II III, and IV deal respectively with tuberculous arthritic affections of the upper and lower extremities and of the trunk, each articulation being treated of individually A brief account is given in Part V of tuberculous polyarthritis or tuberculous rheumatism of Poncet A useful bibliography completes this portion of the book, the remaining pages being devoted to illustrations of which there are no fewer than 196

Clean Water and How to Get It By ALLEN HAZEN Second edition, revised and enlarged London Chapman and Hall, Limited, New York John Wiley and Sons 1914 Pp 196 Price 6*s* 6*d* net —This book contains interesting statistics in connexion with questions of communal water supply General principles of course apply to every country The references here given are limited to the water undertakings in the United States but valuable lessons are given to all water engineers and public health authorities We spoke favourably of this book on the occasion of the first issue in 1907 It has now been brought up to date and into line with the progression made in water engineering schemes

JOURNALS AND MAGAZINES

British Journal of Tuberculosis —In the January number Dr Kenneth Fraser discusses in a commended M D Thesis of the University of Edinburgh early pulmonary tuberculosis in childhood On the basis of an examination of approximately 300 cases of pulmonary tuberculosis mostly incipient among 29 750 elementary school children in Cumberland an investigation was conducted into age incidence weight and nutrition the meaning of night sweats the occurrence of cough the pathological condition of the lungs the detection of pulmonary dulness the presence of accompaniments and the character of breath sounds In relation to children Dr Fraser suggests the expression inadequate increase of weight in place of failure to put on weight or loss of weight for physiologically even the phthisical child is automatically increasing in weight year by year Among his conclusions he considers inadequate increase of weight as very suspicious defective nutrition as probably the earliest indication of tuberculous infection, inequality of breath sounds as a very early indication of which friction and fine crepitations are the most significant accompaniments though all accompaniments are suspicious if persistent and especially if localised —Mr H Morriston Davies discusses the surgical aspects of pulmonary tuberculosis immobilisation of the lung and obliteration of cavities and the selection of cases suitable for treatment by immobilisation —Mr Harold Barwell reviews recent views on laryngeal tuberculosis, Mr Godfrey B Dixon considers the domiciliary treatment of tuberculous patients, and Dr William Cox discipline and recreation in the sanatorium —Dr Thomas D Lister in an illustrated article describes an apparatus for the production of artificial pneumothorax based on that of H de Carle Woodcock, of Leeds, oxygen being added to the nitrogen used in the former

Science Progress —The January issue, after an article on Militarism and Party Politics, contains a sympathetic criticism by Mr H G Plimmer, F R S, of Mr T A Cook s book, "The Curves of Life," which was reviewed in our columns recently —Miss L S Stebbing replies to Dr C A Mercier s article in the October issue on Some Logical Impossibilities suggesting that the syllogism is not the exclusive form of all argument and secondly, that Dr Mercier s non syllogistic arguments are merely syllogisms in disguise, depending for their validity on an unexpressed but necessarily implied proposition —Mr Hugh Elliot presents us with a survey of the problem of vitalism showing the ground already traversed by controversialists, examining the types of arguments used, and estimating the position now reached His trend is mechanistic —Mr Allan Ferguson discusses Capillary Constants and their Measurements and suggests that inasmuch as in a large number of papers dealing with this subject the multitude of units in which surface tensions are given causes a great deal of trouble much labour would be saved to those engaged in comparing the accuracy of different methods and searching for general results connecting capillarity and constitution if capillary constants were invariably expressed in C G S units—surface tensions in dynes per centimetre, and specific cohesions in square centimetres —Mr J N Pring, in a paper on the Formation of Ozone in the Upper Atmosphere and its Influence on the Optical Properties of the Sky considers certain factors which determine the optical properties of the atmosphere, and discusses the chemical estimation and distinction of some constituents of the atmosphere the action of ultra violet light on air the estimation of ozone in the atmosphere at high altitudes, and the influence of ozone on the nature of light from the sky —Dr F W Edridge Green discusses colour vision and colour vision theories including the theory of vision, and incidentally enters a very cogent protest against the official scientific methods of accepting or rejecting papers —A paper on the International Struggle for Manufactures as Illustrated by the History of the Alum Trade by Mr Rhys Jenkins, is followed by an illustrated article by Mr C Edward Wallis on Ancient and Modern Dentistry which contains considerable interesting material It should be mentioned that in the notes following the articles is one on the Society of Members of the Royal College of Surgeons of England with an exposition of its aims and a statement of the chain of events which called it into existence.

British Journal of Inebriety —The principal feature of the January number is an article by Dr R Armstrong-Jones on Drug Addiction in Relation to Mental Disorder The author considers the question in the light of his experience as an asylum physician, basing his remarks on observations of some 40 cases of drug takers in whom mental deterioration reached the degree of certifiable insanity With regard to such cases as with the similar cases of alcoholic intemperance, the question naturally arises whether the drug habit is to be considered as the cause or the consequence of the mental disorder Dr Armstrong-Jones s reply to this question is that while in most if not in all instances a certain degree of nervous abnormality must be admitted as an antecedent condition it is clearly evident on the other hand, that without the aggravating influence of the intoxication the graver destructive changes in the neurotic organisation would not have occurred at all or at all events would have been much later in developing And this fact is of practical account, for the reason that abnormal individuals of this class frequently possess by virtue of their very abnormality special endowments notably in the way of artistic and literary aptitudes which give a high social value to their work In agreement with the majority of observers Dr Armstrong-Jones finds that opium or some derivative of opium generally morphia is the most important of the habit-forming drugs Next in order of frequency come the new synthetic sedatives, amongst which veronal is especially that is or ought to be in him We also gave expression to a high opinion of its merits

The time that has elapsed since the second edition was published has necessitated very thorough review, and has led to some rearrangements and the addition of two chapters One of these chapters deals at length with the mechanical factors in indigestion Attention is drawn to "spasmodic hour glass contraction" Much controversy has centred round the question of the existence of a "middle sphincter" in the stomach It is known that under abnormal stimuli the circular muscle at the beginning of the pyloric vestibule is capable of powerfully contracting and dividing the gastric lumen The condition is liable to be mistaken for an organic hour glass contraction Dr Brown expresses the view that the spasm is usually due to the presence of an ulcer, which is generally situated on the lesser curvature, and may be quite small But it may occur in other conditions, and we think that he is probably right in the belief that the symptoms in so called 'appendix dyspepsia" are in part at any rate due to such reflex spasm A chapter which is partly new, is headed "Albuminuria and the Treatment of Nephritis" The difficulties in arranging the diet are duly discussed, and it is rightly pointed out that too rigid a limitation of the protein with the idea of diminishing the albuminuria is bad, because it cannot effect the desired object and deprives the patient of an essential form of nourishment On the other hand, an excessive protein diet is inadvisable, even if the patient can metabolise it, because he is getting the energy in a form that throws work on to the damaged excretory organs We agree with Dr Brown's contention that it is undesirable to restrict patients suffering from chronic nephritis to milk, which is too dilute a form of food for them, and may increase the œdema

There is much in this volume that is of value to the practitioner, the work is well written and affords interesting reading

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The Operative Treatment of Fractures

By Sir W ARBUTHNOT LANE Bart, M S Lond, F R C S Eng, Senior Surgeon to Guy's Hospital and Emeritus Surgeon to the Hospital for Sick Children, Great Ormond street Second edition London The Medical Publishing Company, Limited 1914 Pp 184 Price 10s

Twenty two years have elapsed, the author tells us, since he made it his habitual practice to operate on all cases of simple fractures of the long bones in which he was not able to obtain accurate apposition of fragments, when the restoration of the bone to its normal form was of mechanical importance to the individual, and this statement expresses the idea of the book The reasons for all that the author does are clearly explained, and he describes the results that he has obtained

Opinions certainly differ on many points in relation to the systematic plating of bones, but all surgeons must acknowledge the ingenuity of the author's methods, the skilfulness of his manipulations, and the excellence of the results obtained Those who do not know at first hand the methods advocated by Sir Arbuthnot Lane will find in this volume what they wish to know, but they should see the author at work if they wish to appreciate fully what surgery can do in fractures

LIBRARY TABLE

Medical History Manuals Pasteur and After Pasteur By STEPHEN PAGET London Adam and Charles Black 1914 Pp 152 Price 3s 6d net—It is obvious that the history of medicine will soon have to be treated after the fashion of the Cambridge Histories—that is to say, in periods by specialists The book now before us is the first of a forthcoming series of Medical History Manuals to be published under the general editorship of Dr J D Comrie, future volumes of which are to deal with Greek and Roman Medicine, Mediæval Medicine, the Artist Anatomists of the Cinque Cento, Sydenham and Clinical Medicine, and the Predecessors of Lister, all by various writers expert in the subjects which they have undertaken In this volume Mr Paget has devoted the first 90 pages to a simply written resumé of Pasteur's life and work, derived in great measure, as he himself admits in his preface, from M Vallery Radot's "Vie de Pasteur" It is well that British readers who have not the time and possibly not the energy to embark on the study of the longer life should have the opportunity of studying the main facts of a life so unassuming, so earnest, so painstaking, and so fraught with benefit, both to man and the animal creation, as was Pasteur's Theology is called the queen of the sciences because it includes all the others, and for this reason, that the patient and humble study of Nature is a chief path that leads to a knowledge (as far as finite minds can understand the Infinite) of the Creator of all things And of Pasteur, whose studies into the secrets of Nature began with the humble "life" of crystals, it was said that "here was a man whose spiritual life was no less admirable than his scientific life" From Pasteur's labours came much of Lister's work and the understanding of, together with the ability to defeat, infective diseases, especially as Mr Paget shows, tuberculosis, diphtheria, cholera, plague, typhoid fever, Malta fever (known no longer by the unfair name), yellow fever, malaria It was from Pasteur's work on fermentation, putrefaction, the diseases of silkworms, anthrax, and many other phases of departure from health that other earnest workers found out how to fight disease, and no more simple or striking proof of this can be found than in the account of the stamping out of undulant fever as given in Mr Paget's excellent little book

The Elements of Chemistry By H Ll BASSETT, B A, B Sc With an introduction by Professor W J POPE, M A, F R S London Crosby Lockwood and Son 1914 Pp 368 Price 4s 6d—There is nothing strikingly original about this collection of principles and facts presenting, in the author's words, "as concisely as possible all the chemistry—general inorganic, organic, and practical—that is required for the Conjoint Board and First Medical Examinations' It will serve its purpose, however, if it is placed early enough in the hands of students who intend to pursue a medical or dental career, inasmuch if they digest so much chemistry before they join the hospital or university so much time will be saved The author has been careful to include just what is necessary While it is something more than an elementary school book, it avoids a stock of materials which for the time being, at any rate, are not essential Nowadays, of course the student of medicine finds that he must pursue chemistry considerably further than the mere elements, or his ideas of the great physiological processes will be most incomplete However, it

THE LANCET.

LONDON SATURDAY, JANUARY 30, 1915

The Dearer Loaf

THE rise in the price of wheat flour from 26s a sack before the war to the present figure of 45s is, of course, serious With the economic conditions which have led to this advance we do not propose to deal beyond expressing a belief that it is due not to a famine but to a shortage of labour and a resulting congestion of shipping If we are right the remedy is obvious, and its application should be simple and near and in that case there is no ground for panic, though some apprehension as to immediate effects is reasonable We look with confidence to the Cabinet Committee, recently appointed to consider the question of food supplies and prices, and presided over by the Prime Minister, to deal promptly with the conditions which are at the root of the present general advances All medical men and sanitarians are concerned in the question of applying scientific methods with a view of relieving the inconvenience of high prices when they prevail In a former article[1] we referred to the directions in which our food supplies could be augmented, and the present seems to be an opportune moment for returning to this subject We are inclined to think that the time has come to put aside a conventional contempt for or prejudice against so called substitutes, because it is undoubted that dietetically many of them can effectively replace certain articles of food for which only custom has reserved a place of respect in the common dietary So long as honest dealing is the rule, substitutes supply a common need in a way not appreciated in all quarters, their use, at any rate, would materially help the householder to keep his domestic expenses down while ministering equally to his physiological needs

For the present we may defer presenting the case for margarine or dripping as substitutes for butter, or glucose for dear sugar, and confine our attention to the loaf According to reports from Germany, attempts have already been made in that country to lighten the burden of the dear loaf by putting in it a notable proportion of potato or forms of potato flour Cheaper admixtures have been proposed, including materials possessing very little nourishing or even energy value at all We do not think that this country will be reduced to any such expedients But in the meantime it is just as well to consider how the loaf may be cheapened without affecting its energy value To the majority of people bread is not a source of nourishment, but only of energy To the extreme poor, often limited sadly enough to bread with butter or jam, the nitrogenous contents of the loaf become of very great importance It does not matter clearly to the man who can add to his bread some cheese or meat whether that bread is rich in nitrogenous material or not To the poor it matters a great deal, and that is a difficulty to be faced when suggestions are made to cheapen bread by mixing with wheat flour a cheap farinaceous substitute On this point some interesting observations are made by Dr E FRANKLAND ARMSTRONG in an article on the "Chemistry of Wheat and Flour"[2] He observes that flour is primarily a starchy material, but those characteristic properties which enable it to be made into bread are due almost entirely to the presence of some 10 per cent of nitrogenous material—the gluten Consequently from the point of view of the miller and baker gluten is the all important constituent of flour But to day, and somewhat irrationally, gluten has come to be regarded by the would be food expert as the essential constituent, overlooking the fact that bread is eaten primarily, not as a source of protein, but as an easily digestible, attractive form of starch The man in the street properly regards bread as equivalent to rice, potatoes, or the like, rather than as a substitute for meat, and it is not surprising, Dr ARMSTRONG thinks, that the academic reformers have failed to secure followers The proportion of gluten, we may point out, varies widely in different flours, and "grade" is based largely upon this fact It would be possible to add to rich gluten flours a proportion of starch, as, for example, cornflour, which is very much cheaper than wheat flour, without materially reducing the nitrogen value when compared with a low grade wheat flour The energy value of such a loaf would be quite high, while its nourishing properties would be little impaired If it should be feasible to introduce, say, 20 per cent of cornflour in this way into a strongly glutinous flour a very definite economy would be gained, and a loaf decidedly cheaper than the all wheat-flour loaf would be available for food purposes There are the probabilities, also, of increasing the "strength' of the gluten as a formative agent by activators such as phosphoric acid or phosphates which are not foreign ingredients of flour, thus it might be possible to increase the addition of cheap starchy materials still further Since the supply of pure maize starch is practically inexhaustible, and there has been no appreciable rise in its price—certainly no advance anything like that in wheat flour—the attention of our authorities may usefully be drawn to this suggestion It may be remembered that cornflour is amongst the most easily digested farinaceous foods prominent In several instances the drug habit appears to have been initiated by the use of quack remedies, such as various patent "headache powders " and "nerve tonics " Most of the patients were brain workers, and more than one third of them were doctors or nurses The average age on admission under asylum care was 40 years for males and 43 for females With regard to the mental symptoms which the patients presented, the most interesting points to note are the prominence of disorders of conduct and moral sense and the frequency of suicidal tendencies, which were observed in 57 per cent of the cases The paper concludes with an emphatic appeal for a more effective control of the sale of dangerous drugs —Dr Mary Scharlieb, Sir George Savage, and several other physicians contribute brief comments on the points discussed by Dr Armstrong Jones, and express their complete concurrence with his plea in favour of legislative action to check the evil of habitual drug-taking —A short article by Mr John Newton notes with approval the action of Russia in prohibiting the sale of vodka during the war, and quotes journalistic evidence as to the good effects that have followed this measure

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[1] THE LANCET August [illegible] 1914 p [illegible]

[2] Nature Jan. 7th 1915.

Knowledge —A note in the January issue on obtaining chlorophyll and phycoërythrin from red seaweeds appears under the name of Mr W B Grove, and among the correspondence is a letter asking whether it is not possible to find a process by which the wool for woollen fabrics may be made not only aseptic but antiseptic The query is suggested by the statement that in the present war whenever serge from the clothing is carried into wounds by shell fragments the wound is more septic than is usually the case when it is similarly contaminated by shreds of linen

PLAGUE INVESTIGATIONS IN INDIA[1]

NINTH REPORT

THE Advisory Committee appointed by the Secretary of State for India the Royal Society, and the Lister Institute have recently issued their ninth report on plague investigations in India In continuation of previous inquiries directed to find out the reasons why some parts of India have suffered less from plague than others, the circumstances of the Madras Presidency were specially investigated In a previous report the comparative immunity of the city of Madras from plague was considered, and in the present inquiry the conditions of some other parts of the Presidency were examined by Major J O Kunhardt, I M S, and Captain J Taylor I M S, who were assisted in the work by five assistant surgeons of the Indian Medical Service.

Epidemiological Observations in the Madras Presidency

The portions of the Presidency specially inquired into were (1) the Bellary district, the Mysore plateau, and the Nilgiri Hills, which had suffered severely from plague, (2) a zone, which had suffered but slightly from plague lying immediately below and around the above mentioned areas, and (3) the east coast and southern part of the Presidency which had escaped the ravages of the disease A full description of these areas is given, including their physical features, climatic conditions distribution of plague, rat and flea prevalence, susceptibility of the local rats to the infection, and other matters 90 per cent of the plague deaths in the Madras Presidency were found to have occurred in certain districts which immediately adjoin infected areas in the Bombay Presidency and the State of Mysore In some years when the temperature has been lower and the humidity higher than normal plague has extended to places immediately adjacent to the infected areas of the Madras Presidency mentioned above and serious epidemics have developed in certain municipal towns while the disease in the surrounding villages had generally been mild Although the disease has invaded the Presidency it has shown little tendency to spread beyond the limits already indicated While the districts which suffered the most have the characteristic in common that they are in closest proximity to infected areas outside the Presidency they also resemble each other in being the most elevated and coolest parts of the province A low lying comparatively hot and dry plain separates the areas at present infected from the more humid and cooler coastal regions Plague has rarely occurred on the east coast, but on the west coast the seaport towns of Mangalore and Calicut which have intimate trade relations with Bombay, have suffered from the disease It appears then that the proximity to infected areas and the facilities for communication with them have been of more importance in determining plague incidence than climate in the Bellary district Kurnool, with a similar climate but more distant from infected centres and having also less rapid and efficient means of communication has suffered but little On the other hand, plague has been severe in the Nilgiris where the population is scattered and the means of communication are indifferent, but where the climate is very favourable for the spread of the disease The number of fleas found on rats depends to a great extent on the climate Experiments showed that rats caught in places in Madras which have been free from plague epidemics are very susceptible to the infection, and this is a favourable factor for the development of plague The existence of such susceptible rats at present in certain places in India, now that plague has continued there for a series of years, indicates that conditions exist in such places hindering the successful implanting of infection in them. It is difficult to determine what these conditions are, but the investigators are inclined to attribute this comparative immunity to the warm climate obtaining over the greater part of the Presidency As plague is carried from place to place in the bodies of infected fleas any local conditions affecting survival of these insects, apart from a host, are of importance in determining the liability of the neighbourhood to plague When separated from their host rat fleas speedily succumb to the combined effects of a high temperature and drying Unfavourable conditions of this kind are found in the hot and dry plains separating the cooler and moister sea coast districts from the existing plague infected areas in the Presidency This region breaks the chain of communication between the infected area on the west and the cooler regions of the east coast As no satisfactory harbour exists on the east coast of the Presidency where ships can discharge cargoes there are few facilities for the landing of infected rats The physical features and climate of the Madras Presidency, therefore, have an important influence in limiting the distribution of plague in it

Experimental Researches

Dr Sydney Rowland, of the Lister Institute, carried out a number of valuable researches, details of which are given in the report relating to plague including further experiments on vaccination against a body strain of plague, immunisation by *pseudo tubercle*, *immunisation* by living avirulent cultures, the influence of race on the efficiency of antigen, the failure to vaccinate against a virulent body strain even with an antigen prepared as far as possible under body conditions, the protection and curative value against infection with a serum race of plague of the serum of a horse immunised with nucleo-protein extracted from a strain of plague bacilli propagated on serum protein, and lastly ultra violet light as a germicide in the preparation of plague vaccine

Entomological Investigations

Mr A W Bacot, entomologist to the Lister Institute, made a series of observations on the length of time that fleas (Ceratophyllus fasciatus) carrying bacillus pestis in their alimentary canals are able to survive in the absence of a host and retain the power to re-infect with plague He also contributes to the report some further notes on the mechanism of the transmission of plague by fleas He supplies, likewise some notes with two illustrative plates on the development of bacillus pestis in bugs (*Cimex lectularius*) and their power to convey infection *He found* that the development of B pestis within the crop *of bugs* differs generally from *that* which takes place in *the stomach* of the flea in respect of its slower and looser growth this limitation of activity being accompanied by *and possibly* due to the preservation of the structural character *of the* blood for many days after its ingestion into the crop The absence of any definite valve between the pump and the crop, together with the looser nature of the growth within the bug preclude the idea of such mechanical blockage as causes regurgitation and mouth infection by fleas.

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[1] The Journal of Hygiene Plague Supplement IV Being the Ninth Report on Plague Investigations in India Issued by the Advisory Committee The Cambridge University Press January 1915 Pp 109 With [illegible] maps and charts and [illegible] plates Price 7s net

in the present war, and he lays great stress on the need of using antitetanic serum early in cases of lacerated wounds The importance of ambulance ships is acknowledged, and therefore we are glad to see two papers on this subject. One is by Mr SEYMOUR BARLING, who points out that in the cases carried in ambulance ships there is an undue proportion of wounds of the upper and lower limbs, because the more serious wounds of the head, thorax, and abdomen remain in the hospitals of France Mr CHARLES A. PANNETT, serving in the hospital ship *Liberty* discusses in a practical way the fitting up of hospital ships, their personnel, and the transport of wounded Some very striking skiagrams taken by Captain HERSHEL HARRIS, of Sydney, accompany an account of radiography at the Australian Voluntary Hospital, Boulogne Mr WILLIAM THORBURN has described the work of the 2nd Western General Hospital and Mr GILBERT BARLING that of the 1st Southern General Hospital Mr D'ARCY POWER has contributed a note of a case in which gold coins were carried into the back by a shell fragment, and Mr W BALY PEACOCK has illustrated a case in which a pile of five franc pieces were deeply scored and bent by a bullet Lastly, we may mention an account of a visit to some of the military hospitals of Paris and Boulogne, an especially full account being given of the Hotel Majestic in Paris

It will be seen from these admirable professional journals that the medical profession, both naval, military, and civil, are doing their best for those who have suffered wounds and injuries in this war The energy with which the writers have managed to find time to put on paper some of the lessons which the war has already taught us is to be highly commended, while it is rapidly becoming clear that the whole subject of military surgery will require overhauling in our text books

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SCOTTISH POOR LAW MEDICAL OFFICERS' ASSOCIATION —The council in its report for the year 1914 states that the number of vacant appointments was not so large as usual and the correspondence in connexion therewith was therefore considerably less The new Order issued by the Local Government Board came into force rendering all forms of tuberculosis notifiable A fee of 1*s* is payable by the local sanitary authorities in respect of each case occurring in parish practice, and 2*s* 6*d* for cases occurring in private practice The Highlands and Islands (Medical Service) Grant Act came into force and, from all the council has been able to learn will do much to render the position of medical officers in the Highlands and Islands much more satisfactory both in regard to remuneration and status It is especially noted that medical officers in the crofting counties now have an appeal to the Local Government Board in cases of dispute with their parish councils From all the information the council has gathered the National Insurance Act appears to be working to the benefit of both the medical officers and the public in sparsely populated districts The annual meeting of the association will be held in the North British Station Hotel Glasgow, to-day Friday Jan 29th, at 3 30 [illegible]

Annotations.

"Ne quid nimis"

THE BELGIAN STUDENT AND THE UNIVERSITY OF CAMBRIDGE

THE Master of Christ's College, Cambridge, Professor Shipley, writes —"We are gradually building up a little Belgian University here for students who, for one reason or another, cannot go to the front and for professors who are past the age of serving Altogether we have between 100 and 200 students and some 15 to 20 professors Last term we were able to establish effective teaching in four faculties and this term we have increased the number to six In the Faculty of Medicine we are in need of copies of some standard text book on human anatomy, preferably Gray's" The University of Cambridge has already found several thousand pounds to support her guests, and will have to find several thousands more to fulfil the obligations which she has undertaken, even if such a term is put to them as next June It will be necessary to husband resources very carefully, and it is not possible to purchase expensive text books It may be that some of our readers have copies of "Gray's Anatomy" lying unused on their shelves If this is so, the Master of Christ's College would be grateful if they would send them to him at Christ's College Lodge At present ten or a dozen copies would suffice, we are told

INSANITY IN EGYPT[1]

AGAIN we have to review a piece of most excellent work carried on in very trying conditions The report may be said to be a year old, but delay in publication was due to the stress of work which has fallen on Dr J Warnock in consequence of the tragic death of his able assistant during the year 1914 and the present apparent difficulty in replacing him The report is one of the most complete records of the work done and of the various lines of development which can be imagined It is a puzzle to understand how Dr Warnock can manage the big asylum and yet find time to enter into minute details His report is a mine of information which ought to be a field for all workers on developing institutions for the treatment of insanity We can only shortly refer to a few special points 1329 cases were treated during the year 1913 Pellagra showed an increase and is said to be the most frequent cause of insanity in Egypt As in former years, there was excess of admissions over the space for their reception, this excess being most on the men's side It is sad to notice that for want of accommodation over 200 cases were discharged while still insane, thus leading to returns of insane on the one hand and to criminal acts on the other The further development of Khanka under Dr H W Dudgeon did a good deal to relieve the acute pressure, and as a result of less crowding the recovery rate was increased In every part of the report there is evidence of strenuous and earnest work It is satisfactory to know that the Lunacy Department in Egypt is no longer part of the Public Health Department, but is under the

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[1] Reports of Government Hospitals for the Insane at Abbasia and Khanka, Egypt for 1913

The movement for "standard" bread has been revived, for it is contended that the loaf production of the country would be increased from 10 to 20 per cent by using practically the whole of the grain By the rejection of the germ and by roller methods of refining flour it is urged that much valuable food material is lost That may be so, but it is doubtful whether the adoption of a standard bread will cheapen the loaf, for the separated germ is an independent source of revenue, and it is not a famine we are confronted with, but dearness arising out of reduced transport facilities To meet the difficulty we ought to use all ingenuity For example, the industrial use of low grade flours for "sizing" and "filling" purposes in the textile trades may want supervision from the food supply aspect Although described as low grade, there can be little doubt that such flours would serve for human food, and they can be replaced for this industrial purpose by "sizes" showing a lower food value We hope that the attention of the Cabinet Committee appointed to consider the question of food supplies and prices will be directed to the fact that very many thousand tons of wheat flour are annually used for "sizing" purposes in the textile industries And yet it is well known in the trade that the "sizing" process is by no means dependent upon wheat flour, and that other materials such as the plain starches can be used equally well for the purpose The Cabinet Committee will have evidence placed before it in many directions of the most interesting and important kind The result of its labours will be looked for anxiously, and success will follow if the reasons for any measures adopted are scientifically sound, and are explained in simple language to the public

Medicine and Surgery in War.

IT is only natural that at the present time, when all our energies are being devoted to the carrying on of a great war, that the *British Journal of Surgery* should contain little that is not connected in one way or another with war This month has also appeared the first number of a new medical quarterly, the *Journal of the Royal Naval Medical Service* This is edited by Fleet Surgeon R C MUNDAY and Fleet Surgeon W L MARTIN, and if from the first number we may gauge the value of the contents of succeeding issues it will form a most important addition to British medical literature Almost the only article in this number which is not directly concerned with war is that by Staff Surgeon E L ATKINSON, dealing with the British Antarctic Expedition from 1910 to 1913 Even this throws light on matters now affecting both our army and navy, for it treats *inter alia* of frost bites, various forms of which have been seen so widely of late in our army in Flanders. It is of interest to note that the snow of the Antarctic regions is too cold to be employed for rubbing a frozen nose or ear, though this may be the best treatment for frost bite in more temperate climes One of the most interesting papers is that by Fleet Surgeon WALTER K HOPKINS on the action off Heligoland, in which the value of an early and thorough cleansing of wounds is clearly shown, he was on duty 37 hours during and after the action, and evidently did an immense amount of work The difficulty of localising bullets in the body and limbs is sometimes very great, and the method suggested and described by Surgeon S BRADBURY is simple and appears to be very useful, it consists essentially in finding the position of the bullet from two aspects and then tracing its real position by means of a strip of lead This needs rotation of the limb through only a few degrees, and therefore little disturbance of the patient The paper on the prevention of typhoid fever by Fleet Surgeon P W BASSETT SMITH is timely, when we find preventive treatment of typhoid fever so violently assailed Of great interest and importance is the note by Surgeon SHELDON F DUDLEY on a typhoid carrier, the man was "ship's cooper" and therefore he was brought in contact with articles of food when opening casks, in 13 years he had served in 12 ships, and he had given rise to 53 cases of typhoid fever, of whom 11 had died Surgeon A VAVASOUR ELDER has written a valuable paper on ambulance trains, containing an account of Naval Train No I In this the cots are movable and not fixed, thus there is much less disturbance of the patient in taking him into and out of the train, and he is much less affected by the jarring of the train. We have said enough to show that in the *Journal of the Royal Naval Medical Service* we have a valuable addition to medicine

In the January number of the *British Journal of Surgery* are many important papers bearing on the war Lieutenant Colonel C B LAWSON and Mr. H BECKWITH WHITEHOUSE have published a communication on the treatment of acute emphysematous gangrene, a disease which has appeared with great frequency in the present war The treatment employed consists in the injection by means of a Higginson syringe of hydrogen peroxide into the healthy tissues three or four fingers breadth above the line of advancing gangrene, as shown by the dusky copper coloured tint of the skin It is essential that a complete belt of oxygen should be formed above the gangrene, and therefore several openings may be needed, and the dissemination of the oxygen must be aided by kneading and massage A certain amount of shock is produced, especially if the upper limb is affected, and general anæsthesia, or sometimes spinal anæsthesia, must be employed As to the results of 11 cases treated by infiltration 8 recovered while of the 3 cases not treated by infiltration all died Especially it seems to follow from these cases that amputation above the grangrene is not only not called for, but that it may be dangerous, for it may prove fatal from shock. Professor TUFFIER, of Paris, has written a short note on military surgery as seen anginal attacks, pulmonary signs, or enlargement of the liver There was no history of cardiac failure even in the slightest form Some of them returned to the front They all showed well marked aortic insufficiency with manifest hypertrophy of the left ventricle and peripheral signs In all cases the disease was of rheumatic origin In the discussion which followed M A Siredey and M de Massary reported cases in which on examination for life insurance they found to their surprise aortic insufficiency in strong and vigorous men given to sports and athletic exercises

FEBRILE CONDITIONS FOLLOWING OVARIECTOMY

IT has been frequently noticed that women who have been subjected to operative treatment for ablation of the ovaries present a rise of temperature of moderate intensity occurring without rigors and having a characteristic duration of 15 days, after which a condition of complete and absolute apyrexia becomes established During this febrile period the patients do not experience any general disturbance of importance, having recovered from the operative shock their general condition is satisfactory and cicatrisation of the wound takes place normally and without complications After 15 days the fever disappears and convalescence is established This thermic rise is met with in cases of simple ovariectomy for inflammatory conditions and also in those in which hysterectomy has been performed together with removal of the tubes and ovaries, but is especially frequent in cases of ovarian sclerosis with marked general nervous phenomena. Dr P Azara, in a recent issue of *Il Policlinico*, draws attention to this condition, in which the thermometer does not rise above 38° or 38 1° C, and offers an explanation of it Chiarugi had already described in his work on the surgery of the thyroid a "thyroid fever following excision of that organ and considered it due to the pouring into the circulation of thyroid secretion not yet elaborated, or altered by the pathological condition, or else modified by contact with the air Whatever clinical analogy exists between thyroid fever and ovarian fever Dr Azara is of opinion that Chiarugi's explanation is not applicable to the latter In the first place, the operative field in ovariectomy is altogether different as regards vascularity to the cervical, and, moreover, it is impossible to admit however remotely, the pouring into the circulation of "ovarin, which by accumulating in excess in the organism would produce a febrile condition Another theory, however, may be adduced to explain the ovarian fever Starting with the conception that the ovaries have an internal secretion, and admitting that the so called ovarin, a product of the corpus luteum, has a disintoxicant action on the organism, it follows that this action would be annulled by ablation of the ovaries and that the febrile condition would come to an end as soon as the organism had re established a certain equilibrium by means of the compensative action of some other organ with internal secretion

THE JARISH HERXHEIMER REACTION

THE Herxheimer reaction consists in a focal local and general reaction supervening in syphilitics at the outset of treatment with antispecific agents This reaction, when first described applied more fittingly to mercury It consisted in an aggravation of all the signs of the infection during the first days of treatment after two to five injections or inunctions Herxheimer believed that the reaction existed solely during the second stage of syphilis, but since it has been more fully studied in relation to its occurrence following salvarsan it has been found that this reaction appears equally readily at all stages The reaction, too, may be as varied as the forms of syphilis, cutaneous, visceral, or cerebral Thus the chancre may enlarge rapidly In the secondary stage there may be arthritis, headache, or even fever and meningitis, it is said that in the secondary stage 63 per cent have a syphilitic meningitis, shown by leucocytosis of the cerebro spinal fluid Amongst tabetics the reaction takes the form of transitory aphasia, acute delirium, or shooting pains, or it may be barely noticeable It was suggested that some part of the aggravation of symptoms might be due to the development of toxins derived from organisms in the diluting fluid used for the intravenous method, but this does not explain all the facts, as Dr K. M Benoit Simon points out in the *Canadian Practitioner and Review* (1914, vol xxxix, p 655) The reaction, in view of the gradual accumulation of fatal results after salvarsan (200 up to 1912), may deserve attention Dr Simon says that the reaction is proportionate to the intensity of the lesions, it is thus more marked in the secondary stage It is also proportionate to the dose of the antisyphilitic drug and its specific activity Two questions regarding the reaction may be asked is it useful or is it noxious, and if the latter, is it preventable? 1 The reaction is useless—all agree on this, it is also injurious the danger lying especially in the meningeal response 2 The reaction is preventable It is necessary first to seek dangerous localisations of the disease, especially a latent meningitis, lumbar puncture must be performed for the diagnosis of such a latent and potential source of trouble. Secondly, since a first dose must be blindly given, let it be the minimum which has never given accidents—that is, 0 2 gramme salvarsan for an adult—and watch The temperature and the cerebro spinal fluid being observed the dose can be increased gradually

INTRA-ARTICULAR FIXATION OF FRACTURES

WHILE the value of the fixation of fractures by apparatus inserted in the bone is established it is generally taught that no foreign substance should be inserted into joints However, it has recently been shown that intra articular fixation is possible In the *Maryland Medical Journal* for December, 1914, Professor Nathan Winslow has reported two cases in which he performed this operation A man aged 50 years had a fracture through the head and anatomical neck of the humerus in a bad position which could not be rectified by manipulation An incision was made midway between the acromion and the coracoid processes extending 7 inches down the arm The distal fragment was delivered through the incision Then the head of the bone was separated from its capsule and entirely delivered from the body The fragments were brought into apposition but the upper was so shattered that it offered but little surface for plating After some difficulty a very small plate was insecurely attached to the fragments It was necessary to pass a wire nail through the articular surface into the shaft of the bone The capsule was sutured the wound closed, and directorate of Dr Warnock, and is attached to the Ministry of the Interior There is a great gain in the addition of skilled English female nurses, as till these were sent women of the lowest class had to be employed Dr Warnock and Dr Dudgeon deserve the highest praise for their work and their report proves this

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EXTRAORDINARY ACCIDENTS

IN our last issue we printed an account by Lieutenant T O Thompson, R A M C, of a patient who impaled himself on the handle of a hayfork The only noticeable lesion was a tear of the scrotum some three inches in length, but the fork handle had passed almost subcutaneously from the scrotum to the inter clavicular region, it had carried in with it some hay and also a portion of the patient's clothing The second rib was broken and much sepsis followed In spite of this severe injury the patient was able to walk three miles home and to drive thence ten miles to the hospital This case shows well that extensive internal injuries may be present as the result of an accident, and yet the obvious lesions may be small There is to be noted a curious sameness about lesions resulting from falling upon the handles of hay forks We may quote one from the *American Journal of the Medical Sciences* for 1853, there was reported a case which was under the care of Dr Sargent, of Worcester The patient was a lady 37 years of age, and she slipped down from a hay loft and impaled herself on the handle of a hayfork, the handle entered the vagina and penetrated 22 inches, and its entrance was stopped only by her feet touching the ground The handle was immediately withdrawn, and though the patient complained of some pain on the left side of the thorax she was wonderfully little affected Surgical emphysema developed above the left clavicle, and later it was found that the first rib on the left side was broken Several other similar cases have been recorded in which impalement has occurred with very little external evidence of injury In THE LANCET of 1885 we published an interesting case reported by Dr Shirtliff A coal porter was found dead on a railway line, showing only bruising of the abdomen and surgical emphysema of both sides of the abdomen and of the right side of the chest, yet at the necropsy the left pleural cavity was found to contain in addition to a large quantity of blood, the torn spleen, the stomach which had been separated both at its cardiac and its pyloric ends, and also a piece of the liver, these had passed through a large hole in the diaphragm In the right pleural cavity were also much blood and many small pieces of the liver, which had come through a small opening on the right side of the diaphragm Of the portion of liver which remained in the abdominal cavity much had been reduced to pulp, many of the branches of the mesenteric veins had been torn, and four yards of the intestine had been forced into the scrotum The bladder was ruptured and the aorta was torn through at the level of the tenth dorsal vertebra, which was fractured, many ribs were also fractured In this case the amount of external injury was utterly out of proportion with the damage which had been done to internal organs Every surgeon knows how slight may be the external evidence of injury when a cart wheel has passed over the abdomen, and yet a rupture of the intestine may have been caused Only a week or two ago the daily press reported that a child had been brought to a hospital after having received a blow in the abdomen. As the external injury was slight, and there were no signs that any internal viscus had been damaged, the child was sent home, but later the appearance of peritonitis showed that internal damage had been done, and it was found that rupture of the bladder had occurred It is difficult to lay down hard and fast rules, but it may be said that in all cases when the nature of the accident renders it possible that a severe injury to some internal viscus has occurred, even though no signs of it are present or can be elicited, it is wise to keep the patient under observation, so that at the first sign of internal injury manifesting itself surgical intervention may be available

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SUBJECTS OF AORTIC INSUFFICIENCY IN THE FIGHTING LINE

IT has often been said with truth that our press has not done justice to the achievements of the French in the war The fault has not been due to any desire to overrate our exploits by underrating theirs, but partly to the secrecy which has largely veiled the military operations and partly to a naturally engrossing interest in the work of our own troops The want of appreciation is not so much of the valour of our Allies, for which no praise could be too great, but of the extraordinary efforts which they are making to confront a numerically greater military power The magnitude of these efforts is no doubt obscured by the fact that the French preparations for such a gigantic struggle were insufficient However, it must be remembered that complete preparedness could be expected only in the Power which planned the war and struck at what she conceived the opportune moment The extraordinary efforts now being made by France are strikingly shown by the willing and successful part taken in the campaign by the subjects of grave organic disease We recently called attention to the case of a tuberculous man, the subject of artificial pneumothorax, who successfully went through the arduous campaign in Northern France during the month of August and broke down only during a forced march[1] He was shown at the Societe Medicale des Hopitaux of Paris by M Rist At a subsequent meeting M Ch Aubertin reported cases in which the subjects of aortic insufficiency took part in the campaign Curiously, this flagrant violation of therapeutic rules was unattended by accidents While engaged during October at the Gare de l' Est in examining the sick and wounded arriving from the front he was surprised to find among them cases of aortic insufficiency During a fortnight he observed five among a relatively limited number of soldiers The ages of the patients ranged from 20 to 30 years One joined the army on his own demand, in spite of the lesion being found at the medical examination, the others did not know of the existence of the disease They all had taken full part in the campaign, including the battle of the Marne Some of them had marched as much as 30 kilometres a day with their knapsacks The trouble which caused them to be sent back as "*éclopés*" was almost always general fatigue rarely palpitation In no case could M Aubertin find œdema, arrhythmia dyspnœa

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[1] THE LANCET Dec. 19th 1914 p 1425.

INTRAVENOUS TREATMENT OF ARTHRITIC PROCESSES

THERE are certain positive advantages obvious to the intravenous methods of giving drugs One is precision and accuracy of dosage with the certainty that the agent used will exert its effect unchanged by the disturbing factors which are necessarily associated with the ordinary absorptive processes from the gastro intestinal tract The other is rapidity of action Advantages accruing from precision of dosage are especially seen in the salvarsan treatment, the necessity for such accuracy being obvious The advantage of quickness of effect is most conspicuously noted, perhaps, in the intravenous injection of strophanthus in urgent cases of heart failure due to auricular fibrillation It is natural that intravenous medication should have been tried in other conditions, and some success is claimed for this method of giving salicylates for refractory cases of acute rheumatism Dr Albert Comstock records the details of this form of treatment in certain articular diseases in the *New York Medical Journal* (vol c, 1914, p 1113) He uses the following prescription —

R Guaiacolis—sodii salicylatis, ana gr	640
Glycerin	gr 640
Aq destill et steril	2000 c c

The conditions for which its intravenous use is indicated are acute articular rheumatism, acute and chronic muscular rheumatism, and acute gouty arthritis The patient is suitably prepared and an aperient given The quantity of the solution, at 100° to 110 F, used is 250 c c (*sic*) The vein is usually dissected out and the fluid slowly allowed to flow in The first subjective sign noted is a tingling sensation, with a coal tar taste in the mouth, due to the guaiacol The face then becomes suffused and congested and perspiration is free There is generally slight delirium, which may last for half an hour The pain, however, is relieved in a wonderful manner, and within 24 hours the patient is better This relief is most marked and most permanent in acute rheumatism, in 50 cases there has been no bad result In muscular rheumatism the result is not so good, and in the chronic form two or three injections may have to be made at intervals of three or four days For cases where salicylates given in the ordinary way cannot be tolerated by the stomach or in particularly obstinate cases this intravenous method is recommended

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AT a meeting of the Council of the Royal College of Surgeons in Ireland held on Jan 21st, Mr F Conway Dwyer, President, in the chair Sir Arthur Chance was elected to represent the College at the meetings of the General Medical Council

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Dr George Lovell Gulland, physician to the Edinburgh Royal Infirmary has been appointed to the Chair of Medicine in the University of Edinburgh, vacant through the resignation of Professor John Wyllie

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AT a meeting of the Senate of the University of London held on Jan 27th Dr Edward Barclay Smith M A M D L C Camb was appointed to the University Chair of Anatomy at King's College London and Dr Edward Provan Cathcart, M D Ch B, D Sc Glasg, was appointed to the University Chair of Physiology (as from April 1st next), tenable at the London Hospital Medical College

THE CHADWICK LECTURES ON WAR AND DISEASE[1]

THE second of three Chadwick lectures was delivered at the Royal Society of Arts on Jan 22nd by Colonel F M SANDWITH, M D The chair was occupied by Sir FREDERICK TREVES, and there was a large attendance

Presentation of Chadwick Prizes and Medals

An interesting function preceded the delivery of the lecture—namely, the presentation to Fleet-Surgeon Cleveland Munday and Colonel Heaton Horrocks, R A M C, of the Chadwick Medal and £50 for distinguished services in promoting the health of the men in the navy and army respectively

Sir ARTHUR MAY, in thanking the Chadwick trustees for the honour they had conferred on the navy, said that when he entered the navy in 1878 the rate of sickness was 47 per 1000, to-day it was only 25, and the invalid rate was now 15 as against 35 in 1878 In the latter year the death-rate in the navy was 6 per 1000, whereas to-day it was 2 The improvement was due to sanitation and the education of the men, for every sailor in the service attended lectures on personal hygiene

Sir ALFRED KEOGH emphasised the importance of the health of the troops in the maintenance of an army's fighting strength and said that Colonel Horrocks was the officer most responsible for the very satisfactory health of our army now in France, and his record extended back many years, the abolition from Malta of undulant fever having been due to him Formerly there were in that island 600 or 700 men stricken with that disease, and hospitalisation alone cost £15 000 a year To-day there was no fever Colonel Horrocks had also done much steady work in improving the sanitation of camps and barracks

Colonel SANDWITH then delivered a lecture on

The South African and the Russo-Japanese Campaigns

He said the Japanese army medical officers held that there were three grades of illness (*a*) comprising wounds or disease caused by hardships and exposure incidental to warfare, (*b*) diseases accidents, or injuries to which the soldier might succumb in circumstances beyond his control; and (*c*) diseases brought about by disobedience to orders, immorality, the eating of unwholesome food and the drinking of dirty water The victim of the latter received no sympathy Before the Russo-Japanese War the individual Japanese soldier was made to understand how largely his health contributed to the fighting efficiency of the army, and this was an important factor in the avoidance by that nation of serious epidemic disease during the campaign. This lesson had had its good effect on our own army, and the French admired the British troops in this war for their hygienic observances No illness so dogged the steps of an army as did typhoid fever For many years water contamination was thought to be the cause but epidemics had occurred where the water supply was excellent, and dust and flies had obviously to be blamed He particularised the case of Quetta which had an admirable water supply A striking instance was that which occurred in the camp at Modder River in the South African campaign The winds covered the food with grit, and flies multiplied rapidly The first case of typhoid fever was recognised on Dec. 18th 1900 and by the end of that month 18 cases had been admitted into hospital The Highland Brigade camp suffered the least because it was in a wind protected locality. There was also great danger from the handling of food by typhoid carriers, some of whom had had the disease so slightly that it escaped recognition, especially in view of the necessary huddling of the men together in quarters during war time The typhoid death-rate in civil life varies from 5 per cent to 20 per cent; among armies in war time the rate is much higher owing to the absence of the best nursing facilities In the South African War we lost 8022 from this disease 19 454 were invalided and 30 208 were either returned to duty or otherwise discharged The mortality from typhoid fever in the war exceeded in number that of the men killed in action Each the arm encased in plaster Sinuses leading to the head of the bone formed, and necessitated a second operation The previous incision was opened and the plate with three screws removed The capsule was then opened and the head of the bone disarticulated Careful search failed to reveal the head of the nail The sinus in the bone was therefore enlarged and the nail grasped at its point with forceps and pulled out The sinus was curetted and drained The patient recovered and had good motion in all directions except elevation In the second case a coloured girl, aged 3 years, had separation of the lower humeral epiphysis An attempt at reduction by hyperextension and flexion under ether was attended with indifferent success An incision was made over the olecranon process down to the bone and the fragments were delivered after much trouble As no surface presented extra articularly through which nails could be passed and the fragments did not remain in apposition when released two small wire nails were passed from the articular surface through the epiphysis into the shaft Three weeks after the operation there was some motion in the joint The final result cannot yet be stated, but Professor Winslow believes that without operation function would have been seriously impaired He claims that his cases show that intra articular fractures which cannot be otherwise treated should be screwed or pegged from the articular surface, that the joint tolerates a foreign body provided infection does not occur, and that this method offers a better prospect than leaving the fragments in bad alignment

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[1] A report of the first lecture appeared in THE LANCET of Jan. 23rd, p. [illegible]

ANÆSTHESIA IN GOITRE OPERATIONS

THE problem of safe and satisfactory anæsthesia in operation for goitre may present more difficulty to the anæsthetist than is met perhaps in any other class of case There are, of course, plenty of instances where in the absence of respiratory difficulty from pressure and of all symptoms of hyperthyroidism the choice and administration of the anæsthetic are at least as simple as in any other operation in the neighbourhood of the neck When, however, there is narrowing of the trachea from pressure or still more when there are marked tachycardia and other indications of hyperthyroidism, then the question becomes an anxious one Still more, needless to say, is this the case when the patient presents to a marked degree the signs and symptoms of actual exophthalmic goitre The mechanical difficulty in these cases may be regarded as that which is most easily obviated It is, of course, true that any dyspnœa due to mechanical narrowing of the trachea is liable to be increased during anæsthesia by swelling of mucous membrane and congestion of vessels as well as by spasm The avoidance of all closed methods of administration, however, the preliminary injection of atropine, and a gradual induction usually result in anæsthesia without any increased difficulty in such cases The mechanical obstruction may be overcome with even greater certainty by the insufflation of ether through a tracheal catheter should the passage to this not be of itself a too difficult achievement A much more difficult problem than the mechanical one is presented by the nervous condition of some of these patients and by their tendency to syncope during operation, or to an increase afterwards of the tachycardia till the heart finally runs down exhausted by its own rapidity We do not know the essential cause of this fatal tachycardia, and cannot even declare positively that it is partly attributable to anæsthesia and not wholly to the effect of manipulation of the thyroid gland with increased entry of its secretion into the circulation Dr W S Bainbridge, who has recently discussed the question before the American Association of Anæsthetists, believes that fatalities of the kind described are more apt to occur after operations done during general than after those done with local anæsthesia. His preference for local agents in this class of case has the authoritative support of Kocher The disadvantage of the presence of consciousness on the part of these sensitive, excitable patients is, however, not to be overlooked, and indeed Dr Bainbridge himself points out that operating with local anæsthesia throws great strain upon the surgeon, and not infrequently is associated with discomforts, if not with pain, on the patient's part These things, however, cannot be allowed to weigh seriously against any marked superiority from the point of view of safety, and if it can be clearly shown from comparing large numbers of cases that general anæsthesia involves the occurrence of more fatalities than local, then preference should surely be given to the latter method The use of rectal and of infusion methods is obviously applicable to this class of case The considerable inconvenience of the former and the oozing associated with the latter are, we imagine, their chief detriments Moreover, in the case of infusion, any considerable addition to the amount of fluid in the circulation would not appear to be without detriment in the type of patient under consideration. Crile's well known process of "stealing the thyroid" may meet the temperamental difficulties of the patient very well, but we cannot believe that sufficient calm cannot be induced, if it is possible at all, by quiet, tactful, and deliberate handling of the patient at the time of induction of anæsthesia without rehearsals

THE ETIOLOGY OF CONGENITAL HYDROCEPHALUS

THE old Neapolitan custom of treating chronic hydrocephalus by mercurial friction and the often favourable result obtained thereby, very justly gave rise to the suspicion that this morbid condition might be due to hereditary syphilis It was rarely possible, however, to adduce evidence of specific infection in the parents Recent biological methods have now proved that almost invariably chronic hydrocephalus owes its origin to parental syphilis Former observers had already shown that among those diseases to which the congenital syphilitic is subject hydrocephalus occupies the chief place after idiocy and imbecility, but when Wassermann's test was applied to the etiology of hydrocephalus negative results seemed to discountenance any relation between it and hereditary syphilis In 1912 Cannata, having made observations on 12 cases of congenital hydrocephalus came to the conclusion that hereditary syphilis plays a more important part in the pathology of chronic internal hydrocephalus than has usually hitherto been admitted In a new periodical issued by the medical staff of the lunatic asylum at Catanzaro, under the direction of Professor Frisco, two well marked and instructive cases are recorded in one the Wassermann reaction was positive both in the mother and child who was second born following a premature birth of a dead fœtus In the second case the reaction was positive in father, mother, and child to wear the prescribed uniform Surgeon Captain Thomas Duncan Greenlees (late Grahamstown (South Africa) 1st City Volunteers) to be Major (temporary) Captain William E Rielly, from 2nd London Field Ambulance, to be Captain Lieutenant John B Bate to be Captain (temporary) Lieutenant James P N Casey, from 1st London Field Ambulance, and Hugh Gilbert Bruce to be Lieutenants

ORDER OF ST JOHN OF JERUSALEM

The King has sanctioned the promotion to Knight of Grace of Lieutenant-Colonel William Ernest Jennings, I M S

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last census, 8172 births and 6259 deaths were registered during the week ended Saturday, Jan 23rd The annual rate of mortality in these towns, which had been 21 3 19 4, and 18 8 per 1000 in the three preceding weeks, further fell in the week under notice to 18 0 per 1000 of their aggregate population, estimated at 18,134 239 persons at the middle of 1914 The annual death rate last week ranged from 6 6 in Eastbourne, 8 0 in Ilford, 9 6 in Coventry, 10 5 in Acton, and 10 9 in Southport and in Blackpool, to 25 3 in Gateshead, 27 1 in Cambridge, 31 9 in Merthyr Tydfil, 36 3 in Great Yarmouth, and 37 5 in Gillingham

The 6259 deaths from all causes were 286 fewer than the number in the previous week, and included 479 which were referred to the principal epidemic diseases, against numbers declining from 575 to 454 in the three preceding weeks Of these 479 deaths, 206 resulted from measles 93 from whooping cough 83 from diphtheria, 62 from infantile diarrhœal diseases 23 from scarlet fever, and 12 from enteric fever, but not one from small pox The mean annual death rate from these diseases was equal to 1 4 or 0 1 per 1000 more than in the previous week The deaths attributed to measles, which had been 269, 183 and 195 in the three preceding weeks, further rose to 206 last week and caused the highest annual death rates of 2 1 in Newcastle-on Tyne, 2 2 in Ealing, in Wolverhampton, and in Preston, 2 5 in Merthyr Tydfil, 3 1 in Gateshead, 3 2 in Rotherham, 3 3 in Grimsby 3 7 in Plymouth, and 4 0 in Wigan The deaths referred to whooping-cough, which had been 80 93, and 76 in the three preceding weeks rose to 93 last week, and included 22 in London, 8 in Bristol, 5 each in Willesden Liverpool, and Merthyr Tydfil, 4 in Stoke-on Trent and 3 each in Gloucester, Nottingham, Newcastle-on Tyne, and Cardiff The fatal cases of diphtheria which had been 89, 77, and 63 in the three preceding weeks rose to 83 last week, of these 8 each occurred in London and Birmingham, 7 in Bristol 5 each in Manchester and Sheffield, 4 each in Warrington and Leeds, and 3 each in Bradford and Stockton on Tees The deaths of infants (under 2 years) attributed to diarrhœa and enteritis which had been 86, 84, and 75 in the three preceding weeks, further declined to 62 last week and included 14 in London 8 in Birmingham, and 3 each in Preston and Gateshead The deaths referred to scarlet fever which had been 31 35 and 34 in the preceding three weeks fell to 23 last week of which 5 occurred in Liverpool and 4 in London The fatal cases of enteric fever which had been 20 15, and 11 in the three preceding weeks, were 12 last week, and included 2 in London

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily declined from 5035 to 3952 in the eight preceding weeks, had further fallen to 3836 on Saturday last 308 new cases were admitted during the week against 436 321, and 338 in the three preceding weeks These hospitals also contained on Saturday last 1643 cases of diphtheria, 109 of measles 56 of enteric fever and 35 of whooping-cough but not one of small pox The 1597 deaths from all causes in London were 104 fewer than in the previous week and corresponded to an annual death rate of 18 4 per 1000 The deaths referred to diseases of the respiratory system which had been 562 497 and 472 in the three preceding weeks further fell to 417 in the week under notice and were 3 below the number in the corresponding week of last year

Of the 6259 deaths from all causes in the 96 towns 252 resulted from different forms of violence and 545 were the subject of coroners inquests while 1667 occurred in public institutions The causes of 62 or 1·0 per cent. of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Leeds Bristol West Ham Bradford and Newcastle-on-Tyne Nottingham and in 59 other smaller towns Of the 62 uncertified causes 13 were registered in Birmingham, 6 in Liverpool 4 each in Stoke-on Trent, Preston, and Gateshead, and 2 each in Ilford, Dudley, Bootle, Bolton, and Manchester

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2,345,500 persons at the middle of this year, 1258 births and 977 deaths were registered during the week ended Saturday, Jan 23rd The annual rate of mortality in these towns, which had been 20 5, 24 5, and 22 8 per 1000 in the three preceding weeks, further declined to 21 7 per 1000 in the week under notice Among the several towns the death rate ranged from 12 5 in Motherwell, 14 2 in Coatbridge, and 15 2 in Falkirk, to 25 3 in Aberdeen, 25 9 in Dundee, and 29 4 in Perth

The 977 deaths from all causes were 50 fewer than in the previous week, and included 98 which were referred to the principal epidemic diseases, against 117 and 92 in the two preceding weeks Of these 98 deaths, 58 resulted from whooping-cough 16 from scarlet fever, 8 from diphtheria, 8 from infantile diarrhœal diseases, 7 from measles, and 1 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 2 2, against 1 4 per 1000 in the large English towns The deaths attributed to whooping-cough, which had increased from 28 to 56 in the four preceding weeks, further rose to 58 last week, of which 37 occurred in Glasgow, 11 in Dundee, 6 in Edinburgh, and 2 in Motherwell The deaths referred to scarlet fever, which had been 17, 13 and 9 in the three preceding weeks, rose to 16 last week, and included 8 in Glasgow and 3 each in Aberdeen and Paisley The fatal cases of diphtheria, which had been 14, 21 and 10 in the three preceding weeks, further fell to 8 last week, of which 4 were registered in Glasgow and 2 in Edinburgh The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 11, 17, and 7 in the three preceding weeks were 8 last week, and included 3 in Glasgow The 7 deaths referred to measles comprised 6 in Dundee and 1 in Glasgow, and were equal to the number recorded in each of the two preceding weeks The fatal case of enteric fever was registered in Glasgow

The deaths referred to diseases of the respiratory system, which had steadily increased from 154 to 275 in the six preceding weeks fell to 238 in the week under notice, 30 deaths resulted from different forms of violence, against 32 and 35 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland with an aggregate population estimated at 1 212 380 persons at the middle of this year, 665 births and 557 deaths were registered during the week ended Saturday, Jan 23rd The annual rate of mortality in these towns, which had been 27 8, 26 5, and 24·4 per 1000 in the three preceding weeks, further fell to 24·0 per 1000 in the week under notice The annual death rate last week was equal to 27 7 in Dublin (against 18 4 in London and 22 2 in Glasgow), 20 2 in Belfast 37 4 in Cork, 19·0 in Londonderry, 12 2 in Limerick, and 26 6 in Waterford while in the 21 smaller towns the mean death rate was 21 9 per 1000

The 557 deaths from all causes were 11 fewer than the number in the previous week and included 35 which were referred to the principal epidemic diseases, against 38 and 48 in the two preceding weeks Of these 35 deaths, 15 resulted from measles 9 from whooping-cough, 4 from infantile diarrhœal diseases, 3 from scarlet fever, 2 from enteric fever and 2 from diphtheria, but not one from small pox. The mean annual death rate from these diseases was equal to 1 5, against 1 4 and 2 2 per 1000 in the English and Scotch towns respectively The deaths attributed to measles which had been 9 6 and 12 in the three preceding weeks further rose to 15 last week and included 11 in Belfast The deaths referred to whooping-cough, which had been 7 11 and 10 in the three preceding weeks were 9 last week and comprised 6 in Dublin, 2 in Belfast and 1 in Cork The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had increased from 9 to 14 in the four preceding weeks fell to 4 last week and included 2 in Dublin The 3 deaths attributed to scarlet fever occurred in Belfast the deaths from diphtheria in Dublin and Sligo and the fatal cases of enteric fever in Dublin and Limerick

The deaths referred to diseases of the respiratory system, which had been 162 139, and 164 in the three preceding weeks, fell to 137 in the week under notice Of the 557 deaths from all causes, 177 or 32 per cent occurred in public institutions and 8 resulted from different forms of violence The causes of 28 or 5·0 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest in the English towns the proportion of uncertified causes did not exceed 1·0 per cent case was under treatment an average of 56 days, and was necessarily a source of danger during the whole of that period The conditions encountered by the army were greatly aggravated in the beleaguered city of Ladysmith, where the half starved garrison had to draw its water supply from a river known to be contaminated During the 120 days of siege there were 1280 cases of typhoid fever, with 360 deaths, and 1841 cases of dysentery, with 105 deaths When our troops entered Bloemfontein they found two churches filled with Boers suffering from typhoid fever During the forced marching tents had to be pitched for the relief of about 130 men who collapsed from the effects of the heat On Feb 16th one brigade was marching and fighting for more than 15 hours When the battle of Paardeburg began the men had been marching 24 hours, during which some had nothing to eat The fighting lasted 12 hours When a week later, Cronje surrendered, among his force were 160 sick and wounded including 10 cases of enteric fever In 20 weeks from March to July there were 1134 deaths in Bloemfontein, of which 85 per cent were due to typhoid fever War could never be waged on land by hygienic methods, the supreme object was to defeat the enemy, but in anti typhoid inoculation we had now a means of circumventing the danger It was very gratifying to find that the soldiers were becoming more and more convinced of the efficacy of this preventive measure, and the vast majority of those on active service were now so protected Typhoid fever was found to be five or six times as common in the non inoculated as in the inoculated At Avignon (France) in 1912 typhoid fever broke out in barracks containing 2053 men, of whom 1366 were protected Of the 687 unprotected there were 155 who had the disease and 21 died while among the protected there was not one case In 1913 the French Senate resolved that the protective treatment should be made compulsory throughout the army In Canada, among the camps of the Canadian Pacific Railway, 3500 men were protected, and only two cases of typhoid fever occurred, while among 4500 non protected men there were 228 cases In the face of such facts it was difficult to understand those who were trying to persuade the soldier not to submit to it The lecturer proceeded to deal next with the case of dysentery and cholera, describing the course of these diseases and their method of spread, remarking that in the South African War there were 38,108 cases of dysentery,[2] the chief source having been the water supply In her war with China Japan had 155 140 cases of dysentery, with 38 000 deaths On Oct 22nd last 98 cases of cholera were reported in Austria and 231 in Hungary Cholera had also appeared in some of the Russian towns Dr Fleming and others were sent from this country to the Russian side to ascertain what particular kind of cholera bacillus was present, they had now returned and were, he believed engaged in preparing a vaccine He had words of warm commendation to those British officers, including Sir Francis Wingate, who showed such heroism in combating the Egyptian cholera epidemic In the Greek army the mortality among unvaccinated cholera patients was 275 in each 1000 cases of the disease, in the vaccinated 102 per 1000 cases The British authorities were providing in every possible way against the invasion of cholera among our troops The lecture was illustrated by very informing slides, including photo micrographs of disease bacilli

Sir FREDERICK TREVES, in proposing a vote of thanks to Dr Sandwith emphasised what he said regarding the attitude to be adopted towards typhoid fever in war The education of the soldier on the question was most important The second line of attack was the improvement of the sanitary condition of the army Speaking as a member of the Sanitary Committee at the War Office he could say there had never been a time in the history of any campaign when the wounded or sick soldier had been better looked after But this was not all, for even medical men versed in every detail of personal care and sanitation had, when in charge of typhoid camps, contracted the disease A further precaution was necessary—namely, inoculation Since the present war began there had been in the British Expeditionary Force only 212 cases of typhoid fever 201 of them in unprotected men for 173 of them had not been inoculated at all, only 11 of this number had been fully inoculated Not one inoculated man in the whole force had died from the disease In the face of such facts those who tried to persuade the men not to submit to the measure were playing into the hands of the enemy He also alluded with much satisfaction, to the universality of motor transport in the present operations near the front At the actual firing line, however, horse transport could not be dispensed with

The vote of thanks to the lecturer was very heartily accorded

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE following appointments have been notified —Staff Surgeon N B V Jacob to the *Pembroke* additional, for disposal Temporary Surgeons H O Blanford to the *Roxburgh* S L Harke to the *Impregnable*, and A M Gray to the *Woolwich*

The undermentioned have been granted temporary commissions as Surgeons in His Majesty's Fleet —John Grandisson Watkins, Purser Davies, Lionel Frederick Strugnell and David Sutherland

The following Surgeon Probationers, R N V R, have been entered as Temporary Surgeons, R N —H G Moser and L S Fry

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Probationers G Pearson to the *Blake*, additional, for the *Goldfish* and W L Hunter

ROYAL ARMY MEDICAL CORPS

Honorary Major Guy N Stephen to be temporary Lieutenant-Colonel (dated Jan 10th)

To be temporary Captains —Dated Dec 29th, 1914 Charles Edward Forbes Mouat Biggs Dated Jan 4th Robert Sturgeon Cocke

Peter Macdiarmid is granted temporarily the honorary rank of Captain (dated Jan 27th)

To be temporary Lieutenants —Dated Dec 9th, 1914 Arthur Vernon Stocks Dated Dec 18th, 1914 James Stewart Hall and Hugh Llewellyn Apthorp Dated Dec 22nd 1914 James Edward Cook Dated Dec 29th, 1914 Frederick Pearson Fisher Dated Dec 31st, 1914 John Samuel Martin, John Gibson, and Ronald Bute Macfie Dated Jan 4th Arthur Hyde Greg Dated Jan 5th James Edmund Rutherford Dated Jan 6th Charles Edward Pepper Dated Jan 7th James Donald Finlay, Andrew Grant George Douglas Sherwood, Thomas Lister Llewellyn, Bernard Creasy Evens John Laing Annan Wilfred Garton, George Henry Steven Dudley Forde Albert Ernest Hodgson James Joseph Keirans, and John Lang Dated Jan 8th Henry Percy Harpur and James Fettes

SUPPLEMENTARY TO REGULAR UNITS OR CORPS

Royal Army Medical Corps

The undermentioned to be Lieutenants (on probation) —Francis Antrobus Duffield, John Joseph Molyneaux Frederic Sanders George Stephen Pirie Edwin John Bradley, Frank Oppenheimer, James Walker Wood, and George Macdonald Scott

TERRITORIAL FORCE

Honourable Artillery Company

"A" Battery 1st City of London Horse Artillery Surgeon Lieutenant Colonel and Honorary Surgeon Colonel Richard J Reece is seconded

Royal Army Medical Corps

1st Wessex Field Ambulance Walter Fitzpatrick (late Captain, Royal Army Medical Corps Territorial Force) to be Captain (temporary)

2nd Highland Field Ambulance Lieutenant James A Stephen to be Captain (temporary) Thomas Stewart Slessor to be Lieutenant

3rd Southern General Hospital Lieutenant Colonel Horatio P Symonds resigns his commission on account of ill health

2nd West Riding Field Ambulance Hartas Foxton to be Lieutenant

1st London (City of London) Sanitary Company Robert Robison to be Lieutenant

West Lancashire Casualty Clearing Station Lieutenant William N W West Watson, from 3rd West Riding Field Ambulance to be Lieutenant

West Riding Casualty Clearing Station David Rutherford Cramb to be Lieutenant

Sanitary Service Thomas Hamilton Ward (late Lieutenant, Royal Army Medical Corps Territorial Force) to be Captain whose services will be available on mobilisation

Attached to Units other than Medical Units —Major Alexander Leitch resigns his commission on account of ill health, and is granted permission to retain his rank and

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[2] THE LANCET Sept 5th 1914 p 63[illegible]

VITAL STATISTICS OF LONDON DURING DECEMBER, 1914

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the 10 diseases specified in the table was equal to an annual rate of 9 2 per 1000 of the population, estimated at 4,516,612 persons in the middle of last year, in the three preceding months the rates were 11 6, 14·0, and 12 5 per 1000 respectively The lowest rates last month were recorded in St Marylebone, Hampstead, Hackney Holborn, Poplar, and Bermondsey, and the highest rates in Hammersmith Fulham, the City of London, Bethnal Green, Stepney, and Deptford The prevalence of scarlet fever showed a marked decline from the high numbers in the two preceding months, the greatest proportional prevalence of this disease last month was recorded in Hammersmith, Fulham, Stepney, Deptford, and Lewisham The Metropolitan Asylums Hospitals contained 4431 scarlet fever patients at the end of last month, against 4561 and 4956 at the end of the two preceding months, the weekly admissions averaged 445, against 618 and 661 in the two preceding months Diphtheria also was less prevalent than in either of the two preceding months, this disease was proportionally most prevalent last month in Hammersmith Fulham, Finsbury, the City of London, Shoreditch Bethnal Green, Stepney, and Woolwich There were 1653 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 1459 and 1630 at the end of the two preceding months the weekly admissions averaged 177 against 213 and 247 in the two preceding months The prevalence of enteric fever, which had shown a decline in November increased again last month, the greatest proportional prevalence of this disease was recorded in Chelsea, the City of Westminster St Marylebone, the City of London, Shoreditch, and Stepney The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 65 and 63 at the end of the two preceding months, rose again to 68 at the end of last month, the weekly admissions averaged 10, against 11 and 8 in the two preceding months Erysipelas was proportionally most prevalent in Fulham, Finsbury Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, Deptford, and Woolwich The 24 cases of puerperal fever notified during the month included 5 in Fulham 3 in Camberwell, and 2 each in Hampstead St Pancras, Islington, Stepney, Southwark, and Wandsworth The 5 cases of cerebro-spinal meningitis included 2 in Lambeth, where 3 of the 7 cases of poliomyelitis also occurred

The mortality statistics relate to the deaths of persons actually belonging to the several boroughs the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided the death rates from all causes are further corrected for variations in the sex and age constitution of the populations of the several boroughs During the five weeks ending Jan 2nd the deaths of 7246 London residents were registered, equal to an annual rate of 16 7 per 1000, in the three preceding months the rates were 15 5 14 1 and 14 6 per 1000 respectively The death rates last month ranged from 12·0 in Wandsworth, 13 3 in Hampstead 13 5 in Lewisham 13 8 in Camberwell, 14 3 in St Marylebone, and 14 4 in Battersea to 19 6 in Southwark 19 7 in Greenwich, 20 5 in Shoreditch 20·7 in Poplar 20·9 in Stepney 21 7 in Holborn and 23 1 in Finsbury The 7246 deaths from all causes included 542 which were referred to the principal infectious diseases, of these, 224 resulted from measles 47 from scarlet fever 101 from diphtheria, 49 from whooping cough 9 from enteric fever and 112 from diarrhœa and enteritis among children under 2 years of age No death from any of these infectious diseases was recorded last month in Hampstead among the other boroughs they caused the lowest death rates in Chelsea, Stoke Newington, the City of London Wandsworth and Lewisham and the highest rates in Hammersmith Fulham Hackney Southwark Stepney Shoreditch, and Bethnal Green The 224 deaths from measles were 35 above the corrected average number in the corresponding period of the five preceding years, this disease was proportionally most fatal last month in Hammersmith Hackney Bethnal Green Southwark and Lambeth The 47 fatal cases of scarlet fever were 23 in excess of the corrected average the greatest proportional mortality from this disease being recorded in Fulham Stoke Newington Finsbury and [illegible] The 101 deaths from diphtheria were 48 above the corrected average number, this disease was proportionally most fatal in Hammersmith Fulham St Marylebone Shoreditch Bethnal Green Stepney Deptford and Woolwich The 49 fatal cases of whooping-cough were 19 fewer than the corrected average the highest death rates from this disease last month were recorded in Hammersmith, Fulham, Holborn and Deptford The 9 deaths from enteric fever were 6 below the corrected average, and included 2 in the City of Westminster The mortality from diarrhœa and enteritis among children under 2 years of age was proportionally greatest in Paddington, Hackney, Shoreditch, Stepney, Poplar, Southwark, and Bermondsey In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was 25 per cent above the average

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IRISH MEDICAL ASSOCIATION AND THE CASE OF MR NATHANIEL MAYNE.—At a meeting of the Council of the Irish Medical Association held last week a resolution was passed unanimously, protesting against the attempt of the governing body of the County Longford Infirmary to dismiss Mr Mayne from the office of surgeon to the infirmary, and declaring that in the opinion of the Council Mr Mayne had acted properly and prudently and in accordance with the rules of the institution

ROYAL MEDICAL BENEVOLENT FUND—The annual general meeting of subscribers to this fund will be held at 15 Wimpole street, W, on Tuesday, Feb 9 h, at 4 P M The chair will be taken by the President, Sir John Tweedy, LL D, F R.C S Eng —At the last meeting of the committee 22 cases were considered and grants amounting to £202 voted to 19 of the applicants An annuity of £20 was also made to one of the applicants The following is a summary of the cases relieved —

Wife aged 48 of M R.C S Eng who practised at Chesham Was deserted by her husband in 1905 Has three children the youngest at Epsom College others at school Eyesight defective Only income about £25 per annum Previous relief £14 Voted £12 in 12 instalments —Widow aged 74 of M R C S Eng who practised at Braintree Lives with married son who has large family and only a small income. No income of her own and unable to work. Was elected to an annuity of £20 per annum Previously relieved £2.—Widow aged 66 of M R C S Eng who practised at Heywood Lancs. Has acted as cook and nurse but finds it difficult in consequence of age to obtain work. Previous relief £2. Voted £12 in 12 instalments —Widow aged 30 of M B., B S Lond R A.M C who was killed at the front Since husband's death has undergone severe operation and quite unable to work at present Only income War Office pension Voted £15 towards convalescence.—Widow aged 67 of M D St And and F R C S Eng who practised at Kidderminster Present distress caused by the depreciation of securities and the death of her sister with whom she lived Health bad Voted £10 in two instalments.—Widow aged 34 of M R C S Eng who practised at Swansea and died in 1914 Left her totally unprovided for Right side paralysed One daughter aged 6 years Lives with mother whose means are very limited Voted £12 in 12 instalments —Widow aged 62 of L.R C S Edin. who practised in Brixton Present distress caused by depreciation of her dividends and being unable to let her furnished house Health too bad to allow her to work Voted £10 in two instalments —Daughter aged 59 of M R C.S Eng who practised at Battle Unable to work owing to chronic rheumatism Lives with sister who is also badly off Relieved 31 times £242. Voted £12 in 12 instalments —Widow aged 77 of M.R C S Eng who practised at Leamington Tries to earn a little by taking in lodgers but owing to age not able to do much. Has the Old Age Pension Has seven children none of whom can help. Relieved three times £36. Voted £12 in 12 instalments —Widow aged 59 of L R C P Irel who practised at Buckley Health very indifferent Only income a pension from another charity of £25 Relieved seven times. £34 Voted £12 in 12 instalments —Daughter aged 31 of M R C S Eng who practised at Wolverhampton Suffers from Graves's disease and unable to undertake any permanent work Relieved seven times £46. Voted £12 in 12 instalments —Widow aged 58 of M R.C S Eng who was an annuitant of the Fund Eldest son used to keep the home but has joined the army and unable to do much Other son's earnings very much reduced Relieved once £10 Voted £2, with leave to apply again.—Daughter aged 62, of M R.C S Eng who practised at Watford. Health bad. Only income £20 from another charity and a little from sewing Has to assist to keep an invalid brother Relieved eight times £93 Voted £15 in 12 instalments —Widow aged 58 of M R C S Eng who practised at Sydney N S W Has own house, which is heavily mortgaged and has been empty for five years Only daughter a professional singer but owing to the war cannot obtain engagements Relieved three years ago £10 Voted £10 in two instalments —Daughter aged 70 of M.R.C S Eng who practised at Stoke Newington Lives with two sisters and they try to make a living by taking in boarders but in consequence of the war have lost several foreign boarders Relieved twice £24 Voted £18 in 12 instalments and recommended for an annuity —Widow aged 62 of M R.C S Eng who practised at Maidstone Earns her living by taking in paying guests but in consequence of the war has lost two Only income from friends which is uncertain about £20 Relieved four times £31. Voted £12 in 12 instalments —Daughter aged 67 of M R.C S Eng who practised at Greenwood Hantsville Health very bad and lost all her money invested in an apartment house Earns a little by needlework and friends provide food Relieved four times £[illegible] Voted £12 in 12 instalments —Widow aged [illegible] of L S A who practised at [illegible] Lost all capital in investments Takes in a boarder when she can get one and earns a little by needlework Relieved twice £24 Voted £12 in 12 instalments

Contributions may be sent to the honorary treasurer Dr Samuel West 11 Chandos street, Cavendish square, W —Queen Amélie will preside at the annual general meeting of the Royal Medical Benevolent Fund Guild at the Royal College of Physicians of London, on Thursday, Feb 4th, at 3 30 o clock.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING DECEMBER, 1914.

(Specially compiled for THE LANCET.*)*

Cities and Boroughs	Estimated population in the middle of 1914	Notified Cases of Infectious Disease: Small pox.	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever	Other continued fevers.	Puerperal fever	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis	Total.	Annual rate per 1000 persons living	Deaths from Principal Infectious Diseases: Small pox	Measles	Scarlet fever	Diphtheria *	Whooping cough	Enteric fever	Diarrhœa and enteritis (under 2 years)	Total	Annual rate per 1000 persons living	Deaths from all causes	Death rate per 1000 living †
LONDON ..	4,516,612	—	2416	951	—	78	6	24	513	5	7	3999	9·2	—	224	47	101	49	9	112	542	1·3	7246	16·7
West Districts.																								
Paddington	142 055	—	71	17	—	3	—	—	16	—	—	107	7·9	—	1	1	2	—	—	6	10	0·7	204	14·9
Kensington ..	170 817	—	75	24	—	—	—	—	16	—	—	115	7·0	—	5	3	2	—	—	1	11	0·7	246	14·0
Hammersmith	124 750	—	108	39	—	1	—	1	14	—	—	163	13·6	—	17	1	5	4	1	2	30	2·5	200	16·5
Fulham ..	158,849	—	108	45	—	5	—	5	23	—	—	186	12·2	—	10	5	6	6	—	6	33	2·2	243	16·6
Chelsea	63 791	—	31	8	—	4	—	—	2	—	—	45	7·4	—	1	—	—	—	—	—	1	0·2	101	16·7
City of Westminster	152,346	—	87	31	—	7	2	—	10	—	—	137	9·4	—	2	2	4	1	2	1	12	0·8	214	15·4
North Districts																								
St. Marylebone	112,892	—	43	20	—	4	—	—	6	—	—	73	6·7	—	—	—	4	1	1	4	10	0·9	152	14·3
Hampstead	86,731	—	21	11	—	1	—	2	6	—	—	41	4·9	—	—	—	—	—	—	—	—	—	105	13·3
St. Pancras	212,497	—	93	44	—	4	—	2	17	—	—	160	7·8	—	12	2	4	2	—	4	24	1·2	376	18·4
Islington	324,761	—	184	46	—	2	—	2	41	—	—	275	8·8	—	12	4	4	4	—	8	32	1·0	541	17·0
Stoke Newington ..	50,454	—	25	7	—	—	—	—	5	—	—	37	7·6	—	—	2	—	—	—	—	2	0·4	70	15·6
Hackney	223,724	—	76	39	—	4	2	1	22	—	1	145	6·8	—	44	2	3	1	—	9	59	2·8	392	18·4
Central Districts																								
Holborn	45 801	—	15	6	—	—	—	—	1	—	—	22	5·0	—	—	1	1	1	—	—	3	0·7	95	21·7
Finsbury	83,212	—	37	23	—	1	—	—	12	—	—	73	9·1	—	—	3	1	5	—	1	10	1·3	187	23·1
City of London	17 129	—	10	6	—	3	—	—	2	—	—	21	12·8	—	—	—	—	—	—	1	1	0·6	26	16·5
East Districts																								
Shoreditch	108 869	—	37	41	—	5	1	—	19	—	—	103	9·9	—	6	—	4	1	1	6	18	1·7	207	20·5
Bethnal Green	127,662	—	83	48	—	2	—	—	32	—	—	165	13·5	—	11	1	5	—	—	4	21	1·7	226	19·2
Stepney ..	273 265	—	227	112	—	11	—	2	41	—	1	394	15·0	—	16	7	12	—	1	11	49	1·9	525	20·9
Poplar	160 222	—	58	20	—	—	—	—	24	—	—	102	6·8	—	6	—	2	—	—	9	17	1·1	321	20·7
South Districts																								
Southwark ..	186 941	—	100	25	—	1	—	2	33	1	1	163	9·1	—	18	3	5	3	—	8	37	2·1	349	19·6
Bermondsey	124 213	—	41	20	—	3	—	—	7	1	—	72	6·0	—	6	—	—	2	1	6	15	1·3	204	17·1
Lambeth	298 724	—	147	78	—	2	—	—	19	2	3	251	8·8	—	26	1	6	3	—	6	42	1·5	501	17·3
Battersea	167,338	—	87	20	—	3	—	—	14	—	—	124	7·7	—	6	2	2	1	—	2	13	0·8	220	14·4
Wandsworth	338 993	—	184	48	—	2	—	2	32	—	—	268	8·2	—	1	—	6	5	—	5	16	0·5	388	12·0
Camberwell	262 020	—	131	41	—	1	1	3	30	—	—	207	8·2	—	12	2	4	1	1	7	27	1·1	351	13·8
Deptford	109 183	—	82	28	—	1	—	1	18	—	1	129	12·3	—	1	2	4	5	—	1	13	1·2	175	16·5
Greenwich ..	98 037	—	61	20	—	—	—	—	13	—	—	94	10·2	—	—	2	3	1	—	1	7	0·8	104	10·7
Lewisham ..	172 433	—	128	43	—	4	—	—	19	—	—	194	11·7	—	—	1	5	1	—	3	10	0·6	220	13·6
Woolwich	122 836	—	66	43	—	4	—	1	18	1	—	133	11·3	—	9	—	8	1	1	—	19	1·6	199	17·3
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup. † The death rates are corrected for variations in sex and age constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

Jan 7th, 1915, and that he had continuously practised the same either in the United Kingdom or elsewhere for a period of not less than ten years immediately preceding Jan 7th, 1915

Application should be made to the Registrar for a form for the use of Belgian practitioners seeking registration Belgian practitioners who fulfil the prescribed conditions may thereupon, without further examination, be inscribed in the British Register, and acquire all the rights and privileges of duly qualified British practitioners

The documents, the prescribed fee (Five pounds), and the cost (One shilling) of the Government stamp should be transmitted to the Registrar of the General Medical Council, 299, Oxford street, London, W —I am, Sir yours faithfully,

A J COCKINGTON,

Jan. 27th 1915 Acting Registrar

THE PREVENTION OF FROST-BITE

To the Editor of THE LANCET

SIR,—There are some points in the prevalence of frost bite affecting the Expeditionary Force which are worthy of careful consideration with a view to prevention. In the first place it is not mere cold that produces frost bite. The attacks with our soldiers are limited almost entirely to the feet, from the minor degrees in the form of chilblains through all the further stages up to positive gangrene If we look to the accounts of Arctic and Antarctic experience we find frost bite mostly in exposed parts—face and hands—and chiefly accounted for by the prevalence of wind in association with low temperature When the feet have been attacked it has mostly been in association with wet In the trenches, in which frost bite is almost exclusively met with the conditions present are those of water or mud slush with low temperature, a temperature, however, far above the highest met with in the Arctic or Antarctic winters Further conditions to which frost bite is attributable are long maintenance of the upright posture with general fatigue and lowered vitality from exposure It is obvious, however, that amongst the important contributory causes must be mentioned (1) any tightness of leg gear causing a constriction of circulation, and (2) ill fitting boots having the same effect If the precautions mentioned by Mr A W Mayo Robson as laid down in the Army Medical Regulations be observed these latter causes will be obviated[1] No doubt sound and more or less water tight boots are of some value but it practically is the case that the soldiers are ofttimes well over their boots in water or slush, so that the soundness of the boot in this respect is of little avail It has been suggested that the men in the trenches should wear water tight thigh boots something after the fashion of those used by our sewer inspectors but it should be remembered that the men must be fit at any moment for skirmishing, quick marching or hand to hand fighting in all of which foot agility is of the utmost importance In a charge or bayonet encounter foot work is as important as in boxing or fencing and to handicap feet and legs by cumbrous boot gear would be to sacrifice the men s efficiency and often their lives to the comfort of their feet

Returning to the etiology of this matter I would point out that frost bite in the present war is due (1) to the feet becoming sodden with water and their circulation and vitality thus depressed, and (2) to long exposure to a considerable degree of cold, a degree, however, to which the dry foot would be resistant In the rational treatment of such cases with a view to prevention it is of the first importance to render the feet less permeable to moisture This indication may be best met by their anointment with some greasy material with low hygroscopic properties It is well known to swimmers that anointing with fatty or oily material enables them to withstand cold, but the value of an application of low hygroscopic power for persons whose feet are passively subjected for hours or days to water or half frozen slush is, perhaps, not sufficiently realised

Mr Squire, of Oxford street, has prepared a foot ointment answering the four requirements (1) resistant to water penetration, (2) mildly stimulating and antiseptic, (3) readiness for use, and (4) not too expensive After a good deal of trouble and investigation he has produced an ointment of purified suet, camphorated and with 5 per cent eucalyptus oil, supplied on the pattern of a shaving stick in a metal case with smooth rounded edges The solid ointment is pushed up from the bottom, and when rubbed over the surface leaves a smooth application of the ointment A special advantage of this ointment is that its absorbing power for water is only 5 per cent, whereas most other greasy materials, such as lard, lanoline, &c, have an absorbent power for water of about 30 per cent Mr Squire has also prepared on the same lines a second ointment from palm oil sufficiently stiffened for the purpose but containing only vegetable ingredients, so as to meet the requirements of our Indian troops, to whom all animal fats are repugnant

A limited trial of the first ointment has given so far satisfactory results but it is, of course, too early to draw practical conclusions Meanwhile "the rain it raineth every day" and the cold is bitter for our officers and men

I am, Sir, yours faithfully,

Portland place W Jan 25th 1915 R DOUGLAS POWELL

FAITH AND ASTIGMATISM

To the Editor of THE LANCET

SIR,—I envy Mr C E Pronger and Mr Ernest Clarke, whose communications have recently appeared in THE LANCET What a happy state of mind to be in to be sure! To be able to cure or relieve headache, neuralgia, sleeplessness, fits, and a tendency to insanity and suicide, *et hoc genus omne*, and all with just a pair of spectacles, cylindrical lenses for choice, varying in strength from half a diopter to one eighth thereof I wish I could do it myself Years ago, when at Wiesbaden, the present Professor Pagenstecher told me that many of the English speaking patients who consulted him, when asked what was the matter replied, "Oh I have astigmatism," so much so that he called it the English complaint They do not seem to be troubled so much with the same affection on the continent, or perhaps their 'Kultur does not extend to the diagnosis thereof It is the lower grades of astigmatism which are said to cause all these dire symptoms, and the uneven contraction of the ciliary muscle, in its effort to equalise matters and overcome this, is the *fons et*

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[1] THE LANCET Jan [illegible] p [illegible]

ITALY

(FROM OUR OWN CORRESPONDENT.)

The Medical Officers of the Army Reserve.

HERE, as everywhere else, the war is the only subject of real interest. The Italian army is mobilised, and for the extra medical service required the medical officers of the reserve of the 1877-78 classes have been called up. These are professional men, 36-38 years of age, and they are rather indignant that the younger classes should not have been called up before them. They protest, too, at the inferior position in which they find themselves, being allowed only the rank of subalterns whatever their professional attainments may be, and so junior in rank to officers of perhaps 24 years of age; in fact, a professor may find himself junior in rank to, and under the orders of, his own pupil. They find themselves on an equality with and obliged to "tutoyer" young subalterns of the other arms of the service, often 20 years their juniors. The duties of orderly officer fall chiefly upon them. They are losing the practices which they have built up by many years of work, and in return are paid by the Government at the rate of 5.53 lire, or 4s. 6d. per day. They demand that they should be allowed the rank to which the majority of the regular officers of their year have attained, while allowing the latter seniority in such rank. Their grievances seem natural enough; do they find an echo among the largely increased staff of the British Royal Army Medical Corps?

Treatment of Tetanus.

The treatment of tetanus is at this moment a very living question. Il Policlinico (Sez. Prat., anno xxi., fasc. 51) returns once more to its advocacy of Baccelli's treatment, or the method of the Roman school. This consists in the injection, either subcutaneously or intramuscularly, of carbolic acid. Solutions varying in strength from 1 to 5 per cent. were used in the cases quoted in the paper, and the quantity of carbolic acid given in 24 hours varied between 20 and 80 centigrammes. For example, one case was treated by subcutaneous injections of 2 c.c. of a 3 per cent. solution every three hours, increased later to a similar quantity of 5 per cent. solution; another received from 24 to 34 cgm. of carbolic acid in 2 per cent. solution daily; another from 40 to 70 c.c. of 1 per cent. solution per diem intramuscularly. Baccelli's method is said to have given extremely encouraging results up to now among the wounded in France. It is well tolerated and under easy control, and has the great merit of simplicity.

Heliotherapy and the Treatment of Wounds.

The wonderful results of sun treatment in the mountain resorts of Switzerland have set the profession in Italy thinking how they may make use of the sun, which is theirs so freely. A start in the right direction was made years ago with the institution of seaside and mountain colonies for delicate children in the summer months. The number of these is on the increase every year, and some of the seaside colonies are now kept open in winter as well as summer. A more direct use of the sun's rays is made by Professor Poli, who has opened this year a sunny terrace overlooking the sea at Genoa for the treatment of children with surgical forms of tuberculosis. An extension of this idea is advocated along the Italian Riviera, and it is claimed that not only are cases of surgical tuberculosis benefited by this heliotherapy but that experiences after the Balkan War have demonstrated beyond doubt the curative effects of the sun's rays in suppurating wounds such as those produced by shrapnel. I fancy that no one would deny that heliotherapy has at least as much effect upon the organisms of suppuration as upon tubercle bacilli, and that most would agree that it is likely to be as safe and quick as, and a great deal more pleasant than, the ordinary methods of treatment of suppurating wounds.

White Slave Traffic.

The Neapolitan police seem to have awakened recently to the flagrant violation of the laws relating to the abuse of young girls. In one night they raided 15 so-called hotels and pensions, restored 73 young girls between the ages of 13 and 19 to their families, and arrested 280 individuals as "sfruttatori di minorenni." The large number of people implicated has made a great impression and drawn public attention to the scandal. Something, it is felt, must be done, and not only in Naples but for all the south of Italy, where the trade in young girls and their export to foreign countries are carried on upon a large scale and with impunity.

Jan. 22nd.

Correspondence.

"Audi alteram partem."

BELGIAN PRACTITIONERS AND THE MEDICAL REGISTER.

To the Editor of THE LANCET.

SIR,—In pursuance of the Order in Council dated Jan. 7th, 1915, by which the Medical Act, 1886, was made applicable to the kingdom of Belgium, the Executive Committee of the General Medical Council has passed the following resolution:—

> That so long as the Order in Council of Jan. 7th, 1915, remains in force any person who produces evidence satisfactory to the Registrar that he has obtained the degree of Doctor of Medicine in any of the Belgian Universities of Brussels, Ghent, Liége, or Louvain, and is legally authorised to practise medicine, surgery, and midwifery in Belgium, and who satisfies the Registrar as to the other particulars specified in Section 12 of Part II. of the Medical Act, 1886, shall be entitled to be registered in the Foreign List of the Medical Register.

It is necessary, according to the provisions of the Medical Act, 1886, that any person applying to be registered in respect of the degree of M.D. of any of the above-mentioned universities should produce to the Registrar documents or certificates as follows: (1) Evidence that he possesses the diploma of M.D.; (2) satisfactory evidence of identity; (3) satisfactory evidence of good character; and (4) satisfactory evidence (a) that the applicant is not a British subject, or (b) that being a British subject, the said diploma was granted to the holder at a time when he was not domiciled in the United Kingdom or in the course of a period of not less than five years, during the whole of which he resided out of the United Kingdom, or he was practising medicine or surgery or a branch of medicine or surgery in the United Kingdom on dangerous thing it often leads them to talk a lot of sorry nonsense to their patients

Speaking for myself, I can truly say that my knowledge of physiology has not in any way helped me to lead a healthy life All that the public need know in regard to the preservation of health can be set down in a surprisingly small compass To attempt to disseminate a knowledge of physiology—be it of the generative or any other system—is, in my belief, to mix up the issues in a jangle of mere words, and to obscure what is after all transparently simple I am, Sir, yours faithfully,

Wimpole-street W Jan 23rd 1915 HARRY CAMPBELL

ANATOLE FRANCE AND MORALITY

To the Editor of THE LANCET

SIR,—Mr D Arcy Power s lecture in your issue of to day is admirable in every way, but it is strange to find the works of Anatole France recommended as food for the chaste

The finest stylist of present day French literature is one of the "unmorals," and there are only one or two of his books which do not contain descriptions of intimate amatory relationships, clothed in beautiful but none the less smutty language France is an artist pure and simple, and decidedly not for *la jeune fille* or her brother These remarks apply to the works in the original I have no knowledge of the English translations, but have often heard them described as poor

I am, Sir, yours faithfully,

A. M Ross, M B

Waterfoot near Manchester Jan 23rd, 1915.

EMETINE INJECTIONS IN AMŒBIC DYSENTERY

To the Editor of THE LANCET

SIR,—It may be of interest to record results of the treatment of amœbic dysentery by hypodermic injections of emetine hydrochloride in an out patient practice In the space of 11 months 27 cases were treated and in all cases the symptoms quickly disappeared and the patients were so struck with the result that they came back for more injections even after they were apparently cured We commenced with injections of gr $\frac{1}{3}$ which was given on dispensary days—i e , three times a week—but soon the dose was raised to gr [illegible], gr [illegible], and lastly to gr 1. The majority of cases received gr 1 at each injection with most satisfactory results Gr 1 gave the best and quickest result and no untoward result was ever complained of or observed It is interesting to note that once, when the stock of hypodermic tabloids had run short, a half grain tabloid of emetine was given internally, and when the patient was next seen he reported that on his way home he had severe vomiting and diarrhœa As all were treated as out patients they could not be restricted to a liquid diet All the cases except one were chronic, lasting from one month to four years The number of motions averaged about ten in the 24 hours, two had 16 and one 30 motions All patients showed remarkable improvement after the first or second injection, the hæmorrhage greatly decreased or stopped altogether straining was much less or quite gone the number of motions considerably diminished and the stools became fæcal The pallor disappeared and the pained expression of the face entirely altered after a few injections As a rule no other drug was given, and the majority of cases had no symptoms of the disease after four or five injections In the case which had lasted four years all symptoms disappeared after the third injection of 1 gr emetine hydrochloride Two cases had recurrence of their symptoms and came back for treatment about three weeks after the cessation of the emetine injections One of these cases had a third relapse after six months, when he attended the dispensary for a week, and had three 1 gr injections and was apparently cured We are, Sir, yours faithfully,

F J HARPUR, M B

W B HADDAD M D

Church Missionary Society Achmoun Menoufeyah Egypt.

LEECHES AND THE WAR

To the Editor of THE LANCET

SIR,—Our country has been for many months suffering from a serious shortage of leeches As long ago as last November there were only a few dozen leeches left in London, and they were second hand

Whilst General Joffre, General von Kluck, General von Hindenburg and the Grand Duke Nicholas persist in fighting over some of the best leech areas in Europe, possibly unwittingly, this shortage will continue, for we have for many years largely depended on importations from France and Central Europe

In November I made some efforts to alleviate the situation by applying to America and Canada, but without success I then applied to India, and last week, owing to the kindness of Dr Annandale, director of the Indian Museum at Calcutta, to the officers of the Peninsular and Oriental Steamship Company, and to Colonel A Alcock, M.D , of the London School of Tropical Medicine, I have succeeded in landing a fine consignment of a leech which is used for blood letting in India It is true that the leech is not the *Hirudo medicinalis* of our pharmacopœias, but a different genus and species, *Limnatis granulosa* Judging by its size, always a varying quantity in a leech, we may have to readjust our ideas as to a leech's cubic capacity, yet I believe, from seeing them a day or two ago, they are willing and even anxious to do their duty They have stood the voyage from Bombay and the changed climatic conditions very satisfactorily, and are in a state of great activity and apparent hunger at 50, Wigmore street London, W

It is true that leeches are not used to anything like the extent they were 80 years ago—Paris alone about 1830 employed some 52 millions a year—but still they are used though in much smaller numbers It may be of some consolation to my fellow countrymen to know that our deficiency in leeches is more than compensated by the appalling shortage of sausage skins in Middle Europe With true German thoroughness they are trying to make artificial ones I am, Sir, yours faithfully,

A E SHIPLEY

Christ's College Lodge Cambridge Jan [illegible]th 1915

THE ASYLUM SERVICE AND BELGIAN REFUGEE DOCTORS

To the Editor of THE LANCET

SIR —It is stated in the *Daily Telegraph* of Jan 20th that the Commissioners hope soon to have Belgian doctors available for employment in the asylum service Both editorially and in many *origo malorum;* where the astigmatism is greater no effort of the ciliary muscle can overcome the irregularity and so it gives up the effort as a bad job and *does not try* Now astigmatism is for the most part *congenital, and one would naturally be* inclined to think that *the ciliary muscle, trained to* this slight unevenness of focusing from its earliest youth, would have got used to it, and that the higher centres would not have been so much upset thereby

My own position is often difficult Being fairly *broad* minded, disinclined to split hairs, and taking an all *round point* of view of things, *I* have gradually *come to the conclusion that* human nature is very complex, that other organs and structures besides the eyes are to be found above the collar bone, and that a pair of spectacles, however rose coloured, will not cure all the ailments to which our flesh is heir Over and over again have I had patients sent to me by physicians—who seem to have swung of late years *from one extreme of the pendulum to the* other—with symptoms of headache and neuralgia, &c, in and about the eyes and their neighbourhood, in whom, after carefully working out their refraction, I have found ⅛ or ¼ diopter of astigmatism, and in view of their symptoms have corrected this and ordered them glasses for constant wear, but I have *so often* failed in relieving the symptoms for which *they consulted me that* I *have got* into the habit of reminding them that the proof of the pudding is in the eating thereof, that the slight error of focus I have discovered may be a factor in the production of their symptoms or not, that if it is, the glasses will be calculated to relieve their symptoms, and in that case they had better continue to wear *them* constantly, but failing relief *after a fair three* months' trial they can leave *them off or only* use them for near work and reading But, *me miserum!* how few have been relieved thereby? Logically, where are we to draw the line? If we are to relieve 1/8 diopter of astigmatism, why not 1/80?

But here, again, another difficulty steps in Personally, I find many—perhaps *most*—patients unable to appreciate *the effect of a* ¼ diopter cylinder, it makes very little, if any, difference to them whether it is held vertically or horizontally, &c What, then, about a cylinder of much less strength? Still, I really believe that some neurotic or neurasthenic people are honestly relieved by weak cylindrical or spherical lenses, and I have in view the case of a *friend—an optician,* strange to say—who *at times* wore weak ¼ diopter cylindrical lenses and claimed he obtained relief thereby I did not prescribe them, he was gouty, very excitable, neurasthenic, the subject of cancer, and by no means a teetotaler It is mainly or entirely in people with a crank *or neurotic* or neurasthenic, who *admit* that these trifling *corrections relieve* them They are people who are easily impressed, and coming into contact with ophthalmic surgeons *of marked personality* after being examined in the dark room and with various weird apparatus and instruments, are told they have astigmatism—a word which, like that *blessed one* Mesopotamia, appeals to their feelings—and that glasses will in all probability relieve or cure them A positive is worth three negatives Thereupon they go off with a prescription with a clock work face and strange figures and hieroglyphics to some optician, who probably makes the remark that the *glasses* the doctor has prescribed are very unusual—as indeed they are, if they are 1/8 diopter cylinders—the result being that they feel something is being done for them, and their symptoms are relieved forthwith, and they think and say they derive much comfort from their glasses—for a time, when they either relapse and go elsewhere, or meanwhile their general health improves, or *they* get married or take up Christian Science or something and all *goes* well, they, at any rate, put down their cure to the oculist But the end is not always so favourable, and the *patient drifts* from one ophthalmic surgeon to another

I have no objection whatever to any oculist impressing a neurotic patient with weak spherical or cylindrical lenses—with such patients, as in love and war, it is fair to adopt almost any means to give them relief—but I do object to anyone thinking or assuming that it is the weakness of the cylindrical or spherical lens that does the trick I have arrived at this conclusion after an experience of over 28 years' considerable practice as an ophthalmic surgeon amongst all sorts and conditions of patients, and the longer I *live* the more convinced *I am of the correctness of the old* Latin maxims, "Media sunt simillima veris" and "In medio tutissimus ibis", and now, to add to my doubts and fears and misgivings, comes this letter from Dr A S Gubb pointing out, as it does, that insomnia is due to many trifling causes, amongst which a loaded rectum plays a not inconsiderable part Really, it will in the future be difficult to know which end of the patient to begin with, and whether a pair of spectacles or a glycerine suppository should have the priority, for many of these patients are the subjects of constipation

I am, Sir, yours faithfully,

Norwich Jan 17th 1915 S JOHNSON *TAYLOR*, M B

THE PHARMACOPŒIAL DOSE

To the Editor of THE LANCET

SIR,—Mr W J Uglow Woolcock's suggestion in his letter in THE LANCET of to day's date relative to unusually large doses in prescriptions of powerful drugs has the great *disadvantage* of acquainting the patient or his friends that an unusually large dose of an active drug is prescribed My practice is to mark the quantity both on the right and left of the drug, and if necessary to underline the quantity marked on the left of the name of the drug

I am, Sir, yours faithfully,

Dublin Jan. 23rd 1915. GEORGE FOY.

PHYSIOLOGY AND MORALITY

To the Editor of THE LANCET

SIR,—In his admirable lecture published *in* your issue of Jan 23rd Mr D'Arcy *Power*, discussing the best *means* of *preventing* the spread of venereal disease, says —

> Knowledge, too is a powerful help The physiology of the generative system is no more a mystery than the physiology of digestion or respiration and there is no reason why it should not be explained in a scientific manner as a part of a course of biology Let the women teach the women

I would ask, in reference to this suggestion, whether a knowledge of the physiology of the generative system has had any influence in preventing the *male* medical student in the past from exposing himself to venereal infection? My experience has been that the smattering of physiology taught to nurses and masseuses is worse than useless. In this, as in other things, a little knowledge is a organisation of the Association should be utilised so as to get into touch with the members of the medical profession all over Scotland Similarly, Dr Ewing put the organisation of the Pharmaceutical Society at the disposal of the committee, so as to press the claims of the Fund on the members of the pharmaceutical profession.

The executive committee was authorised to draw up a circular containing an appeal for contributions and send it to every medical man and pharmacist in Scotland It was announced that up to the present subscriptions amounting to £257 had been received in sums varying from 1 to 20 guineas

Contributions are being received by the treasurers Dr Norman Walker, 7, Manor place, Edinburgh, Dr R McKenzie Johnston, 2, Drumsheugh gardens, Edinburgh, Dr W G Dun, 15, Royal crescent, Glasgow, W, and Mr J Rutherford Hill, Resident Secretary, Pharmaceutical Society, Edinburgh

THE BIRMINGHAM COMMITTEE

The activity of the Birmingham Committee is another feature to which attention may be called A local committee has been formed here with the following as a strong executive Mr Gilbert Barling, M B, F R C S, Vice Chancellor of the University (Chairman), Dr Purslow, President of the Birmingham Branch of the British Medical Association, Mr Christopher Martin, M.B, F R C S, President of the Birmingham Medical Institute, Professor Kauffmann, President of the Midland Medical Society, Dr Lilley, Chairman of the Central Division of the Birmingham Branch of the British Medical Association, Professor Saundby, Sir Thomas Barclay, J P, Mr E W Mann, B Sc, F I C, President of the Birmingham Pharmaceutical Association, Mr J Poole, Mr J A Radford, Mr F Smith, Honorary Secretary of the Birmingham Pharmaceutical Association, and Mr J Wakefield An eloquent circular has been distributed in the district calling attention to the Central Committee which has been formed in London, composed of representative English doctors and pharmacists, to raise money for the immediate relief of members of these professions who are remaining in Belgium, acting in coöperation with a Belgian Committee having similar aims Professor Saundby, Mr Gilbert Barling and Sir Thomas Barclay have joined the Central Committee already The circular of the Birmingham Committee recapitulates the chief points in the speech made by Professor C Jacobs, of Brussels (head of the Red Cross Society in Belgium) at the meeting of the Edinburgh Obstetrical Society on Dec 9th, 1914[1] Professor Jacobs's story loses nothing in terror from condensation and it is not surprising that the Birmingham circular should have met with immediate response

"Subscriptions for any amount," says the circular, "will be gratefully accepted but only actual payments can be acknowledged Cheques or postal orders should be sent to Dr Saundby, 140b, Great Charles street Birmingham or to Mr F Smith, 221 Soho road Handsworth, who are acting as joint honorary treasurers and secretaries They should be drawn in favour of the 'Belgian Doctors and Pharmacists' Relief Fund' and crossed 'Lloyds Bank'"

DANISH UNION OF DOCTORS

The following is an analysis of the subscriptions which have been received from this society through Dr V Christophersen, who is acting as honorary secretary to the Danish Fund —

	Kr		Kr
Ugeskrift for Laeger	100	Herr C G Hedegaard	20
Herr C Mundt	20	Herr J A Bang	10
Herr F Sadolin ..	10	Herr L Möller	20
Herr T C Vöbtz ..	100	Herr W Jessen	10
O K.	100	Herr H. Bing	20
Herr M Krag ..	5	Herr S Monrad	50
K. B ..	5	Herr B Meyer	20
Herr H Adsersen	20	Herr Dehlholm ..	25
Herr A. J Mathiesen	10	Herr V Poulson ..	50
Herr Frock-Jansen	20	Herr E Pedersen	30
Herr J Kaarsberg	100	Herr S Christensen	20
Herr P Pedersen	10	Herr H Golderlund	25
Herr J Lemche	10	Herr V Wille	5
Herr Leop Meyer ..	500	Herr J Jessen ..	10
Herr V Hertel ..	100	Herr G Schleisher	10
Herr N G Ernst	50	Herr Yusjong ..	10
Herr C Vogel ..	10	Herr A. Meyer	50
Herr K. Lundh	15	Herr G Pryde ...	25
Herr A. Kampegaard ..	15	Herr J Lunddahl ...	15
Herr V Scheel	20	N W	5
Herr V Bie ..	20	Herr J Ostenfeld	20
Herr V Christophersen	20	Herr G Schroll	20
Herr Rendtorff	50	Herr P Vermehren	50
S	20	Herr H. J Panner	25
Herr Aa. Klär ..	50	Fr Karen Schlanbusch	15
Herr L Melchior	20	Herr I Schlanbusch	15
Herr Giellerup	10		

Total Kr 1985 = £103 7s 8d

The following subscriptions to the Fund have been received by Dr Des Vœux up to Tuesday evening last, in addition to subscriptions amounting to £4040 previously acknowledged, and not including money received by the Scottish or Irish Funds —

	£	s	d
Dr Greville Macdonald	10	10	0
Dr Peter H. Abercrombie	5	5	0
Major Horace C Colman R.A.M C (T) ..	1	1	0
Dr W L. Pethybridge	1	1	0
Dr L J Hobson	1	1	0
Mr A. P Dodds Parker	2	2	0
Mr J E Burton	2	2	0
Mr A. Bruce Roxburgh	3	3	0
Dr Harold Swale	3	3	0
Mr J J Giles	0	10	6
Mr Maurice F Squire	1	1	0
Henry Wells Oil Co	1	1	0
Dr B Farquharson	2	2	0
Dr Arthur G Phear ..	5	5	0
Dr W Pasteur	5	5	0
Mr E M Corner	3	3	0
Mrs Scharlieb	5	5	0
Mr Henry Juler	5	0	0
Dr Harrington Sainsbury	3	3	0
Mr Arthur Cheatle	5	5	0
Danish Union of Doctors (per Dr Christophersen Hon Sec.)	103	7	8
Dr J E MacIlwaine	2	2	0
Mrs Dawson Williams	1	0	0
Dr W Hale White	5	5	0
Dr Alfred Parkin	1	1	0
Dr John E Eddison	5	5	0
Dr D A Alexander	1	17	4
Dr Alex Macphail	1	1	0
Dr R Percy Smith	5	0	0
Dr T Wakefield	2	2	0
Mr R Lake	10	10	0
Dr Ettie Sayer	1	1	0
Sir William Whitla	5	0	0
Messrs Coleman and Co	5	5	0
Dr C M Chadwick	3	3	0
Colonel H H Johnston A M S	1	0	0
Dr John Stewart ...	2	2	0
Dr Gould May ..	3	3	0
Mr Victor Bonney	2	0	0
R L. G	1	1	0
Dr L G Nash ..	1	1	0
Dr J C Baker	1	1	0
Dr J J Pringle ..	5	5	0
Messrs Allen and Hanburys	0	5	0
Mr Alfred Wright	0	5	0
Ross and Cromartie Division B M A (per Dr [illegible] H Mackenzie Hon Sec)—Dr Smith Dr Cameron Dr Mackenzie Dr Duncan Dr J [illegible] [illegible] Dr [illegible] Dr N Dr S[illegible]ville Dr [illegible]	[illegible]	9	0
Warrington Division B M.A. (per Dr J A. Murray Hon Sec.)—			
Dr Sutherland	0	10	6
Mr Wm R Brown	1	1	0
Dr Herbert B Gibbins	1	1	0
Dr F R Miller	2	0	0
Dr E J Hawkins	1	1	0
Mr J B Ferguson Wilson	1	1	0
Mr W M Mollison	5	5	0
Dr T Wilmot ..	1	1	0
Sir John F H Broadbent, Bart ..	5	5	0
Dr H Campbell Thomson	2	2	0
Mr T P Legg ...	3	3	0
West Somerset Division B M.A (per Mr W B Winkworth)—			
Mr R Henry F Routh	1	1	0
Mr Arthur W Ormond	5	5	0
Dr Jas Bannerman	1	1	0
Dr G F Still ..	10	0	0
West Herts Division B.M A. (per Dr K J Aveling Hon Sec.)—			
Dr A. N Boycott ..	1	1	0
Dr S G Scott	3	0	0
Brussels Medical Graduates Association (per Dr Major Greenwood, Treas) further donation	2	2	0
Sir W S Church Bart	5	5	0
Birmingham Local Committee (per Dr Robert Saundby)—			
Dr Harry C Dixey	5	5	0
Dr Sam H Agar	3	3	0
Dr Hamilton Morton ..	3	3	0
Dr Ernest J Beards	2	2	0
Dr J F G Pietersen	2	2	0
Mr D Priestley Smith	1	1	0
Dr Harold E White	1	1	0
Dr Richard Drury	1	1	0
Dr H W Jacob ...	1	1	0
Dr Cecil [illegible]	1	1	0
Dr G A Wilks	1	1	0
Dr A B Creak	1	1	0
Dr W H [illegible]	1	1	0
Dr F N Deakin ...	1	1	0
Dr Cyril [illegible]	1	1	0
Dr H Hubert Tipping ..	1	1	0
Dr J [illegible]	1	1	0
Dr H Troughton [illegible]	1	0	0

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[1] The Lancet, Dec [illegible]

letters to your columns it was shown that long before the war was thought of British practitioners in sufficient numbers could not be found to take up these posts owing to their many disabilities Are the Commissioners—or, to give them their latest title, the Board of Control—to import "foreign cheap labour" for this purpose? We all, I hope, sympathise with our Belgian brethren, but it is a serious menace indeed if they are to be used to cheapen the service at the expense of Britishers It may be the asylum service to day, but be sure it will not stop there

I am, Sir, yours faithfully,
Jan 21st 1914 VERB SAP

THE "SHORTAGE" OF DOCTORS

To the Editor of THE LANCET

SIR,—There is one phrase used by Dr Robert R Rentoul in his letter in THE LANCET of Jan 16th which I cannot allow to pass unchallenged—viz, "The school medical officer whose duties are very light" I am a school medical officer to a county education authority My experience as a medical man extends over 17 years, and includes hospital and other institution appointments, a ship's surgeoncy, active service, and private practice at home and abroad

I can definitely state that my present duties are not light, and, further, that the circumstances attendant on professional work—travelling, &c—have never been so continuously arduous

My card is enclosed

I am, Sir, yours faithfully,
Jan 24th 1915 M B

THE medical profession will note with satisfaction that Sir Donald MacAlister, K C B, President of the General Medical Council, and Dr A E Shipley, F R S, Master of Christ's College, Cambridge have been appointed members of the new Royal Commission to inquire into the methods of making appointments and promotions in the Civil Service

CENTRAL MIDWIVES BOARD —A special meeting of the Central Midwives Board was held at Caxton House, Westminster, on Jan 20th, Sir Francis H Champneys being in the chair A number of midwives were struck off the roll, the following charges amongst others having been brought forward The midwife did not wash the patient's external parts with soap and water or swab them with an efficient antiseptic solution before making the first internal examination, as required by Rule E 7 (a), neglecting to provide for the comfort and cleanliness of the patient as required by Rule E 11, that when called to a confinement the midwife did not take with her the appliances and antiseptics required by Rule E 2. That notwithstanding having been warned and with intent to avoid supervision and inspection by the local supervising authority the midwife abstained from notifying the authority of her intention to practise as a midwife, not being scrupulously clean in every way, and not keeping her nails cut short as required by Rule E 1, administering vaginal injections by means of an appliance used for giving enemata contrary to Rule E 2, not taking and recording the pulse and temperature of patients as required by Rule E 13, and making false records of the temperature of patients The placenta and membranes not having been completely expelled within two hours after the birth of the child the midwife did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her in order that this might be immediately forwarded to the medical practitioner as required by Rule E 20 (3), neglecting to stay with the patient until the expulsion of the placenta, as required by Rule E 6 and not keeping the register of cases as required by Rule E 23

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE subscriptions to the Fund have been fairly maintained during the week, the international interest in the Fund has been shown in several ways, and contributions or communications from the colonies and provincial centres have been promising The first meeting of the Scottish Committee, whose personnel was published in THE LANCET and *British Medical Journal* at the beginning of the month, took place last Saturday, and the support at once given is sure to be maintained We announced last week a notable contribution from the doctors in Dunedin, who have sent a lump sum of 100 guineas to the Fund, a donation which has been received with particular pleasure

In the Sheffield district all the medical men have been given notice of a general meeting to be held at the University of Sheffield with the object of forming a local committee

A meeting in aid of the Fund will be held in the College of Medicine, Newcastle on Tyne, on Feb 17th, at 4 P M, when Professor Jacobs, of Brussels, will deliver an address All medical men and pharmacists in the districts of Northumberland, Durham, and Yorkshire are invited to attend, and a local committee will be appointed at the meeting

THE CENTRAL COMMITTEE

A meeting of the central committee was held on Thursday, Jan 21st, at the offices of the British Medical Association, when Sir Rickman Godlee explained the satisfactory results of personal visits to the American Ambassador and Mr Herbert Hoover in respect of the distribution of the parcels of medical stores sent out to Belgium through the medium of the International Committee for Relief in Belgium American assistance is taking a similar form to that devised by the Central Committee Sir Rickman Godlee also reported that a box of instruments which had been selected by Mr Meredith Townsend and himself, with assistance in certain directions, was packed ready for the Belgian doctors, since which definite instructions have been received from the International Committee with regard to the transmission of the box. At this meeting of the Central Committee Dr H A Des Vœux, the honorary treasurer, announced that the total amount subscribed was over £5000, though part of this sum had not been received yet by the treasurer

THE SCOTTISH COMMITTEE

The first meeting of the Scottish Committee was held in the Royal College of Physicians, Edinburgh, on Jan 23rd, Dr J Barlow, President of the Royal Faculty of Physicians and Surgeons of Glasgow, being in the chair The meeting confirmed the appointment of the secretaries and treasurers who had previously been provisionally appointed An executive committee was appointed consisting of the presidents of the three medical corporations the three secretaries of the Scottish Committee—viz, Dr R Cranston Low, Dr J Walker Downie and Mr J Rutherford Hill—and Mr J L Ewing LL D

Dr J Adams intimated that the British Medical Association was willing and eager to do all in its power to aid the Fund, and it was agreed that the

DUBLIN CASTLE RED CROSS HOSPITAL SURGICAL DRESSERS —The honorary secretary of the Students' Union of the Royal College of Surgeons in Ireland was informed last week by Mr Seton Pringle, honorary secretary of the medical committee of the Dublin Red Cross Hospital, that the members of the Medical Units of all Officers Training Corps in Dublin have been recognised as official surgical dressers to that hospital There was an official opening of the hospital on Wednesday afternoon last, when the medical units paraded in the Upper Castle Yard

ADDITIONAL BOMBAY WAR HOSPITAL —The committee of the Bombay Presidency Branch of the Imperial Indian War Relief Fund have offered to the military authorities, through His Excellency the Viceroy, to provide a 500 bed hospital for Indian troops engaged in the war This offer has been accepted, and measures are now in progress for the organisation of this hospital which under the title of 'The Bombay Presidency Hospital" will be equipped, staffed, and maintained from the Bombay Presidency, including Sind, and will be located probably at some convenient base in Egypt or at any place that the military authorities may, with a view to the requirements of the British Indian Forces operating in the field, determine to be most desirable The expenditure incurred on the hospital will be entirely defrayed from the Bombay Presidency Branch of the Imperial Indian Relief Fund, in collaboration with the Women s Branch, and its general administration will be under the control of a special subcommittee appointed by the Administrative Committee of the Fund The Indian Council of the St John Ambulance Association, Bombay Presidency Centre, will also coöperate in the undertaking

RED CROSS GIFTS FROM INDIA —A return of the units received at the St John Ambulance War Gifts Depot, Bombay, up to Jan 5th shows a total of material representing a cash value of no less than 2¼ lakhs of rupees, or £15,000, collected in three months H H the Maharaja Scindia of Gwalior, in addition to the many generous contributions which he has already made towards the comfort and relief of the troops who are now fighting, has recently prepared and despatched to Bombay 500 units for the Indian Branch of the St John Ambulance Association Each unit makes provision of clothing and comforts for 10 wounded men

NAVAL WOUNDED FROM THE NORTH SEA —Our Edinburgh correspondent writes 'Last night, Jan 25th a ship of war landed at South Queensferry a number of men wounded in the North Sea battle on Sunday The cases numbered 26 and it is understood that none are of a grave nature The men were conveyed in motor ambulances to the Royal Naval Hospital South Queensferry For the second time since the war began Edinburgh Castle has been used as a hospital for German wounded sailors On Jan 25th 25 wounded sailors from the *Bluecher* were received at the Castle Hospital As soon as they arrived at the hospital every attention was shown to them by the medical officers in charge Fourteen of the men were badly injured and the officials of the Red Cross Society who have been engaged in dealing with wounded soldiers on their arrival in the city during the past few months say they are the most serious cases they have yet seen A number of operations were performed without delay One or two sailors are said to be in a precarious condition '

POSITION OF SAILORS AND SOLDIERS UNDER THE INSURANCE ACT —To the Medical Benefit Subcommittee of the Insurance Committee for the burgh of Edinburgh there has been submitted a memorandum issued by the Scottish Insurance Commissioners as to medical treatment of insured persons called up for service with His Majesty's Forces The memorandum states generally that insured persons who belong to the Naval or Army Reserve or to the Territorial Forces or have enlisted in the New Army are regarded as serving as sailors or soldiers from the moment at which they are called up or enlisted and accepted for service until the date of discharge During this period they are not entitled to medical or sanatorium benefits under the National Insurance Acts and accordingly no liability for their treatment [illegible] in the period [illegible] whom they have been [illegible] The position of such persons [illegible] by the [illegible] permitted temporarily to continue to reside at home, even though they may be concurrently engaged in civil employment An insured person who has been sent home owing to illness or in consequence of having been wounded must also be regarded as a serving sailor or soldier until the date of his discharge. Upon discharge, or in a case of a member of the Reserve or Territorial Forces, upon the demobilisation or disembodiment of these forces the insured person will again become entitled to medical benefit under the National Insurance Acts (unless otherwise disentitled)

Medical News.

UNIVERSITY OF OXFORD —On Jan 26th Convocation granted a decree to accept the sum of £450 offered by friends of the late Dr Francis Gotch F R S, Waynflete professor of physiology, to perpetuate his memory and to encourage physiological studies within the University It is proposed to establish a Gotch Memorial Fund the income to be expended upon an annual Gotch Memorial Prize, consisting of a bronze medal and a sum of £5 which will be awarded after examination to a member of the University who has worked in the University physiological laboratories for not less than four terms The remainder of the income will be applied to the establishment and maintenance of a Gotch Memorial Library in the University physiological laboratory —The following medical degrees were conferred on Jan 21st —

B M B Ch—C H L. Harper Wadham

UNIVERSITY OF CAMBRIDGE —The following medical degrees have been conferred —

M B B C—C C Kerby Trinity

SOCIETY OF APOTHECARIES OF LONDON —At examinations held recently the following candidates were successful in the subjects indicated —

Surgery —N W Rawlings (Section I) Manchester and E M Townsend (Sections I and II) Middlesex Hospital

Medicine —J A. W Robinson (Section I) King s College Hospital and M C Stark (Section I) London Hospital

Forensic Medicine—C D Banes W F Matthews and J A. W Robinson King s College Hospital and M C Stark London Hospital

Midwifery —C D Banes King s College Hospital H A. de Morgan Middlesex Hospital W F Matthews King s College Hospital D C Ogilvie Middlesex Hospital J A W Robinson, King's College Hospital and M C Stark London Hospital.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW —The quarterly examinations of the above Board held in Edinburgh, were concluded recently with the following results —

FIRST EXAMINATION

Chombil Vittil Appunni Menon and Kalkhasru Sorabji Bhiwandiwalla.

Physics —Rebecca Goodman Gordon Spivey Woodhead, William Bethune Stott and John Lawson Gibson

Biology —Gwilym ap Vychan Jones and Joseph Raymond Welply

Chemistry —Frederic Leo Jones and Muriel Keyes.

SECOND EXAMINATION

Shapoor Dinshaw Vania, Robert Gloag Battersby Lawson Lamb Steele Thomas Jackson Thomas Robert Wilson Alfred Black, Don Adrian Jayasingha, and Arukatti Patabendige Frederick Abeysuriya.

Anatomy —Oswald Johnston and Buenaventure Ramirez

Physiology —Harold Gengoult Smith and Janie Isabel McBirnie

THIRD EXAMINATION

Charles Harris Henry Valentine Fitzgerald Robert McGregor William McAlpine Andrew Matheson Edward Spence and John Alexander Smith

Pathology —Frederick Charles Joseph Mitchell and Iwan Davies

Materia Medica—James Stewart Durward Owen Glendower Evans Frederick Joseph Jack Harry [illegible] Norman Stewart Bruce John Joseph Mulsey and Paul [illegible]

FINAL EXAMINATION

Maurice Michael Fitzgerald William Hamilton Weir Sarah Louisa [illegible] Jacobus Johannes de Waal [illegible] Oliver Martin Carton Frank [illegible], Andrew [illegible] Leslie Horace Palmer Margetts George Barker Charnock Charles [illegible] Irvine Harold Daman [illegible] Claude Trevor Barnett, John Kenneth Garner and Gerald Douglas [illegible]

Medicine —Percy Chisholm John Adam William Leckie Coullie and Alexander Gray McKee

Midwifery —Arthur [illegible] Tarzuturi Janakiramiah, George Edward Mendis and [illegible]

Medical Jurisprudence —Oswald Walter Bateman Dak Hin Ong Henry Valentine Fitzgerald [illegible] Gavin Blake Oswald [illegible] Thomas [illegible] Arthur Craig and John [illegible]

	£	s	d
Dr and Mrs W Cassels (proceeds of Whist Party)	9	15	0
Dr Wilfred Glegg	1	1	0
Mr H Anglin Whitelock	3	3	0
Dr Rufus E Evans	2	2	0
Dr Thomas Procter	1	0	0
Dr Lloyd Francis	0	10	6
Dr Albert Carless	5	0	0
Mr Hugo Wolff	1	0	0
Messrs Exell Bros	0	10	6
Messrs A. G Hancock Limited	1	1	0
Mr J F Dickenson	1	1	0
Mr G H Dawson	1	1	0
Messrs Whysall and Son	0	10	6
Miss A. I Tufnell	0	10	0
Mr J W Cussons	0	10	6
Mr J J Webb	0	10	0
South East London Pharmacists Association Result of Whist Drive (per Mr W T Tucker)	6	15	0
Sheffield Pharmaceutical and Chemical Society (per Mr H Antcliffe)	5	5	0

	£	s	d
Messrs Clay and Abraham ..	5	0	0
Mr C Symes	1	1	0
Mr D G Pout ..	0	10	6
Birmingham Pharmaceutical Association (per Mr F Smith Hon Sec.), second donation—			
Messrs Southall Bros and Barclay	25	0	0
Mr J A. Radford	5	0	0
Mr P Barlow	2	2	0
Mr J T Bell	1	1	0
Mr T H Foden	1	1	0
Mr F J Keene	1	1	0
Mr A. B Jenson	1	0	0
Mr B B Powell	0	12	6
Mr J H Haines	0	10	6
Mr G L. Scott	0	10	6
Mr F R Smallman	0	10	6
Mr A C Stanford	0	10	6
Miss Cuthbertson	0	10	0
Mr W Keeling	0	10	0
Mr E Paul	0	10	0
Mr A Akam	0	5	0
Mr C E Dallow	0	5	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H A Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund and crossed Lloyds Bank, Limited These will be acknowledged by post direct, and a list will appear in THE LANCET weekly

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries acknowledges with thanks the receipt of surgical instruments kindly contributed by the following donors since the publication of the last list —

Mr Brown, per the Weybridge Cottage Hospital, Dr W A. B Young, Blackburn, Mr F Lett Hastings, Dr B Lewis Paton, Rugeley, Staffs, Mrs K E Raston, Ashford, Barnstaple, Doctors resident in the Barnsley area of the B M A, per Dr R F Castle, Darfield

The War.

THE BRITISH RED CROSS SOCIETY —The summary of the work for the week ending Jan 23rd states that since the last report there have been despatched to Calais 4 lorries to Boulogne 2 motor cycles, 1 lorry, and 1 soup kitchen, and 4 ambulances to various places in England

The number of auxiliary home hospitals accepted by the War Office is now 705 containing beds for 19 576, including 417 beds accepted during the past week. In Netley Hospital there are now 180 British, 194 Indians and 6 Belgians Arrangements are being made to accommodate the Japanese Red Cross surgeons and nurses in two of the hospital huts The Lord Iveagh "Irish Hospital" extension is progressing

During the week the expeditions to Serbia and Montenegro were despatched under the supervision respectively of Mr James Berry and Dr F G Clemow Sir Thomas Lipton s generosity in regard to these units has been very great

The total number of cases of stores sent abroad last week was 467, of which 232 were despatched to Boulogne, 113 to Calais, and 50 to Dunkirk 104 hospitals at home were supplied with 721 cases of stores The ambulance ships were provided as usual with their weekly supply of garments and comforts for the wounded 11 052 garments were received during the past week and 14 036 were issued. Of these, 10,331 were sent to hospitals in this country

SECOND LONDON (CITY OF LONDON) GENERAL HOSPITAL —More than four months ago we described briefly in this column the manner in which St Mark s College Chelsea and its adjacent buildings were being converted into a complete military general hospital of 520 beds under the skilful supervision of Lieutenant-Colonel E M Callender the commandant. The work of adaptation was begun on August 10th, and the buildings were open for the reception of patients on Sept 7th while the first patients were admitted five days later The number of beds belonging to this hospital is now nearly 900, for in addition to the 520 at St Mark s College there are sections at St Thomas s Hospital (233 beds) Victoria Hospital for Children (40 beds), Great Northern Central Hospital (65 beds), and the Richmond Red Cross Hospital (40 beds) Up to the close of last week 4323 patients had been admitted, including 140 officers, and the number of deaths was less than 20 The vast majority of the cases treated have recovered and gone back to military service A brief inspection of the whole institution in company with the commandant made it evident that the great organisation which came into being only a very few months ago has settled down into working order, and that all the wheels are moving with the utmost smoothness The cheerfulness of all the inmates was very noticeable

More than 500 operations have been performed in the theatre, but these have included few amputations Very few cases of undoubted tetanus have reached this hospital from the front Of the four patients two recovered and two died All cases with septic wounds have injections of tetanus antitoxin as a precautionary measure, and the septic wounds, of which there have been a great many have done extremely well as a whole Among the remarkable cases which have been under treatment the following three may be briefly mentioned here 1 A bullet entered the abdomen half an inch above the pubes in the mid line The wound of exit was just at the side of and below the tip of the coccyx. There were no symptoms at all from first to last, and the only sign was that after 14 days the patient had a seminal emission consisting largely of blood 2. A bullet entered the side of the head just below the level of the lower end of the mastoid process It came out at a similar place on the opposite side Although for a time there was great muscular stiffness and vertigo on walking, the patient made a complete recovery 3 A rifle bullet entered the back of the leg just about the popliteal space It passed downwards and forwards and went right through the knee joint, passing through the intercondylar notch It was found in the ligamentum mucosum and removed. The strange feature was that no important tendon, nerve or vessel was injured, and there was no fracture of any bone

Largely through the instrumentality of Mr C Arthur Pearson it has been decided by the War Office that all cases rendered totally blind in consequence of wounds shall in future be drafted to this hospital where arrangements have been made for them to be visited at the earliest moment by representatives of Mr Pearson's organisation, so that education may be begun without delay and some of the mental misery lifted from them by personal contact with blind instructors Afterwards when they are invalided out of the service these blind soldiers will be drafted to a convalescent home for the blind Among the surgeons on the *à la suite* staff of the hospital four—Sir Arbuthnot Lane, Sir Frederic Eve, Mr G H Makins, and Mr E H Fenwick—have left to take up other duties in connexion with the war whilst another surgeon has dropped out through ill health Thus only one of the surgical staff has not been called up so far for active duty at the hospital.

Sir Ronald Ross, K C B, F R S, has been appointed consulting physician in tropical diseases to the Indian troops in Europe

Surgeon-General W D C Williams, C B commanding the medical units of the Australian Imperial Force in Egypt had the honour of being received by the King at Buckingham Palace on Monday last

SOLDIERS AT ST THOMAS S HOSPITAL —At the last court of governors the treasurer Mr J G Wainwright reported that since the opening of the military wards 911 soldiers from the front including 100 officers had been treated at St. Thomas s Hospital, the hospital bearing all expenses

Dr Edmond Lagelouze docteur en médecine de la Faculté de Paris of Bethisy S Pierre Oise together with three other inhabitants of the same commune has by special desire of the King been enrolled an Honorary Associate of the Order of the Hospital of St John of Jerusalem in England in recognition of distinguished services and great humanity to a wounded British officer on Sep 1st

CANCER HOSPITAL, Fulham road, S W —House Surgeon for six months Salary £100 per annum

CANTERBURY KENT COUNTY ASYLUM Chartham.—Third Junior Assistant Medical Officer Salary £250 per annum with quarters board washing &c

CARLISLE, CUMBERLAND AND WESTMORLAND ASYLUM Garlands — Junior Assistant Medical Officer unmarried Salary £250 per annum with board lodging and washing

CARMARTHEN JOINT COUNTIES ASYLUM —Temporary Second Assistant Medical Officer Salary at rate of £200 per annum with *board lodging washing &c*

COLCHESTER, ROYAL EASTERN COUNTIES INSTITUTION FOR IMBECILES AND THE FEEBLE MINDED —Female Medical Officer Salary at rate of £200 per annum with board apartments attendance and washing

COVENTRY COVENTRY AND WARWICKSHIRE HOSPITAL. — House Physician Salary £110 per annum with rooms board washing and attendance

DERBY EDUCATION COMMITTEE.—Temporary Assistant School Medical Officer Salary £[illegible]00 per annum

DERBYSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer Salary £300 per annum

DEWSBURY AND DISTRICT GENERAL INFIRMARY —House Surgeon. Salary £120 per annum with board residence and laundry

DORCHESTER, DORSET COUNTY COUNCIL.—Temporary Assistant Medical Officer of Health Salary at rate of £250 per annum

DUDLEY GUEST HOSPITAL.—Assistant House Surgeon for six months Salary £100 per annum with board residence and washing

EASTERN DISPENSARY Leman street E.—Physician Gynæcologist and One or more Medical Officers for Evening Work

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon unmarried Salary £70 per annum with board lodging and washing

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Senior House Surgeon *for 12 months* Also House Physician and Assistant House Surgeon for six months Salary at rate of £250 per annum for senior post and £150 for junior posts with board apartments and washing

GLOUCESTER COUNTY ASYLUM Barnwood near Gloucester —Assistant Medical Officer unmarried. Salary £250 per annum with board *lodging laundry and attendance*

GREAT YARMOUTH HOSPITAL.—House Surgeon unmarried Salary £200 per annum with board lodging and washing

GUILDFORD *ROYAL* SURREY COUNTY HOSPITAL.—House Surgeon. Salary £150 per annum with board residence and laundry

HALIFAX ROYAL INFIRMARY —Second and Third House Surgeons unmarried Salary £120 and £100 per annum respectively with residence board and washing

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL.—House Physician for six months Salary at rate of £70 per annum with board lodging residence and laundry

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton S W —Anæsthetist Salary 50 guineas per annum Also Assistant Resident Medical Officer Salary £100 per annum with board and residence

HOSPITAL FOR DISEASES OF THE SKIN 52 Stamford street Blackfriars —Assistant Physician or Assistant Surgeon

HOSPITAL FOR SICK CHILDREN Great Ormond street London W C — Two House Surgeons unmarried for six months Salary £30 with board residence &c

HULL, VICTORIA CHILDREN'S HOSPITAL, Park-street —Female House Surgeon and Female Assistant House Surgeon Salary £60 and £50 per annum respectively with board and laundry Or Male Resident House Surgeon Salary £60 per annum with board and laundry

LEEDS PUBLIC DISPENSARY —Honorary Medical Officer and Honorary Officer in Charge of Surgical Cases at Southern Branch, Hunslet lane

LIVERPOOL, COUNTY ASYLUM, Rainhill —Locum Tenens Assistant Medical Officer

LONDON LOCK HOSPITAL, Dean street Soho W —House Surgeon for six months Salary at rate of £150 per annum

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury —Visiting Surgeon Salary £100 per annum

MANCHESTER, COUNTY ASYLUM Prestwich —Assistant Medical Officer unmarried Salary £[illegible] per annum with board apartments attendance and washing

MANCHESTER EDUCATION COMMITTEE.—Two Assistant School Medical Officers Salary £3[illegible]0 per annum

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST —Assistant Medical Officer for the Crossley Sanatorium Delamere Forest Cheshire Salary £100 per annum with board apartments and laundry

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN Park Place Cheetham Hill road —House Surgeon Salary £120 per annum with apartments and board

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham — Female Resident Medical Officer for six months Salary at rate of £100 per annum with rooms board and laundry

METROPOLITAN HOSPITAL, Kingsland road N E —Two Assistant House Surgeons for six months Salary at rate of £[illegible] per annum with board and washing

MILLER GENERAL HOSPITAL FOR SOUTH EAST LONDON Greenwich road S E —Junior House Surgeon for six months Salary £[illegible] per annum with board and residence and laundry

NEWCASTLE-UPON-TYNE POOR LAW INSTITUTION —Second Assistant Medical Officer Salary at rate of £200 per annum with [illegible] and washing

NEWPORT (MON.) ROYAL GWENT HOSPITAL —Resident Medical Officer Salary [illegible] for six months at rate of £[illegible] per annum [illegible] £[illegible] [illegible] £150 with board residence and laundry

[illegible] COUNTY ASYLUM [illegible] Medical Officer [illegible]

[illegible] HOSPITAL —[illegible] Salary £[illegible] [illegible] Salary at rate of £[illegible] [illegible]

[illegible] INFIRMARY —[illegible]

RICHMOND SURREY ROYAL HOSPITAL.—House Surgeon. Salary £150 per annum with apartments board and washing

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN S.E.— Second Resident Medical Officer Salary at rate of £100 per annum, with board and washing

SALFORD ROYAL HOSPITAL.—Casualty House Surgeon Salary at rate of £100 per annum with board and residence.

SALFORD UNION INFIRMARY —Resident Assistant Medical Officer unmarried Salary £150 per annum, with apartments attendance and rations

SALISBURY INFIRMARY —Assistant House Surgeon unmarried. Salary £75 per annum, with apartments board lodging and washing

SHEFFIELD CHILDREN'S HOSPITAL.—House Surgeon. Salary £150 per annum with board and residence

SHEFFIELD CITY HOSPITALS FOR INFECTIOUS DISEASES AND TUBERCULOSIS —First Assistant Medical Officer Second Assistant Medical Officer and Third Assistant Medical Officer Salary £250 £225 and £200 per annum respectively with apartments rations laundry and attendance

SHEFFIELD ROYAL INFIRMARY —House Surgeon and Assistant House Physician. Salary £100 per annum with board and residence

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL — Junior House Surgeon for six months. Salary at rate of £120 per annum with rooms board and washing

SOUTH SHIELDS INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY —Junior House Surgeon Salary £115 per annum, with residence board and washing

STOKE-ON TRENT EDUCATION COMMITTEE.—Assistant School Medical Officer Salary £300 per annum

STOKE-ON TRENT NORTH STAFFORDSHIRE INFIRMARY Hartshill — House Physician and House Surgeon unmarried Salary at rate of £150 per annum with board residence and washing

STOKE-ON TRENT STANFIELD SANATORIUM —Resident Assistant Medical Officer Salary at rate of £350 per annum.

STROUD GENERAL HOSPITAL.—House Surgeon Salary £120 per annum with board *lodging* and washing

TAUNTON AND SOMERSET HOSPITAL, Taunton —Senior House Surgeon Salary £120 per annum with board lodging and laundry

THROAT HOSPITAL, Golden square W —Resident House Surgeon Salary £75 per annum with board, residence and washing

TRURO ROYAL CORNWALL INFIRMARY —*House Surgeon* unmarried. Salary £150 per annum with rooms board and washing

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon unmarried. *Salary £100 per* annum with board residence &c.

VICTORIA HOSPITAL FOR CHILDREN Tite-street Chelsea S W — House Physician for six months Salary £[illegible]0 with board and lodging

WAKEFIELD CLAYTON HOSPITAL.—Senior House Surgeon Salary £180 per annum with board lodging and laundry

WALSALL AND DISTRICT HOSPITAL.—Junior House Surgeon and Anæsthetist. Salary £110 per annum with board residence, and laundry

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon unmarried Salary £150 and £120 per annum respectively with residence board and laundry

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E —Junior House Surgeon Salary at rate of £100 per annum with board, residence, and washing

WEST HAM UNION —SICK HOME 66, Forest-lane Forest Gate E Second Assistant Medical Officer Salary £200 per annum with residential allowances —WORKHOUSE Union road Leytonstone. N E Female Assistant Medical Officer Salary £1[illegible]0 per annum with residential allowances —INFIRMARY Whipps Cross road Leytonstone N E Second Assistant Medical Officer Salary £250 per annum with residential allowances

WHITECHAPEL DISPENSARY FOR THE PREVENTION OF CONSUMPTION — Assistant Medical Officer Salary £250 per annum

WIGAN ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY — Female Junior House Surgeon Salary £130 per annum with board apartments and washing

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months Salary at rate of £125 per annum, with board rooms and laundry

WORCESTER GENERAL INFIRMARY —Resident Medical Officer Salary £150 per annum with board residence and washing

THE Chief Inspector of Factories Home Office London S W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Clogher in County Tyrone and at Hawes, in the county of Yorkshire

Births, Marriages, and Deaths.

BIRTHS

RUTHERFORD —On Jan 22nd at Frith Manor Mill Hill N W the wife of Major N C Rutherford R A M C (T F) of a daughter

TRIGG —On Jan 2[illegible] at Derwent House Derby the wife of G W Trigg M D, Temporary Lieutenant R A M C of a daughter

MARRIAGES

MARTIN—LAIRD —On Jan [illegible] at St [illegible]'s Parish Church Liverpool [illegible] Edward [illegible] Lieutenant R A M C to Alice Muriel [illegible]

DEATHS

[illegible] —On Jan [illegible] at [illegible] Lancashire [illegible] aged [illegible]3 years [illegible] M R C S L S A. [illegible]

[illegible] —On Jan [illegible] at [illegible] M R C S L S A [illegible] [illegible] Dee [illegible]

Queen's University of Belfast —At examinations for the degrees of M B, B Ch, and B A.O held recently, the following candidates were successful —

William W Blair William K. Campbell Frank L Cleland David M Clements *Robert Condy Francis J Devlin* Edmund Doherty (second-class honours) George Gordon Thomas B McKee Frederick McKibbin (second class honours) Terence P McQuaid Edward W Mann Samuel A D *Montgomery* James Park *Malachy G* Paul John C Robb Frederick G Smyth, John K Stewart (second-class honours) Martha J M Stewart, Patrick W White and John C Wilson (second-class *honours*)

University of London Advanced Lectures in Physiology —A course of eight lectures on Metabolism in Infancy will be *given in the* Physiological Theatre, Guy's Hospital, Borough, S E, by Dr M S *Pembrey, University* reader in physiology, and Mr J H Ryffel, at 4 30 P M, *on* Thursdays, Feb 4th, 11th, 18th, and 25th, and March 4th and 11th Attendance at this course is recognised in connexion with the B Sc (honours) degree in physiology The lectures, which will be illustrated by experiments, are *addressed to advanced students* of the University and others interested in the *subject Admission free, without ticket*

London Dermatological Society —A meeting of this society was held on Jan 19th, at St John's Hospital *for Diseases* of the Skin, Dr W Knowsley Sibley being in the chair, when *some good cases* were shown Dr Pinkus (Warsaw) opened a discussion on Copper Dermatitis

Leicester Royal Infirmary —At the last quarterly meeting of the governors and supporters of this institution it was resolved *to build and equip a* complete pathological and clinical laboratory at an estimated cost of £3500

West of England Centenarians —On Jan 20th Mrs A *Moore, of Plymouth, celebrated the 104th* anniversary of her birthday Mrs Arthur Mozley, of Cheltenham, celebrated the 100th anniversary of her birthday on Jan 22nd

Medical Staff of the Viceroy of India —Lieutenant-Colonel T A Granger, Assistant Director of Medical Services (Indian Services) has been appointed honorary surgeon on the staff of His Excellency the Viceroy of India from Sept 15th last, on which date Surgeon General G F A Harris, Surgeon General with the Government of Bengal, completed the tenure of his appointment

Literary Intelligence —Messrs J and A Churchill announce for publication a new book on "Malay Poisons and Charm Cures" by Mr J D Gimlette, which throws light upon *the witchcraft of the medicine man, and discusses the medicines, poisons and their antidotes*, of the Federated Malay States The same publishers also announce "A Textbook of Diseases of the Skin," by Dr J H Sequeira, physician to the skin department at the London Hospital, with new plates from colour photographs, and "The Difficulties and Emergencies of *Obstetric Practice*," by Mr Comyns Berkeley and Mr *Victor Bonney*, obstetric surgeons *to* the Middlesex Hospital

Bazett *v* the London Insurance Committee —*We are informed that two applications* have been made in the King's Bench *Division* before the Master (Sir J MacDonnell) with regard to this case, which is an action brought by Mr H Bazett for a mandamus to compel the London Insurance Committee to proceed to the "assignment" of those insured persons for whose treatment no arrangements *had been made on* March 31st 1913, and for *damages* for their having failed to do so in the course of that year The first application made by counsel for Mr Bazett was for the defendants to supply particulars of the insuperable difficulty of ascertaining with precision the numbers names and addresses' of those persons which they *allege in their* '*defence*" and an order to that effect was made by the Master The second application by counsel for the defendants was for the plaintiff to furnish particulars of the numbers of those unallotted persons for whom he claims payment of capitation fees would have been made to *him had* the assignment *taken place and for details* of those persons and of the fees claimed The order was made for such further particulars to be furnished as the plaintiff might be able to give after discovery' or production by the defendants of the necessary documents in their possession

Medical Calls to the Bar —The following *medical men were called* to the Bar on Jan 26th —Middle Temple J W Miller, M D, D P H *Gray's Inn A Foster* M D, C M

Royal Institution —After his Friday evening discourse on Jan *22nd* at the *Royal Institution* Sir James Dewar presented to the institution on behalf of Dr H D Rolleston, the bust of Sir Humphry Davy, executed by Samuel Joseph in 1822

Dr Helen MacMurchy has been chosen by the Hon R A Pyne, M D, Minister of Education for Ontario, to be inspector of auxiliary classes for the training of pupils who, from physical or mental causes, are unable to take proper advantage of the ordinary public school classes of the province

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication*

Gulland, George Lovell, M D C M Edin has been appointed to the Chair of Medicine in the University of Edinburgh.

Hudson, A C. M D B C Cantab F R C S Eng has been appointed Ophthalmic Surgeon in Charge of Out patients at St Thomas's Hospital

Leishman, Alexander, M B Ch.B Glasg has been appointed Medical Officer to the Teesdale Board of Guardians

MacIlraith, A R M L R C P & S Edin L F P S Glasg., D P H., has been appointed Assistant Medical Officer of Health *of the* Borough of Warrington

Meachen, George N M D Lond has been appointed Medical *Officer to Sherburn Hospital near Durham*

Oliver, George H D O Oxon M R C S Eng L R C P Lond., has been appointed Honorary Surgeon to the Ophthalmic Department *at the Royal Eye and Ear Hospital Bradford*

Riseley, Stanley M D Edin has been appointed Honorary Consulting Ophthalmic Surgeon to the Sheffield *Royal Hospital*

White, Major F Norman I M S Assistant Director General Indian Medical Service has been appointed a Member of the Simla Municipal Committee

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Barnsley County Borough —Medical Officer of Health Salary £500 per annum

Bath Royal United Hospital.—House Physician Salary £120 per annum with board lodging and washing

Bermondsey Medical Mission —Female Resident Junior Assistant Salary with board and lodging

Bethnal Green Infirmary Cambridge-road N E —Assistant Medical Superintendent and Assistant Medical Officer Salary at rate of *£2[illegible]0 and £2[illegible]0 per annum respectively* with apartments board and washing

Birkenhead Borough Hospital.—Senior House *Surgeon* Salary £120 per annum with board and laundry

Birkenhead Education Committee.—School Dental Officer Also Assistant School Medical Officer Salary £300 per annum in each case

Birmingham City Mental Hospital, Rubery hill —Female Junior Assistant Medical Officer Salary £200 per annum with apartments board laundry &c

Birmingham General Dispensary —Resident Medical Officer unmarried Salary £240 per annum with apartments fire light and attendance

Bolton Infirmary and Dispensary —*Junior House* Surgeon and Third House Surgeon Salary £150 and £130 per annum respectively with apartments board and attendance

Bradford Children's Hospital.—House Surgeon Salary £120 per annum with board residence and laundry

Bradford Royal Infirmary —House Surgeon unmarried Salary £100 per annum with board residence and washing

Bradford St Luke's Hospital and Union House —Assistant Resident Medical Officer unmarried Salary £150 per annum with rations apartments and washing

Brecknock County and Borough Infirmary —*Resident House* Surgeon Salary £120 *per annum* with apartment board attendance laundry &c

Bridgwater Hospital.—House Surgeon *unmarried* Salary at rate of £125 per annum with board lodging and washing

Bristol Eye Hospital.—House Surgeon Salary £1[illegible] per annum with board residence and laundry

Bristol General Hospital.—Resident Obstetric Officer [illegible] month Salary at rate of £120 per annum with board residence [illegible]

Bromsgrove, Worcestershire Asylum Barnsley Hall —Locum Tenens Medical Officer

Brookwood Surrey County Asylum —Second Assistant Medical Officer Salary £2[illegible] per annum with board lodging and washing

Bury Infirmary —Junior House Surgeon Salary £1[illegible] per annum with board residence and washing

TUESDAY —2.30 P M., Operations. Clinics:—Medical Out-patient (Dr A. G Auld) Surgical (Mr Howell Evans) Nose, Throat, and Ear (Mr H. D Gillies) X Rays and Electrical Methods (Dr Metcalfe) 3.30 P M Medical In patient (Dr A. J Whiting) 4 30 P M. Lecture:—Mr J Howell Evans Observations on the Surgery of the Present War

WEDNESDAY —Clinics —2 P M., Throat Operations (Mr Gillies) 2.30 P M, Children's Out patient (Dr T R. Whipham); Skin (Dr G N Meachen); Eye (Mr Brooks)

THURSDAY —2.30 P M Gynæcological Operations (Dr A. E Giles) Clinics:—Medical Out-patient (Dr A. J Whiting) Surgical (Mr Carson) X Rays and Electrical Methods (Dr Metcalfe)

FRIDAY —2.30 P.M, Operations Clinics:—Medical Out-patient (Dr A. G Auld); Surgical (Mr E. Gillespie) Eye (Mr R. P Brooks)

POST-GRADUATE COLLEGE West London Hospital, Hammersmith road W

MONDAY —10 A.M Dr Simson Diseases of Women 10 30 A.M Medical Registrar: Demonstration of Cases in Wards 12 noon Dr Bernstein: Pathological Demonstration 2 P.M Medical and Surgical Clinics X Rays Mr D Armour: Operations Dr Pritchard: Bacterial Therapy Department. Mr B Harman and Mr Gibb Diseases of the Eye

TUESDAY —10 A M Dr Owen: Demonstration of Cases in Wards 12 noon Mr T Gray: Demonstration of Fractures &c 2 P.M. Medical and Surgical Clinics X Rays Mr Baldwin Operations Dr Davis: Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin.

WEDNESDAY —10 A M Dr Saunders Diseases of Children Dr Davis Operations of the Throat Nose, and Ear 11 A M Mr Souttar Demonstration of Minor Operations 12 noon, Lecture —Mr Souttar Abdominal Diagnosis 2 P.M Medical and Surgical Clinics X Rays Mr Pardoe: Operations Dr Simson Diseases of Women Mr Gibb: Diseases of the Eye

THURSDAY —9 A M Dr Bernstein Bacterial Therapy Department 12 noon Lecture Dr G Stewart: Neurological Cases 2 P M Medical and Surgical Clinics X Rays Mr D Armour: Operations Mr B Harman Diseases of the Eye.

FRIDAY —10 A M Dr Simson: Gynæcological Operations 10.30 A M Surgical Registrar: Demonstration of Cases in Wards. 12.15 P M Lecture —Dr Bernstein Applied Pathology 2 P M Medical and Surgical Clinics X Rays Mr Baldwin Operations Dr Davis Diseases of the Throat Nose and Ear Dr Pernet Diseases of the Skin

SATURDAY —10 A M Dr Saunders: Diseases of Children Dr Davis Operations of the Throat Nose and Ear Mr B Harman Eye Operations 12 noon Lecture —Mr Souttar: Surgical Anatomy of the Abdomen 2 P.M., Medical and Surgical Clinics X Rays Mr Pardoe: Operations

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL, Gray's Inn-road W C

TUESDAY —3 P M Lecture:—Dr Dan McKenzie: Endoscopy

THE THROAT HOSPITAL, Golden-square W

MONDAY —5 15 P M Special Demonstration of Selected Cases.
THURSDAY —5 15 P M. Clinical Lecture

ROYAL INSTITUTION OF GREAT BRITAIN Albemarle-street Piccadilly W

MONDAY —5 P M General Meeting
TUESDAY —3 P M Prof C S Sherrington: Muscle in the Service of Nerve (Lecture III)
THURSDAY —3 P M Mr H G Plimmer: Modern Theories and Methods in Medicine—Lecture III: Methods and Results (Illustrated by experiments micro-photographs &c and Cinematograph films.)
FRIDAY —3 P M Prof A W Crossley: Science and Industrial Problems

MANCHESTER HOSPITALS POST-GRADUATE CLINICS

THURSDAY —ANCOATS HOSPITAL, Mill street.—4.30 P.M Dr C E Lea: Subjective Symptoms of Heart Disease

For further particulars of the above Lectures &c see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR, and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention should be given to this notice

It is especially requested that early intelligence of local events having a medical interest or which it is desirable to bring under the notice of the profession may be sent direct to this office

Lectures original articles and reports should be written on one side of the paper only AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters whether intended for insertion or for private information must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title-page to Vol. II of 1914 were given in THE LANCET of Dec 26th 1914

VOLUMES AND CASES

VOLUMES for the second half of the year 1914 are now ready Bound in cloth, gilt lettered, price 16*s*, carriage extra.

Cases for binding the half year's numbers are also ready Cloth, gilt lettered, price 2*s*, by post 2*s* 3*d*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows —

FOR THE UNITED KINGDOM		TO THE COLONIES AND ABROAD	
One Year	£1 1 0	One Year	£1 5 0
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Three Months ..	0 6 6	Three Months	0 7 0

(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs 50 per month)

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W C

TO COLONIAL AND FOREIGN SUBSCRIBERS

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS WILLIAM WOOD AND CO, 51, Fifth Avenue New York, U S A

METEOROLOGICAL READINGS

(*Taken daily at 8.30 a.m by Steward's Instruments*)

THE LANCET Office Jan. 27th 1915.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain fall	Solar Radio in Vacuo.	Maximum Temp Shade	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks
Jan 21	29 21	S W	0·02	54	[illegible]	43	[illegible]	[illegible]	Overcast
22	[illegible]	S W	[illegible]	57	[illegible]	[illegible]	33	34	Snowing
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	—	40	[illegible]	[illegible]	[illegible]	[illegible]	Cloudy
25	[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Cloudy
[illegible]	[illegible]	[illegible]	0·01	[illegible]	[illegible]	37	37	[illegible]	Overcast
27	[illegible]	[illegible]	—	41	[illegible]	[illegible]	[illegible]	[illegible]	Overcast

The following magazines, journals &c have been received — [illegible]

Notes, Short Comments, and Answers to Correspondents.

POPULAR MEDICINE IN GERMANY

MODERN *Germany is greatly victimised by quacks* and any one who has had to do with a *hoch kultivirt* German or Austrian knows how *much* he *or* she is likely to be the dupe of dietetic and therapeutic *faddists* The attitude adopted is one of quaint, solemn, and almost grotesque caution in matters of domestic medication Such a work, for instance, as Father Kneipp's "My Water Cure," which attained its jubilee in 1896, may be compared to John Wesley's "*Primitive Physick*," of which the twenty first *edition* appeared in London in 1785 while the last and *twenty seventh edition* was published in New York in 1814 Father Kneipp, *who* was Secret Chamberlain to the Pope and parish priest of Wörishofen, in Bavaria, made a grand discovery when, about 50 or more years after the English, he found out the virtues of cold water Throughout *his book* he regards cold water with solemnity as though it were a scarce and valuable but rather dangerous drug He fights the good fight in its cause, and *demolishes* the objections of those who object to it on the grounds *of* 'extraction of warmth" His illustrative anecdotes are delightful—a *picture of* domestic Germany throughout the nineteenth century We read for instance, of the "gentleman of high position who had an excessive aversion for water," and whose neck was so sensitive that he scarcely knew how to take enough care of it" The picture of Father Kneipp himself seated in a cold bath in midwinter and sponging the lower half of his stomach is meant *to excite respect for his courage* as an innovator The record of *the* "Masserl' *or* highest number of pints, sometimes amounting to 10, which could be taken by the *winner in* a water-drinking tournament, is given as proof of self devotion to a new cause

THE OWNERSHIP OF BULLETS

To the Editor of THE LANCET

SIR,—With reference to the amusing and interesting remarks *of a* Swiss *correspondent in* THE LANCET of *Jan* 23rd *referring* to the ownership of bullets, I have some recollection of an action at law in one of the continental courts being reported in your columns, where a young man claimed the bullet as he wished to have it mounted in gold as a trinket This idea of the souvenir seems to be mainly at the bottom of the question, and is one which also concerns the jeweller perhaps I read not many weeks ago that a German or Austrian lady of high rank was having certain soldiers' bullets mounted in gold for them free of charge The question as to ownership has its comic side, and you reported once in THE LANCET the case of a bullet being extracted from a marine after it had worked its way from the hip to the calf, after being 42 years in the man's body

I am, Sir, yours faithfully,

ALBUS

Jan 25th, 1915

TREATMENT OF THREADWORMS

F F, a medical man, asks if any practitioner can suggest treatment for a case of threadworms of long duration in an adult The patient has had treatment in the country and also from London consultants without permanent benefit, and our *correspondent is at a loss* what further to do

BOVRIL PICTURES

Messrs Bovril, Limited have forwarded us copies of the three bonus pictures of their current picture scheme, the largest being framed and the other two unframed The large picture is an artist's proof of a photogravure after a painting by Mr Arthur Elsley, entitled "A Private Rehearsal" and depicts a little girl performing a pirouette *sur la pointe du pied* in a drawing room to the delight of the assembled company of young and old Another work by the same artist is entitled Good Night," and represents a young mother about to put the last born in its cot in the presence of its brother and sister The third picture is by Mr A de Breanski jun, is entitled 'A Welsh Valley, and shows a mountainous background and a rushing stream with stepping stones being crossed by a peasant The atmosphere is well managed The pictures have all been produced by Messrs C W Faulkner and Co, of London in their usual excellent style

Messrs John Bell and Croyden Limited of 50 Wigmore street London W have published a card which contains a monthly calendar and a brief summary of the most important changes in the new *British Pharmacopœia* A copy will be sent to any of our readers on application

Mr Cuthbert Reid —We fear we could not reprint the article but some further reference to the subject might be made

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY Burlington House, London W

THURSDAY—Papers:— Prof G H Bryan and Mr R Jones: Discontinuous Fluid Motion Past a Bent Plane with Special Reference to Aeroplane Problems —Mr T R. Merton: On the Spectra of Ordinary Lead and Lead of Radioactive Origin (communicated by Prof A. Fowler) —Mr A O Rankine: On the Viscosity of the Vapour of Iodine (communicated by Prof A W Porter)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street W

TUESDAY

SECTION OF PATHOLOGY (Hon. Secretaries—Gordon W Goodhart C Price-Jones)

Laboratory Meeting in the Pathological Department Guy's Hospital S E at 8.30 P.M.

Dr *R A. Chisolm* and *Dr G* Marshall: The Active Principle of the Pituitary in Health and Disease.

Dr P P Laidlaw Some Anaerobic Methods

Dr J H Ryffel Hæmatoporphyrin in Fæces.

Dr J W H Byre.

Dr G W Goodhart (1) Four Tumours of the Suprarenal Medulla Ganglioneuroma and Neurocytoma; (2) Two Cases of Infarction of the Heart, (3) Case for Diagnosis: A *Tumour of the Liver* and *Spleen* associated with Bacillus Tuberculosis

WEDNESDAY

SECTION OF OPHTHALMOLOGY (Hon Secretaries—Leslie Paton *Elmore Brewerton*) at 8 30 P.M

Cases

Mr Bernard Cridland: Case of Glass worker's Cataract in a Puddler (Iron-smelter)

Papers

Dr Batten and Mr Stephen Mayou Cerebral Degeneration associated with Macula Changes: with Pathological Examination of a Case

Mr Leslie Paton The Montessori System and its Use for Children with Defective Sight

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon Secretaries—Philip Turner *J D Rolleston, Sidney Gilford*)

Members are specially invited to attend the discussion of Mr Leslie Paton's paper at the meeting of the Section of Ophthalmology (See above)

THURSDAY

SECTION OF *OBSTETRICS AND GYNÆCOLOGY* (*Hon. Secretaries*—C Hubert Roberts Cuthbert Lockyer): at 8 P.M.

Specimens

Dr Maxwell Fibroid of Uterus showing Invasion by Tubercle

Short Communications

Dr Maxwell *Inversion of Uterus*—(1) Acute; (2) Chronic

Dr Russell Andrews Carcinoma in an Ovarian Teratoma.

Paper

Dr Herbert Spencer: Ruptured Unilateral Solid Cancer of Ovary Removed Subsequent Pregnancies and Good Health

FRIDAY

SECTION OF LARYNGOLOGY (Hon Secretaries—Cecil I Graham, W D Harmer): at 4 P.M.

Dr Hill: Specimens of Laryngeal Carcinoma

Dr Kelson: Case of *Laryngeal Obstruction*

Dr Jobson Horne: Sections of Pachydermia Laryngis

Mr Stuart Low: (1) Case of Epithelioma of *Pharynx* and Tongue (2) Mediastinal Tumour

Mr *E D Davis*: *(1) Three* Cases of Pituitary Tumour (2) Case of Nasopharyngeal Fibroma.

Sir William Milligan: (1) Note on *After* treatment of Submucous *Resection* of Nasal Septum; (2) Case of Chronic Lymphangitis of Nose

Mr C I Graham (1) Epithelioma of Pharynx and Tongue after Operation; *(2) Case* of Tuberculous Inferior Turbinal

Dr E A. Peters: Cases

SECTION OF ANÆSTHETICS (Hon Secretaries—Cecil *Hughes* F E Shipway) at 8 30 P.M

Paper

Mr H Finnemore B Sc. F I C: Anæsthetic Ether

Discussion

On Method of Induction of Anæsthesia to be opened by the President Dr Harold Low

RÖNTGEN SOCIETY at the Middlesex Hospital W

TUESDAY —8 15 P M General Meeting Papers:—Dr S Russ Measurements of the Radiation from the Coolidge and other X Ray Tubes in Clinical Use Dr C R C Lyster will show a Coolidge Tube A "Victor" *Interrupterless Transformer* will be exhibited

NORTH EAST LONDON CLINICAL SOCIETY Prince of Wales's *Hospital* Tottenham N

THURSDAY —4 15 P.M Clinical Meeting

WEST LONDON MEDICO CHIRURGICAL SOCIETY Society's Rooms West London Hospital Hammersmith road W

FRIDAY —8.30 P M *Pathological Evening*

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

NORTH EAST LONDON POST GRADUATE COLLEGE, Prince of Wales's General Hospital Tottenham N

MONDAY —Clinics:—10.30 A M, Surgical Out-patient (Mr E Gillespie) 2.30 P.M Medical Out-patient (Dr T R Whipham) Gynæcological (Dr J B Banister) 3 P M, Medical In-patient (Dr R M Leslie)

Remarks
ON
PUERPERAL ECLAMPSIA

Being the Introduction to a Discussion at the Midland Medical Society on Jan 27th 1915,

BY C E PURSLOW M D LOND,
M R C P LOND
HONORARY OBSTETRIC OFFICER, QUEEN'S HOSPITAL, BIRMINGHAM
LECTURER ON MIDWIFERY AND DISEASES OF WOMEN UNIVERSITY OF BIRMINGHAM CONSULTING SURGEON
BIRMINGHAM MATERNITY HOSPITAL AND
LYING IN CHARITY

MR. PRESIDENT, LADIES, AND GENTLEMEN,—For the purposes of this discussion I will divide the subject into the following sections I, Prophylactic Treatment, II, Treatment of the Fits and of the Toxæmia III, Obstetrical Treatment

I —PROPHYLACTIC TREATMENT

As regards prophylactic treatment there can be no doubt that in many cases in which the disease is threatened it can be warded off by appropriate means, and success depends on an early recognition of symptoms of the pre eclamptic state, these are numerous, but I should say that the most constant and important are albuminuria, persistent headache and œdema Other symptoms may be disturbances of vision and hearing and vomiting One prodromal symptom which is not common, but which when it occurs is, in my opinion of most unfavourable prognostic import, is severe epigastric pain The albuminuria associated with eclampsia in which there is usually a large amount of albumin present, is practically confined to the later half of pregnancy, cases of eclampsia before then being rare Pronounced albuminuria in the later months is a dangerous complication for both mother and child, and the danger of the condition is greatly increased by the fact that it is so often unrecognised and untreated until the sudden onset of a convulsion calls attention to the case

It should be made a rule to examine the urine of every pregnant woman in the latter half of pregnancy, and the examination should be repeated at intervals, shorter as full term approaches, if this rule were adhered to the death rate from eclampsia would be greatly reduced It should always be borne in mind that a haze of albumin may be due to mixture with vaginal discharge, so that if albumin is present in the specimen passed by a patient we should never base a diagnosis or treatment on that, but should examine a catheter specimen If on the other hand, there is no albumin in the specimen voided by the patient it will not be necessary to pass a catheter If albumin is present a microscopical examination and an estimation of urea are advisable Statistics show that this disease is more likely to occur in primiparæ and in my experience it has seemed that its occurrence was more to be feared in well developed women who had been in the habit of taking a large amount of exercise and eating much solid food

When albumin is found in considerable quantity in the urine of women in the later months the case should be taken in hand at once In the first place the patient should be confined strictly to bed and it is a very good plan to commence the treatment by giving nothing else but hot water for the first [illegible] hours Afterwards milk well diluted may be given and the diet should be limited to this until there is distinct improvement in the secretory action of the kidneys Free purgation is essential and for this purpose 30 gr of pulv jalapæ may be given, or sodii sulph ʒi, in water ℥ii., every two hours, until free purgation is produced Rectal injections of normal saline may be given after the bowels have been well emptied, or saline may be given sub cute If in spite of this treatment the renal secretion does not improve or if prodromata of eclampsia come on, the difficult question of induction of premature labour presents itself. On the whole, I am inclined to advise that labour should not be induced I have seen some most satisfactory cases in which the treatment already set out has been followed by spontaneous delivery without the occurrence of eclampsia, even when the patient has seemed to be on the verge of an attack

II —TREATMENT OF THE FITS AND OF THE TOXÆMIA

The practitioner is generally sent for as soon as a fit has occurred, and in some cases it will happen that there will have been no prophylactic treatment because the patient had not been under medical care, and neither she nor her friends will have suspected that anything was wrong until they are alarmed by the occurrence of a fit The patient should be at once put to bed in a darkened room and preserved from all external causes of irritation as far as possible An efficient nurse should be obtained, and she should be instructed that if another fit comes on the patient should be watched carefully to see that no harm befall her, as by suffocating in the bedclothes or falling out of bed During the fit a piece of wood should be placed between the teeth to prevent the tongue being badly bitten It is a good plan to place one side of the bed against the wall, as the nurse can then more easily control the patient During the coma which follows a fit the head should be brought to the edge of the bed and turned well over on one side so as to allow saliva to escape and prevent it entering the trachea

I may say here I am sure that those who have had cases of this kind among the poor will have appreciated the advantages of obtaining admission for them to the Maternity Hospital, which, if only for the treatment of this disease has proved a most valuable addition to the charitable institutions of the city If the patient is able to swallow she may be given water but no food, not even milk, should be given A quickly acting aperient may be given, and one of the best is croton oil ♏ ii, made up with powdered sugar and placed on the tongue, in addition a copious enema of soap and water may be given, and when this has acted a further rectal injection may be slowly given of 4 ounces of water containing 2 ounces of sulphate of magnesia If the apparatus is at hand it is also well to wash out the stomach Poultices to the loin probably encourage action of the kidneys and at all events can do no harm I am not in favour of hot air baths One of the few methods in addition to purgation upon which almost all writers are agreed is the administration of subcutaneous or intravenous injections of saline chloride of sodium ʒi to the pint, or better still ʒi each of chloride and acetate of sodium the salt may be obtained ready for use in glass containers, and Horrocks's small saline infusion apparatus is in my opinion the best and simplest and should be carried in every midwifery bag

Before proceeding to discuss the obstetrical aspect of the question I will refer briefly to some of the numerous other methods which have been advocated for dealing with the fits and toxæmia

Communications, Letters, &c., have been received from—

A—Army and Navy Male Nurses Co-operation Lond. Secretary of Mr Conrad A Achner, Lond Messrs H Reeve Angel and Co Lond Dr K B Allan Coomassie Academy of Medicine, Paris Dr Henry Russell Andrews Lond Aymard Patent Milk Steriliser Co Ipswich

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Z.—Major B J Zwar, Alexandria.

Letters, each with enclosure, are also acknowledged from—

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EXPERIMENTAL PURPURA

(Second Communication)

BY J C G LEDINGHAM M B, D Sc ABERD,
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AND
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IN a preliminary communication by one of us (Ledingham[1]) to this journal on June 13th 1914, the production of purpura hæmorrhagica in guinea pigs, after inoculation with an antiserum prepared by immunising rabbits with guinea pig blood plates, was placed on record The present paper deals mainly with conjoint work carried out in June and July of last year, together with additional experimental data since obtained by one of us (L) in the absence of the other (B) on military service The blood changes in guinea pigs inoculated with anti-plate serum have been followed out in detail, and we propose in the first place to submit data on this point A description will follow of experimental purpura in the rabbit and rat induced by inoculation with their respective anti plate sera.

Blood Changes in Guinea pigs after Inoculation with Anti guinea pig plate Serum

Notes on technique—The blood plates were counted in a Thoma-Zeiss chamber, the blood from the ear being received into citrate solution containing brilliant cresyl blue which showed up the blood plates very clearly The figures for the plate content per c mm obtained by this method in a series of normal guinea pigs were as follows 856 000, 752 000 340 000 640,000 672,000, 683 000, 590,000, 696,000 664 000, 592,000 (the latter four obtained from the same animal on four successive days), 592,000, and 584,000 The average of nine animals works out about 638 000 per c mm The hæmoglobin was estimated by Haldane's instrument Attempts were also made to obtain coagulation times, but as we have not satisfied ourselves that the methods employed yield reliable results, at least so far as the guinea pig is concerned, we refrain at present from alluding to them The statement in the preliminary communication that the clotting is delayed rested entirely on observations of the bleeding time after puncture Prolongation of the bleeding time after puncture of the ear vein is a very marked feature in experimental guinea pig purpura (as Duke asserts to be the case in human purpura), but this function may prove to have no direct relation to the coagulation time as ordinarily understood and calculated

The three animals B 3, B 4 and B 5 whose blood changes &c have been followed daily, received each one dose of anti plate serum (1 5 c c) subcutaneously immediately after the control normal samples had been taken The animals were purposely chosen of large size (over 400 gm), so that a lengthy observation period would be available before the fatal conclusion (or possibly recovery) resulted It had previously been determined that in animals of 250 grm a dose of 1 c.c of a particular batch of anti plate serum had produced death in three, four or five days with typical purpuric lesions The data obtained from these three [illegible] animals together with notes of the general condition are found in Table I (see p 312)

Remarks on Table I—It will be observed from the table that two of the animals died in 4 and 8 days respectively, while the third animal (B 3), whose initial weight was 450 gm., made a complete recovery after exhibition of purpuric skin lesions On July 14th—i.e, 36 days after the first dose—it received a second dose of 2 c c of the serum The reaction to this second dose was very slight, the blood plates only, showing a marked fall, while the purpuric skin spots were few It is impossible here to analyse the blood changes in detail, but certain points deserve notice 1. The total leucocyte count is not appreciably affected, though there is a distinct tendency to relative lymphocytosis (see the column of differential counts) 2 The blood plates are the elements which suffer the earliest and promptest reduction. Except in the case of B 5 which showed an abnormally low initial plate content, the plates fell to one sixth to one tenth of their initial figure In animal B 3, which recovered, the rapid regeneration of red cells and hæmoglobin is well seen. In the last two columns data are appended with reference to the presence of hæm agglutination in the shed blood, the minute changes in the red cells, and the general condition of the animals

Post-mortem appearances of the above three animals *B 3*—Killed for examination on July 18th A few skin hæmorrhages present at site of last inoculation. A few groups of faded punctiform hæmorrhages in stomach wall No petechiæ on heart or lungs Lymph glands not of hæmolymph character Urine not stained with hæmoglobin.

B 4.—Dead June 16th This animal had shown numerous skin hæmorrhages during the early days following inoculation of the serum At necropsy these had faded and skin hæmorrhages were found only in the neighbourhood of the inoculation site The red colour of the lymph glands was disappearing Several hæmorrhages in the lungs and very numerous petechiæ in intestine Stomach mucosa showed two round patches—one about the size of a sixpence the other half that size—studded with small punctiform hæmorrhages There was no ulceration. Liver yellowish. Spleen large, dark red, and friable Kidneys and adrenals apparently normal

B 5—Dead June 12th Numerous hæmorrhages at site of inoculation and a few scattered about elsewhere Only a few lymph glands show the hæmolymph change No hæmorrhages in intestine Liver pale and yellowish Spleen greatly enlarged and friable. Urine blood stained A few small hæmorrhages in testicles *Both eyes show cataract*

Blood Changes in Smaller Animals

To complete this part of the subject tables are also appended showing the variations in the red cells, blood plates, hæmoglobin, &c., in three guinea pigs of less weight Each was inoculated on June 30th, 1914 with 1 c c of anti plate serum subcutaneously (See Tables II A, II B, and II C)

TABLE II.A.—*Guinea pig 8*

Date		Red cells		Plates		Hb		Weight
June 30th*	—	[illegible]	—	[illegible]	—	[illegible]	—	[illegible] gm
July 1st	—	[illegible]	—	512,000	—	[illegible]	—	220 ,,
2nd	—	5,130 000	—	320 000	—	8.7	—	210 ,,
3rd	—	[illegible]	—	[illegible]	—	—	—	200 ,,

Death between 1 and 2 P M on July 3rd

* Received 1 c c anti plate serum subcutaneously

Notes on blood picture and general condition—July 1st Blood picture normal except for one or two red cells showing polychromatophilia Well marked hæmagglutination. Pig lively Diffuse infiltrate over abdomen July 2nd Some irregularity in shape of red cells Megalocytes of medium size fairly numerous mostly show polychromatophilia. Some red cell shadows Pig seems ill Infiltrate softening Some skin hæmorrhages Gums of fairly good colour July 3rd Hæmagglutination of shed blood more pronounced Great irregularity in size of red cells Megalocytes showing and I hope that we may hear their virtues or faults described in the discussion

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[1] [illegible] THE LANCET, [illegible]

Chloroform—If any operative interference is contemplated, even such a small procedure as puncture of the membranes, chloroform should be given, but I am entirely opposed to the method so frequently adopted of attempting to control the convulsions by its continuous or intermittent administration

Morphia—This treatment has been extensively advocated of late years, it is given by hypodermic injection in an initial dose of ½ grain and subsequent doses of ¼ grain until a total amount of 2 grains has been reached I have tried it, but have not been convinced of its advantages, and have not used it lately, and I would say the same of *venesection*

Thyroid extract in doses of 30 to 40 grains has been suggested by Nicholson, of Edinburgh, who reports good results from its use

Nitro glycerine in subcutaneous injection up to 5 minims has been tried with successful results by Dr McCarthy, one of our past presidents, and I have no doubt some of those present may be able to speak of its use

Veratrum viride has been extensively used in America, and recently Haultain, of Edinburgh, has brought forward several successful results from the hypodermic injection of veratrone This remedy is said to be particularly indicated in cases of high pulse tension

Pilocarpine has been extensively used, but on account of its tendency to increase bronchial secretion it is, in my opinion, a dangerous drug

Oxygen inhalation in cases where cyanosis is a marked symptom would be highly desirable

Cold baths are said to be useful in cases in which hyperpyrexia is a marked symptom, this is a not infrequent complication of eclampsia, and is one of bad prognostic import

Decapsulation of the kidneys and *lumbar puncture* have both been advocated and practised, but only to a limited extent, and apparently without any striking success

III—OBSTETRICAL TREATMENT

There have been many differences of opinion revealed in the methods of treatment we have already been considering, but when we enter on the consideration of the obstetrical treatment we might describe the authorities as being divided into two hostile camps, their actions depending in a large degree on the views they hold as to the causation of eclampsia The one, which I may call the Rotunda school, believes that the toxin is elaborated from the food taken in by the mother owing to some faults in her metabolism The other, or what I may call the German school, considers it to be due to the fœtus, and has advanced the theory recently that the symptoms are due to placental albumin finding its way into the maternal blood stream in quantities greater than can be dealt with at the time by the antibodies which are elaborated to deal with it It is on the presence of these antibodies in the maternal blood that Abderhalden's serum test for the diagnosis of pregnancy is based Those holding the first view advise little or no interference with the process of labour, while to those holding the second no methods are too radical—~~induction of labour~~, accouchement forcé, vaginal and abdominal Cæsarean section being each advised in particular cases

Personally, if labour has started and can be terminated quickly under an anæsthetic by forceps I should not hesitate to interfere, but the difficult cases are those in which severe eclampsia is in progress, fit succeeding fit, with no lucid interval and in which there is no sign of labour, the os remaining closed and the cervix not taken up

I have treated cases of this kind on both the expectant plan and on the lines of active interference In an article on the treatment of eclampsia which I wrote three years ago for Latham and English's "System of Treatment" I stated that, on the whole, I thought that the results from interference were slightly better than those obtained when no steps were taken to evacuate the uterus, since then, as a result of further experience of the policy of non interference, I am inclined to modify those views, and the results in the last case which was under my care were so striking that I may *perhaps be pardoned for quoting it*

The patient was admitted to the Queen's Hospital, Birmingham on Dec 1st last on the recommendation of Mr Sydney E Price, of Dudley Port She was a primipara, 23 years of age well developed, and in the seventh month of pregnancy, she had been having fits for about 48 hours and had had more than 80 altogether

On admission the patient was œdematous, comatose, and her heart beat was 160 and the pulse uncountable at the wrist She was given an enema and subsequently a *rectal injection of ℥ii magnes sulph in water* Two pints of saline were then injected slowly into the submammary region She was admitted at 1 A M No obstetrical treatment was adopted and at 7 30 A M she delivered herself of a stillborn male child by the breech, the placenta did not *come away and had to be removed* by hand During the day she had another subcutaneous saline and mag sulph injection by rectum every six hours She remained completely comatose for 36 hours, then slowly recovered consciousness and began to pass urine and left the hospital well on the ninth day after admission

This case was a striking illustration of the success of this line of treatment, which was carried out entirely by Miss Hemingway, my house surgeon, to whose persevering and careful attention the patient largely owes her life If we decide on an active line we have a large number of measures open to us, and I will briefly consider these They are puncture of membranes, bougies, packing the cervix and vagina, tents rubber dilating bags, digital dilatation or dilatation by Bossi's dilators, followed by version or forceps, deep incision of the cervix, including the so called vaginal Cæsarean section, and abdominal Cæsarean section

Puncture of the membranes can be done with little disturbance of the patient, and is a harmless proceeding, it rapidly diminishes intrauterine tension, but as a means of inducing labour it is very uncertain in the time it takes, if done, every antiseptic precaution should be taken

As regards the other *methods, I would say* emphatically of the slow *ones* (under which I include bougies, tents, packing of the cervix and vagina, and rubber dilating bags, including that of Champetier de Ribes) that they are contraindicated in the treatment of eclampsia and if there is one thing about which I am convinced in this question it is that *interference*, if *decided upon* should be by rapid methods under anæsthesia and I would select dilatation by Bossi's dilator or vaginal or abdominal Cæsarean section I think that, on the whole for this class of case the form of active treatment likely to be least prejudicial would be abdominal Cæsarean section but I feel convinced that if a *good trial* be given to the milder methods it will be found that the results will be better than those obtained by the most heroic operative procedures polychromatophilia, very numerous poikilocytes, no punctate basophilia. A few normoblasts, some showing pyknosis and karyorrhexis of nucleus. A few red cells with "Jolly" bodies. Pig cold and collapsed, blood thin and watery; no eye changes observed. Post mortem: Gelatinous blood-stained infiltrate over abdomen and thorax. A fair number of small punctiform hæmorrhages in skin. Numerous hæmorrhages in subcutaneous tissue. No eye changes. Spleen dark red and friable. Bladder filled with dark, blood-stained urine. Testicles showed several large hæmorrhages. No hæmorrhages in stomach or intestines. Lymph glands of red hæmolymph character. Bone marrow dark red.

TABLE II.B.—*Guinea-pig 9.*

Date.	Red cells	Plates	Hb	Weight
June 30th*	6,620,000	672,000	93%	260 gm.
July 1st	5,952,000	480,000	96%	260
2nd	5,616,000	272,000	84%	240 ,,
3rd	720,000	392,000	16%	230 ,,

Death between 1 and 2 P.M. on July 3rd.

* At 5 P.M. received 1 c.c. anti-plate serum subcutaneously.

Notes on blood picture and general condition.—July 1st: Pig lively. Well-marked firm infiltrate over abdomen and extending forward to thorax. Blood picture normal except for one or two red cells showing polychromatophilia. July 2nd: Hæmagglutination well marked. Some red cell shadows. Irregularity in size of red cells commencing. Megalocytes of medium size showing polychromatophilia but not numerous. Animal ill. Infiltrate softening, some skin hæmorrhages, gums of good colour. July 3rd: Hæmagglutination extreme. Blood very watery, oozing after vein puncture. Irregularity in size of red cells. Megalocytes showing polychromatophilia, a few deeply basophile red cells, some poikilocytes. A few normoblasts, some showing punctate basophilia of cytoplasm. Pig collapsed and cold. No eye changes visible. Post mortem: A few small punctiform hæmorrhages in skin. Glands do not show hæmolymph change. No eye changes. Bladder contained dark blood-stained urine. No hæmorrhages in internal organs.

TABLE II.C.—*Guinea-pig 10.*

Date.	Red cells.	Plates.	Hb	Weight
June 30th*	6,6[illegible]0,000	6[illegible]3,000	102%	360 gm.
July 1st	6,170,000	334,000	100%	320
2nd	5,501,000	[illegible]20,000	84%	300

Death during night of July 2nd-3rd.

* At 5 P.M. received 1 c.c. anti-plate serum subcutaneously.

Notes on blood picture and general condition.—July 1st: Blood picture normal. Hæmagglutination well marked. Pig lively. Infiltrate not very well marked. July 2nd: Irregularity in size of red cells. Fair number of megalocytes mostly showing polychromatophilia. Some red cell shadows. Pig not well. Infiltrate more marked but softer. Some skin hæmorrhages, one about the size of a threepenny piece. Post mortem: Well-marked gelatinous blood-stained infiltrate. Numerous small punctiform hæmorrhages in skin. Glands of hæmolymph character. A few small hæmorrhages in lungs and in wall of left ventricle. Spleen much enlarged and friable. One or two minute petechiæ in pancreas. Bladder full of blood-stained urine. Numerous hæmorrhages in wall of large gut and in testicles.

Remarks on Tables II A, II B *and* II C.—These three animals, whose initial weights were 240 gm., 260 gm., and 360 gm., did not survive beyond the third day. All showed pronounced purpura. The effect of the serum on the blood elements is essentially similar to that obtained in the case of the larger animals of Table I. Notes regarding the minute changes in the red cells, the general condition of the animals during life, and the post-mortem appearances are appended to the tables.

Control Experiments with other Sera. Action of Anti-leucocytic Serum.

This serum was prepared by immunising rabbits with leucocytes obtained from the peritoneal exudates of guinea-pigs which were killed [illegible] hours after an intraperitoneal inoculation of 5-10 c.c. of sterile broth. Such exudates, as is well known, consist almost entirely of polymorphonuclear leucocytes, and if great care is taken in manipulation of the animals after death the risk of admixture with red cells can be very largely avoided. The exudates are taken up in citrated saline and thereafter washed in normal saline. The serum of the rabbits so immunised proved to be quite as fatal to guinea-pigs as the anti-plate serum, but did not produce purpuric phenomena. We append two tables (Nos. III.A and III.B) showing the action of the serum on the blood elements throughout the course of the experimentally induced disease.

TABLE III.A.—*Guinea-pig 15.*

Date.	Red cells.	Plates.	Leucocytes.	Differential count.†				Hb	Weight
				P	E	L.	Ma		
									Gm.
July 8th*	6,123,000	592,000	10,200	40·5%	0·5%	58·5%	0·5%	100%	250
9th	4,440,000	456,000	2,900	3·0%	0·5%	96·0%	0·5%	80%	250
10th	2,080,000	640,000	10,800	10·0%	1·0%	88·0%	1·0%	40%	230
11th	?	?	?	25·0%	2·0%	72·5%	1·5%	?	220

Death at 3 P.M. on July 11th.

* At 5.30 P.M. received 1 c.c. anti-leucocyte serum subcutaneously.
† P = Polymorphonuclears. E = Eosinophiles. L = Lymphocytes. Ma = Mast cells.

Blood picture and general condition.—July 9th: Red cells irregular in size, numerous polychromatophilic megalocytes, a few red cells showing "Jolly" bodies, no nucleated red cells. The polymorphonuclear leucocytes are degenerated, their protoplasm being vacuolated and the granules appearing as indistinct basophile knots in cytoplasm. Pig ill. Small infiltrate under skin, no skin hæmorrhages. July 10th: Large numbers of megalocytes, some microcytes, well-marked polychromatophilia, nucleated red cells (normoblasts) 1·5 per cent. of white cells. Some phagocytosis of red cells by mononuclears. General condition unchanged. No skin hæmorrhages. July 11th: Some red cells show punctate basophilia, nucleated red cells (normoblasts and megaloblasts) 21 per cent. of white cells. Neutrophile myelocytes present. Pig ill and collapsed, hæmoglobinuria, no eye changes. Post mortem: No skin hæmorrhages. Lymph glands appear normal. No hæmorrhages in internal organs. Spleen greatly enlarged and friable. Bladder full of blood-stained urine.

TABLE III.B.—*Guinea-pig 16.*

Date.	Red cells.	Plates.	Leucocytes.	P.	L.	Ma.	Hb	Weight
								Gm.
July 8th*	6,250,000	[illegible],000	1[illegible],400	51·0%	43·0%	—	93·0%	270
,, 9th	5,[illegible],000	6[illegible],000	2,600	3·0%	97·0%	—	9[illegible]·0%	2[illegible]0
10th	2,600,000	[illegible],000	8,000	6·6%	83·6%	3·3	22·0%	220
11th	1,6[illegible]5,000	[illegible]	13,200	3·0%	67·5%	0·5	22·0%	200

Pig dead at 6 P.M. on July 12th.

* At 5.30 P.M. received 1 c.c. anti-leucocyte serum subcutaneously.

Blood picture and general condition.—July 9th: Slight hæmagglutination. Irregularity in size of red cells, poikilocytes, polychromatophilic megalocytes, one nucleated red cell seen. Degeneration of polymorphonuclears as in No. 15. Pig seems ill. Very slight infiltrate, no skin hæmorrhages. July 10th: Marked irregularity in size of red cells, no nucleated red cells. Infiltrate soft, no skin hæmorrhages. July 11th: Many megalocytes showing polychromatophilia, some red cells with punctate basophilia, nucleated red cells (normoblasts) 3·5 per cent. of white cells. Phagocytosis of red cells observed. Myelocytes 4 per cent. (total neutrophiles, 3[illegible] per cent.). Pig very ill. No eye changes. Post mortem: No skin hæmorrhages. No eye changes. No hæmorrhages in internal organs. Spleen slightly enlarged. Hæmoglobinuria. Liver yellowish.

TABLE I

Guinea pig B 3

Date	Red cells	Leucocytes	Platelets	Differential leucocyte count				Hb	Temperature	Weight.	Colour index	Appearance of blood on slide	Remarks.
				Poly nuclears	Eosino philes	Lymphocytes	Mast.						
June								%	F	grm			
8*	7 520 000	17 400	856,000	77·3	1·8	18·8	1·4	96	98·0°	450	1	—	—
9	7 808,000	17 400	680 000	76·4	0·4	22·6	0·4	92	97·0°	410	0·92	—	Pig lively Firm infiltrate over abdomen
10	7 024 000	16,400	250 000	64·0	2·0	33·6	0·6	90	98·4°	395	1·0	Hæmagglutination commencing	Infiltrate more marked.
11	6,256 000	14 800	143 000	56·0	1·5	42·0	0·5	76	99·0°	375	0·98	Hæmagglutination marked	Animal ill numerous skin hæmorrhages present
12	3,968,000	14 400	180 000	—	—	—	—	62	99·0°	380	1·21	—	Animal very ill infiltrate softening
13	1 952,000	16,400	80,000	40·0	3·5	50·5	1·0	36	99·4°	400	1·4	Poikilocytosis micro- and macrocytes polychromatophilia normoblasts and megaloblasts	*Condition unchanged*
14	2 924 000	16,200	398 000	39·0	4·5	56·0	0·5	30	99·8°	390	0·9	—	Much livelier infiltrate disappearing
15	2 064 000	20 400	368 000	38·0	2·3	61·6	1·0	56	98·6°	380	1·8	Hæmagglutination no longer present.	Condition good.
16	2,960 000	25 000	472 000	55·6	3·2	40·5	0·5	66	98·4°	—	1·7	Nucleated red cells 3·0%	„
17	4 336 000	24 200	428 000	42·0	1·0	57·0	—	80	99·8°	360	1·4	2·3%	„
18	4 400 000	16 200	592,000	32·5	0·5	66·0	1·0	86	98·0°	370	1·4	„ 1·0%	„
19	4 544 000	18 400	436 000	42·0	—	57·0	1·0	90	100·0°	355	1·5	Nil.	„
20	4 240 000	14 200	624 000	32·6	0·3	67·3	—	94	98·4°	360	1·7	—	„
22	4 920 000	16 400	720 000	51·0	0·3	47·6	0·6	100	98·4°	360	1·5	—	„
29	5 520 000	8 800	896 000	45·0	0·5	54·5	—	100	99·8°	350	1·5	Except for some polychromatophilia blood picture is normal	„
	Interval of 3 weeks.												
July													
14†	5,952 000	—	712,000	—	—	—	—	104	—	320	1·3	*Blood picture normal*	*Animal in good health.*
15	6 312,000	—	708,000	—	—	—	—	104	—	300	1·2	—	*Small infiltrate at site of inoculation*
16	5 324,000	—	304 000	—	—	—	—	93	—	320	1·4	Hæmagglutination some irregularity in size of red cells.	Animal ill; infiltrate softening one or two skin hæmorrhages seen
17	5,104 000	—	240 000	—	—	—	—	93	—	300	1·5	Some polychromatophilia no nucleated red cells seen	—
18	5,248,000	—	608 000	—	—	—	—	96	—	320	1·4	Killed for examination.	

Guinea pig B 4

Date	Red cells	Leucocytes	Platelets	Poly nuclears	Eosino philes	Lymphocytes	Mast.	Hb	Temperature	Weight.	Colour index	Appearance of blood on slide	Remarks.
June													
8*	7,280 000	18 600	752 000	75·7	2·6	21·0	0·4	92	98·8°	400	1·0	—	—
9	7 808 000	15 800	752,000	71·6	1·5	25·9	0·8	92	99·6°	360	0·98	—	Well marked firm infiltrate over abdomen
10	4 704 000	18,200	182,000	66·2	1·2	28·2	—	80	100·0°	360	1·3	Hæmagglutination commencing; some poikilocytosis	Animal ill numerous skin hæmorrhages
11	3,952,000	14,800	190 000	56·0	1·5	42·0	—	66	100·0°	365	1·3	A few microcytes and megalocytes	Animal very ill infiltrate softening
12	2,896,000	8,800	122,000	35·0	3·0	62·0	—	40	101·2°	380	1·1	Hæmagglutination marked polychromatophilia many nucleated red cells 3%	Condition unchanged.
13	1,232,000	13,800	144 000	29·0	2·0	68·0	1·0	30	99·6°	390	1·8	Normoblasts and megaloblasts very numerous 8%	
14	1 296,000	8 400	248,000	36·0	2·3	61·0	0·6	30	98·4°	310	1·8	Some punctate basophilia noted phagocytosis of red cells by large mononuclears	„
15	?	8 600	236 000	34·8	1·3	61·1	2·3	24	96·0°	290	—	Nucleated red cells 3%	
16	1,952,000	15,200	248 000	50·2	—	47·7	1·7	22	94·0°	250	1·4	2·5%	Animal cold and collapsed died during night

Guinea-pig B 5

Date	Red cells	Leucocytes	Platelets	Poly nuclears	Eosino philes	Lymphocytes	Mast.	Hb	Temperature	Weight.	Colour index	Appearance of blood on slide	Remarks.
June													
8*	5 840 000	12,800	340,000	78·2	0·4	20·3	—	94	98·6°	420	1	—	—
9	7 728,000	17 800	1 064,000	80·0	—	20·0	—	90	99·8°	385	0·74	—	Fairly well marked infiltrate over abdomen.
10	7 312,000	11 600	204 000	75·6	—	23·0	1·0	80	99·0°	380	0·61	Agglutination of red cells commencing A few microcytes and poikilocytes	*Animal ill no skin hæmorrhages seen.*
11	2,960 000	9 400	293,000	58·0	4·0	35·0	0·5	66	99·0°	375	1·3	Hæmagglutination well marked numerous polychromatophilic megalocytes	Infiltrate softening a few skin hæmorrhages to be made out
12	1,200 000	10 800	330 000	61·0	6·0	32·0	1·0	—	94·0°	3[illegible]0	1·3	Fair number of normoblasts and megaloblasts 3%	Animal in extremis cold and collapsed died between 9 and 10 P.M.

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* Subcutaneous injection of 1·5 c.c anti-guinea pig platelet serum.

† Received second dose of 2 c.c.

Blood picture and general condition.—July 16th: Hæmagglutination present. Some irregularity in size of red cells, a few red cells showing polychromatophilia, one or two nucleated red cells seen. Rabbit quite lively. Bleeds very readily when ear vein is punctured, marked purpura over entire skin. July 17th: No nucleated red cells seen, a few showing polychromatophilia. Rabbit quite lively. No fresh outburst of purpura so far as can be detected. Post mortem: Extreme purpura of skin. Lymph glands not of frankly hæmolymph character. A few punctiform hæmorrhages in stomach and large gut. Some extensive hæmorrhages in muscles of thigh. No hæmoglobinuria.

TABLE IV B.—*Rabbit 34, weight 920 gm.*

Date.	Red cells.	Plates.	Leucocytes.	P	E.	L.	Ma.	Hb	Coag. time.
July 20th*	5,42[illegible],000	672,000	12,[illegible]00	15·0%	0·5%	83·5%	1·0%	33%	0 58
" 21st	5,015,000	106,000	1[illegible],[illegible]00	22·0%	—	77·5%	0·5%	70%	2 0
" 22nd	[illegible],000	222,000	12,100	40·5%	—	58·5%	1·0%	59%	1 5
23rd	3,980,000	[illegible],000	7,800	25·0%	0·5%	74·5%	—	56	—
" 2[illegible]th	[illegible],000	752,000	8,[illegible]00	—	—	—	—	55	—
" 25th	[illegible]	732,000	18,000	—	—	—	—	55%	—
" 28th	4,[illegible]15,000	80[illegible],000	17,000	—	—	—	—	73%	—

* At 4.15 P.M. received 3 c.c. anti-rabbit plate serum intraperitoneally.

Blood picture and general condition.—July 20th: Before injection one or two nucleated red cells were seen in film. July 21st: Little change in red cells, one normoblast seen. Animal drowsy and unwell. Hæmorrhages in skin and specially marked in skin of ears. The flicking or rubbing of the ears produces an immediate crop of small punctiform hæmorrhages. July 22nd: Many red cells showing polychromatophilia, marked irregularity in size of red cells, no nucleated red cells seen. Rabbit quite lively. Hæmorrhages still present in skin. July 23rd: Marked irregularity in size of red cells, some large megalocytes showing polychromatophilia, no nucleated red cells seen. Animal's condition good. July 29th: Animal's condition good. Purpuric spots in skin mostly faded. A few still present on ears.

TABLE IV C.—*Rabbit 35, weight 700 gm.*

Date.	Red cells.	Plates.	Leucocytes.	P	E.	L.	Ma.	Hb	Coag. time.
July 20th*	[illegible]	6[illegible]2,000	9,600	25·5%	0·5%	72·5%	1·5%	62%	1 2
" 21st	3,69[illegible],000	50,000	15,400	52·5%	—	47·0%	0·5%	50%	3
22nd	3,[illegible]0,000	35[illegible],000	9,000	20·0%	2·0%	78·0%	—	[illegible]7	—
" 23rd	3,55[illegible],000	[illegible]72,000	6,500	50·0%	0·5%	49·5%	—	45%	—

Killed with ether at 2 P.M. on July 23rd.

* At [illegible] P.M. received 3 c.c. anti-rabbit plate serum intraperitoneally.

Blood picture and general condition.—July 20th: Before injection no nucleated red cells were seen. July 21st: Hæmagglutination present but not marked. Some irregularity in size of red cells, some poikilocytes, no nucleated red cells. Animal ill. Hæmorrhages in skin, and especially in skin of ears. July 22nd: No nucleated red cells. Animal's condition unchanged. July 23rd: No nucleated red cells. Condition unchanged. Post mortem: Skin shows numerous hæmorrhages. Lymph glands appear normal. Numerous intramuscular hæmorrhages in diaphragm. No hæmorrhages in stomach or intestine, no hæmoglobinuria. Some hæmorrhages of moderate size in thigh muscles.

It will be seen that all three animals developed marked generalised purpura from which they recovered. They were, however, killed for examination purposes at various dates, and the post-mortem appearances are appended to the tables. The marked and early fall in the plate content corresponding with the early onset of purpuric skin phenomena will be noted. In these rabbits coagulation times were taken by the Dale-Laidlaw method,[3] the blood being drawn into short capillary tubes, each containing a small shot. The data so obtained are included, but we are not satisfied that they can be depended upon in view of the variations we have obtained by this method in normal rabbits examined at short intervals. This question is reserved for further investigation.

Experimental Purpura in the Rat.

Rabbits were immunised with rat platelets recovered from fairly large quantities of rat blood. Each immunising dose consisted of the plates obtained from the mixed blood of 24 sewer rats. Three rabbits were immunised, two of which died during the course of immunisation. From the remaining rabbit a small test bleeding was taken a few days after it received its second dose. The serum so obtained was tested on a rat and found to be efficacious in producing purpura (see below). The rabbit received a third and a fourth dose of rat plates, but unfortunately a few minutes after the intravenous injection of the latter dose it developed marked anaphylactic symptoms. It was felt that the serum of such an animal would probably be largely deprived of its anti-plate elements owing to absorption by the large dose of fresh plates injected. The animal was, however, bled when moribund and the serum so obtained filtered. As we shall see, this serum possessed a marked purpura-producing property.

Effect of Injecting Anti rat-plate Serum into Rats.

Rat 1.—Received on Sept. 29th 2·5 c.c. subcutaneously in dorsal region near root of tail (from test bleeding after second dose). Sept. 30th: Numerous minute skin hæmorrhages round the area of inoculation and along the tail. None elsewhere. Oct. 1st: The animal now moribund was killed with ether. Post mortem: A large oval skin hæmorrhage was found at site of inoculation, with smaller petechiæ at the periphery. Numerous hæmorrhages in skin of tail. *A few in pyloric portion of stomach.* No generalised skin purpura. The result, however, showed that the serum from this early test bleeding possessed the purpura-producing property.

Rat 2.—Received on Oct. 13th, 1914, 3 c.c. subcutaneously (from moribund rabbit after its fourth dose). Oct. 14th: A few petechiæ noted on skin of hind limbs. Oct. 15th: Animal not examined. Oct. 16th: Animal very ill and drowsy, was accordingly killed with ether. Post mortem: Beautiful generalised skin purpura. Large hæmorrhage in muscles of one fore limb, marked purpura of tail. *Several small hæmorrhages in pyloric portion of stomach.* Lymph glands bright red in colour. No hæmoglobinuria. No cataract.

Rat 3.—Received on Oct. 14th 4 c.c. subcutaneously. Oct. 15th: Cluster of small hæmorrhages near site of inoculation. Oct. 16th: More hæmorrhages in the neighbourhood. Animal very ill and drowsy. Oct. 17th: Rat dead. Post mortem: Generalised skin purpura. Red lymph glands throughout. *Petechiæ in pyloric portion of stomach and throughout a considerable part of the small intestine, also in cæcum and rectum.* Urine in bladder blood stained.

On the whole, the lesions in rat purpura are essentially similar to those met with in experimental guinea-pig purpura, except that cataract, so frequently found in guinea-pigs dying of the experimental disease, has not so far been noted in rats. As mentioned above, the effect of anti-rat red-cell serum was investigated on rats. No purpuric lesions resulted.

Action of Heterologous Anti-plate Sera.

The question of the specificity of these anti-plate sera is of importance, and at various times control experiments in settlement of this point have been made. Invariably the result has been that the animal does not respond to the heterologous anti-plate serum—e.g., only slight inconvenience and certainly no purpura follow the

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[3] Dale, H. H., and Laidlaw, P. P.: A Simple Coagulometer, Journal of Pathology and Bacteriology, vol. xvi., p. 351.

It will be seen from the tables that while the red cells were very considerably affected, the blood plates were not appreciably altered in number The most striking phenomenon in connexion with this serum is the great but temporary fall in the absolute number of leucocytes In this fall, as the differential counts show, the polymorphonuclear cells are chiefly involved No hæmorrhages were seen on the skin during life or in the organs after death In both cases hæmoglobinuria was a well marked feature

Action of Anti red cell Serum (Ordinary Lytic Serum)

The effects of injecting lytic serum into the animal whose red cells have been used for immunisation have been studied by several workers, and notably by Muir and McNee (1912),[2] who have experimented with anti rabbit red cell serum prepared by immunisation of the goat with rabbit red cells No record has been found of the production of purpuric lesions by such sera It was, however, considered advisable to prepare a lytic serum for comparative tests, and for this purpose rabbits were immunised with washed guinea pig red cells in the usual way This serum has been tested on guinea pigs only in a few cases so far It is very lethal for guinea pigs, but no evidence has been obtained that it can give rise to generalised purpura As we shall see later, an anti rat red cell serum proved to be equally devoid of purpura producing effects when injected into rats, whereas the anti rat plate serum consistently produced purpura

The Question of Dosage of Anti plate Serum

To test this point four guinea pigs, each exactly 250 gm weight, received the following quantities of anti plate serum subcutaneously in the dorsal region on June 2nd, 1914 2 c c, 1 c c, 0 5 c c, and 0 1 c c (volume in all cases made up to 2 c c with saline) The animal which received 2 c c died on June 6th, showing an enormous number of hæmorrhages, with petechiæ on the heart and lungs and double cataract The animal which received 1 c c died on June 4th (i e, after 42 hours) There was beautiful miliary purpura over the whole skin, with petechiæ on the heart and lungs Cataract had not developed The animal which received 0 5 c c developed, like the others, a local swelling which had practically disappeared on June 6th It died ten days later, but showed no purpuric lesions either internally or externally Very probably any such lesions that may have occurred and escaped detection in the early days after inoculation had faded The animal which received 0 1 c c showed only very slight local swelling for a few days after inoculation, and remained well

Experimental Purpura in the Rabbit

An anti rabbit plate serum was prepared by immunising the goat with rabbit blood plates recovered from rabbit blood by a method similar to that employed in the case of guinea pig blood Each dose given to the goat consisted of the blood plates recovered from the mixed blood of 12 rabbits About nine such injections were given The serum of the goat was tested at various times during the course of immunisation, and it will be convenient to detail briefly the results obtained with this serum on various rabbits, as in certain cases highly interesting pathological lesions were found at necropsy In the earlier cases of the series purpuric lesions in the skin were unfortunately not searched for

Rabbit 1 —Received on June 20th 4 c c. anti plate serum subcutaneously (from test bleeding of goat after three doses) June 21st Considerable soft local swelling June 23rd Swelling very slight Rabbit remained well till July 15th, when sudden death took place Post mortem - Animal well nourished Peritoneal cavity filled with clotted blood and extravasated fæces *Two large fairly clean cut perforations of the bowel just below cæcum A few purpuric spots in small intestine Some faded purpuric spot in skin, especially that of hind limbs Large hæmorrhages in the psoas muscle and in the muscles over tibia and fibula Effusions of blood in the periosteal sheaths of these bones Stomach mucosa showed a cluster of minute hæmorrhages, but there was no general purpura of the organ* Liver and lungs healthy

Rabbit 2 —Received on June 20th 1 5 c c intravenously (test bleeding after four doses) Remained well

Rabbit 3 —Received on June 30th 2 c c intravenously (test bleeding after four doses) Remained well till July 3rd, when it was given a further dose of 3 c c intravenously Death occurred two hours thereafter Post mortem *Perforated ulcer of colon adherent by film of lymph to abdominal wall Purpuric patches round the ulcer* The colon contained another large ragged ulcer with greyish scurf on it It was not perforated *In the stomach were two similar large non perforated ulcers* Right lung collapsed and congested Some free blood in right pleural cavity The liver contained a few nodules of pseudotuberculosis so that some doubt remains whether the late purpuric lesions met with may have been of bacterial origin This is, however, unlikely

Rabbit 4 —Small Russian Received on July 6th 5 c c intraperitoneally (test bleeding after four doses) July 7th Three or four purpuric spots in skin over sternum July 8th Very large number of purpuric spots on skin of abdomen and back, and especially of extremities Petechiæ on ear On the same day it received a further dose of 3 c c intraperitoneally July 9th Rabbit looks well Received a third dose of 3 c c intravenously and died in convulsions five minutes afterwards Post mortem Enormous number of skin hæmorrhages Miliary purpura of stomach, One or two petechiæ on epicardium and a good number on large bowel and under kidney capsule Very large number in skin covering fore and hind extremities and tail No cataract. Large amount of free blood in peritoneal cavity One or two reddish lymph glands in axilla and groin Urine quite clear

Rabbit 5 —Very small Russian weighing 440 gm. Received on August 27th 4 c c intraperitoneally (test bleeding after seven doses) August 28th Animal looks fairly well Numerous purpuric spots on skin of abdomen and extremities Weight 431 gm August 29th Animal dead Post mortem Beautiful purpura of skin *Extensive purpura of cæcum and large bowel* A few spots in small intestine and in stomach Numerous petechiæ in diaphragm

Blood Changes in Experimental Purpura of the Rabbit

We append three tables (Nos IV A, IV B, and IV C) in which are recorded the blood changes, &c in the case of three rabbits inoculated intraperitoneally with the same dose (3 c c) of anti-rabbit plate serum

TABLE IV A —*Rabbit 33*

Date	Red cells	Plates	Leucocytes	P	E	L	Hb	C [illegible] time
July 15th*	5 732 000	648,000	12,200	28·0 %	2·0 %	70·0 %	[illegible]0 %	1 4'
„ 16th	4,864 000	100 000	10 400	5 5 %	0·5 %	5·0 %	[illegible] 0 %	2 [illegible]
„ 17th†	4,872,000	4[illegible] 000	9,800	27·5 %	1·0 %	71·5 %	[illegible]0 %	[illegible]

* At 4 P M received 3 c c anti rabbit plate serum intraperitoneally

† Killed with ether to obtain specimen of skin

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[2] Muir R. and McNee The Anæmia Produced by a Hæmolytic um Journal of Pathology and Bacteriology vol xvi p 410

appeared blurred except at the first moment of opening There was no doubling of objects, they seemed to "dissolve." He was crying the whole time and worrying as to whether he was going blind He kept *turning over* in his mind the succession of events from the beginning of the advance to the bursting of the shells At the dressing station he was still crying and shivering, he was taken thence to a hospital by horse ambulance, where he was given brandy, and then sent on by horse ambulance to another hospital, and thence by motor ambulance at night to X, where he arrived early on Nov 1st He thinks he must have slept on the ambulances as he *remembers nothing*

From Nov 1st to 4th at X, his eyes were bandaged and drops were instilled which "burnt terribly" No numbness or anæsthesia observed *Slight deafness* which soon passed off. On Nov 1st he shivered in bed almost incessantly, his thoughts were still running on events between the advance and the bursting of the shells No shivering after Nov 3rd. He says he *did not micturate* from Oct. 30th P M until Nov 2nd P M. and *did not defæcate* from Oct. 30th until Nov 5th (after aperient here) No involuntary passage of urine or fæces

Past history—He had been for two months in the Aisne district on the lines of communication, sleeping badly all that time owing to lumbar pains (and toothache during the first three weeks) He had failed to pass a medical examination some time previously because of renal trouble (abnormal amount of albumin in water) until after a long period of treatment He had had lumbar pains a few nights before coming to France

Present condition—*Nov 6th*—A well nourished man of nervous temperament, flushed complexion, and dark eyes Movements normal, skin sensations normal Eyes, fundi normal *Fields distinctly contracted*, especially on temporal sides Right eye—can read at normal distance but "things have a slight haze round them" Left eye—the haze is much greater, is unable to see letters until they are quite near

Nov 7th—Says he has lost his sense of taste and smell since the shells burst round him Gets up now

Nov 9th—Woke up last night and found himself crying, "not thinking of anything in particular", he at once "pulled himself together"

Nov 10th—Tested for *taste* (tongue protruded) and *smell* in order mentioned —

(1) Very strong sol. of sugar	Slightly sweet (only tasted after the tongue had been moved about)
(3) ,, ,, ,, salt	No taste
(4) ,, ,, ,, acid	No taste but "a peculiar feeling as if it dried the tongue"
(7) ,, ,, ,, quinine	No taste (later "a peculiar feeling of biting on the tongue")
(5) Carbolic acid (1 40)	No smell
(6) Ether	Faint smell like collodion
(8) Peppermint (strong)	Faint smell of peppermint.
(2) Tincture of iodine	No smell.

Hypnosis tried, patient explains later—"I insisted on resisting" *Suggestions* offered during concentration *Nov 13th*—Says his taste and smell are returning Fields of vision still restricted, perhaps slightly less so *Nov 15th*—He was transferred to England for further treatment

On Nov 16th the patient was admitted to the Middlesex Hospital London, under the care of Mr Arnold Lawson, who has kindly allowed me to append his note of the condition of the patient's eyes —

$$\text{Nov 25th}\quad \text{R E}\ \Big|\frac{+1\ 75}{+2\ 25},\qquad \text{L E}\ \Big|\frac{-1}{+2}$$

Visual acuity each eye 6 36, when under correction 6/18 Just below and to the outer of the left disc is a small clear buff patch in the choroid The upper inner margins of the discs are somewhat blurred and more densely white than elsewhere These features are probably not pathological The fields are definitely restricted especially on the nasal side of the retina being limited here to 40° in the right eye and to 70° in the left No central scotoma. Taste and smell were found affected on admission but these recovered earlier

Nov 27th—General condition improved Not so "nervy" Visual acuity under correction R E 6/24, L E 6/18 The patient is now (Feb 1st) attending the hospital as an out-patient

CASE 2—Corporal, aged 25 Admitted on Dec 11th, 1914 The patient says that he was buried for 18 hours on Dec 8th owing to a shell bursting and "blowing in" the trench in which he lay Can remember nothing until he found himself in a dressing station at a barn lying on straw. He says that then he could not see and that for this reason he fell over something when he got up and walked about there As to his past history, he came out to the war on August 13th, and was in the last two days' retreat at Mons and after at La Bassée Has slept very badly since the start, often when billeted taking large doses of whisky to procure sleep Has led a "fast" life and has had recent domestic worry

Present condition—*Dec 12th*—A healthy looking man with flushed face and large dark eyes with wide pupils His general manner does not inspire one with confidence in his reliability Complains of pains in abdomen, back and limbs, and of difficulty in seeing The pains are chiefly in the knees and ankles His *sight has been very indistinct* since he was "buried" Says that if he looks at an electric light it takes him "five minutes" before he can see anything again. His vision has much improved since Dec 8th, but he can only read when the type is close to his eyes and not for long, "it all becomes blurred" Heart, lungs, and joints appear normal Abdomen distended and tender in lower part *Bowels not opened for five days* Aperient is effective Vision R E 5/60 L E 2/60 Media clear Fundi natural[1] Pupils and eye movements normal. Hearing normal

Dec 17th—*Smell* Fails to smell peppermint, ether, iodine tincture, and carbolic acid (1 40). *Taste* (tongue protruded) Very strong solution of sugar—tasted only after movements of tongue are allowed. Very strong solution of salt—"feels like petrol does on the hand," tasted only after movements of the tongue are allowed. Solution of acid—"salty, like alum."

Dec 19th—Complains that he does not sleep, but the sister in charge of his ward says that he sleeps well. *Treatment by suggestion* (during and without hypnosis) was begun, and continued daily until patient's transfer to England. On the second trial and afterwards a state of light hypnosis was easily induced. The deeper stages, involving hallucinations, anæsthesia, and post-hypnotic amnesia, could not be reached on any occasion But the lighter stages (in which the patient responded to suggestions that he could not open his eyes, close his hand, stop laughing and the like) sufficed to bring about assurance of a good night's sleep, gradual restoration of memory, and (later) improvement in visual and olfactory acuity in near vision, in visual fields, and in colour sensibility The improvement in visual acuity and near vision is shown in the following table —

—	Visual acuity Both eyes.	Near vision.	
		Right eye	Left eye
Dec 15th	Before hypnosis, 5 60	No 15 Jaeger (badly)	Less than No 15 Jaeger
, 23rd.	After ,, 3/36.	No. 12 Jaeger	No 15 Jaeger (badly)
, 26th.	Before ,, 1/6	No 6 ,,	No 12 Jaeger
	After —	No 4 ,,	No 10 ,,
, 27th.	, 2/6.	No 2 ,,	No 10 ,
28th.	No 4/6	No 1 ,	No 4 ,,

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[1] Colonel W T Lister A.M.S., reports (Dec. 15th) that under homatropine and cocaine the refraction of the patient's eyes is as follows:

$$\text{R.E}\ \Big|\frac{+2\,5}{+2\,5}\qquad \text{L E.}\ \Big|\frac{-1?}{0\ \text{or}\ -0\,5}$$

He makes at the same time the following note on the fundi "Right eye Sector below disc is deficient in retinal pigment so that the choroidal vessels are abnormally visible but there is no pathological pigmentation and there are no areas of atrophy Left eye Internal crescent vessels drawn to nasal side and lack of retinal pigment on nasal side (nasal staphyloma) The atrophic appearance is more marked in this eye even the choroidal pigment is deficient, giving a pale area. Macula normal. Both discs are pale, and there is connective tissue by the sides of the vessels. The whole condition in my opinion, might be congenital."

injection of the guinea pig with anti rabbit-plate serum, and *vice versâ* Recently, being in possession of a supply of anti guinea-pig plate, anti-rabbit-plate, and anti rat plate sera, one of us has carried out the following experiment, which shows clearly that a heterologous anti plate serum has no purpura producing property

TABLE V

Rat A	150 gm	received 7/12/1914,	3 c c	anti rat plate serum
„ B	90 „	„ „	3 „	anti guinea pig plate serum
„ C,	140 „	„	4 „	anti rabbit plate serum

(All inoculated subcutaneously)

Guinea pig A	230 gm	received 7/12/1914	3 c c	anti guinea pig plate serum
„ B	230 „	„ „	3 „	anti rat-plate serum.
„ C	230	„ „	4 „	anti-rabbit plate serum

(All inoculated subcutaneously)

Rabbit A,	400 gm.	received 7/12/1914	4 c.c.	anti rabbit-plate serum.
„ B,	380 „	„ „	4 „	anti guinea pig plate serum
„ C,	380 „	„ „	4 „	anti rat plate serum

All inoculated intraperitoneally)

On Dec 8th Rat A showed several purpuric spots near tail and also on legs Other two rats showed nothing and appeared quite lively Guinea pig A had an extensive hæmorrhagic infiltrate over the whole of the abdomen and did not appear well The other two animals showed no purpura and were quite lively Rabbit A had numerous purpuric spots all over its skin and was obviously ill The other rabbits were quite lively and showed no purpura On Dec 9th the animals inoculated with the homologous sera were still more drowsy and listless Other animals appeared quite well On Dec 10th Guinea pig A and Rabbit A dead

Post mortem Guinea pig A showed beautiful skin purpura, extensive œdematous and hæmorrhagic infiltrate spreading over abdomen from seat of injection and extending deeply into the thigh muscles, and miliary purpura of stomach There was no cataract, and the urine was quite clear Rabbit A showed a large œdematous and hæmorrhagic subcutaneous area over upper thorax, neck, and fore limbs also a larger hæmorrhage under skin of left cheek. Miliary purpura of stomach and slight purpura of intestine. Liver yellow and mottled No cataract Urine quite clear

The other animals remained well and put on weight

Dec 11th Rat A dead. Post mortem Purpura of skin particularly marked over skull and cheek A few spots in pyloric portion of stomach and a few in small intestine Urine was blood stained (hæmoglobinuria)

The other animals, which received the heterologous plate sera, remained well and put on weight

Summary and Conclusions

1 Data have been recorded on the blood changes in guinea pigs after inoculation with anti guinea pig plate serum The early fall in the number of platelets simultaneously with the outburst of skin purpura is found to be a marked feature

2 Purpura has also been produced in rabbits and rats by inoculation with the respective anti plate serum The blood changes in rabbits have been followed with results similar to those obtained in guinea pigs

3 Anti plate serum, in addition to its purpura producing properties, possesses in common with other cytolytic sera considerable lytic powers, which in all probability contribute largely towards the fatal issue in small animals Death, however, may occur as the result of extensive hæmorrhages alone without any obvious lytic changes as evidenced by hæmoglobinuria

4 Sera obtained by immunisation with red cells or leucocytes do not produce purpura

5 Purpura is not produced by inoculating animals with heterologous anti plate sera.

The histology of the purpuric lesions will form the subject of a later communication.

A CONTRIBUTION TO THE STUDY OF SHELL SHOCK.

BEING AN ACCOUNT OF THREE CASES OF LOSS OF MEMORY, VISION, SMELL, AND TASTE ADMITTED INTO THE DUCHESS OF WESTMINSTER'S WAR HOSPITAL, LE TOUQUET

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THE remarkably close similarity of the three cases which are described in this paper is shown in the following synopsis —

—	Case 1	Case 2.	Case 3.
Cause	Shells bursting about him when hooked by barbed wire	Shell blowing trench in	Shell blew him off a wall.
	Preceding period of sleeplessness.	As in Case 1.	?
Vision	Amblyopia. Reduced visual fields	?	As in Case 1
Hearing	Slightly affected for a brief time	Not affected.	As in Case 2.
Smell	Reduced acuity	Total anosmia	Unilateral anosmia and parosmia.
Taste	Almost absent	Reduced acuity	As in Case 2.
Other sensations	Not affected.	As in Case 1	As in Case 1.
Volitional movements	„	„	„
Defæcation	Bowels not opened for five days following shock		?
Micturition	Urine not passed for 48 hours	Not affected	As in Case 2.
Memory	Apparently slightly affected	Very distinct amnesia	„
Result of treatment	Gradual improvement by rest and suggestion	As in Case 1 supplemented by hypnosis	As in Case 1

CASE 1 —Private, aged 20 Admitted on Nov 5th, 1914 On the nights of Oct 28th and 29th he slept in the booking hall of X station, "not much sleep there" On the 30th he motored in a bus from X to Y, arriving there at 7 30 P M, billets found at 8 P M, on guard from 10–11 30 P M, and from 1 45–3 45 A M At 11 A M on the 31st for the first time he went to the firing line His platoon advanced to one set of trenches and then crossed the road to another, only to find it filled with cavalry and to be told that there was no room for them During the retirement from this trench, at 1 30 P M, they were "found" by the German artillery Up to that time he had not been feeling afraid, he had "rather been enjoying it," and was in the best of spirits until the shells burst about him

He was now retiring over open ground kneeling on both knees and trying to creep under wire entanglements when two or three shells burst near him As he was struggling to disentangle himself from the wire three more shells burst behind and one in front of him (An eye-witness in this hospital says that his escape was a sheer miracle) After the shells had burst he succeeded in getting back under the wire entanglements, all his comrades had retired already He managed to get into a trench and as the firing slackened he rejoined his company Immediately after the shell had burst in front of him his sight became blurred It hurt him to open his eyes, and they "burned" when closed. The right eye seemed to have 'caught it" more than the left At the same moment he was seized with shivering, and cold sweat broke out especially round the loins He thinks the shell behind him gave him the greater shock—'like a punch on the head without any pain after it.' The shell in front cut his haversack clean away and bruised his side and apparently it burned his little finger It was this shell he says, which 'caused his blindness"

Falling in with two comrades he was led by them one on either side, to the dressing station He opened his eyes occasionally to see where he was going but everything

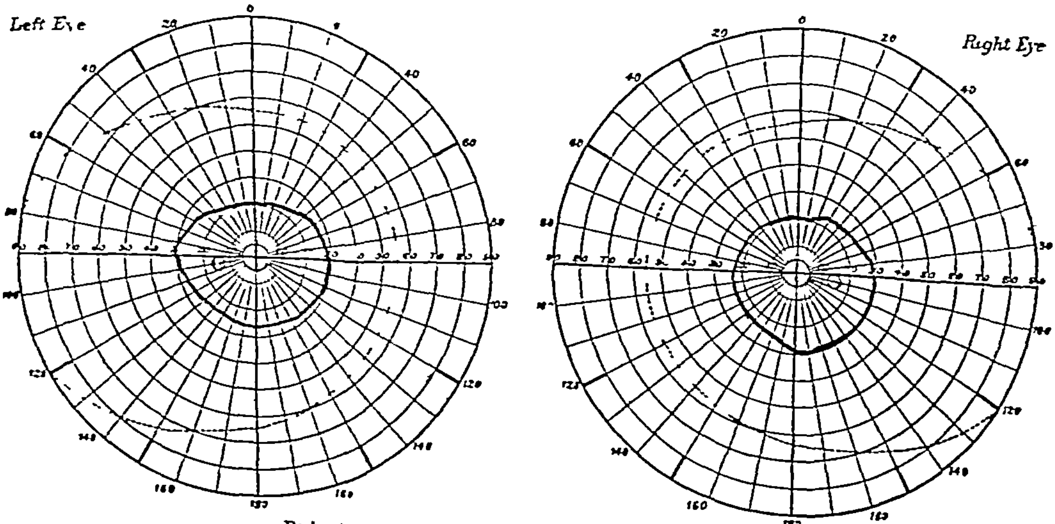
To recover the memory of this period other methods, in addition to hypnosis, were vainly tried His dreams were generally of incidents belonging to earlier periods of the war, never of the trench-shelling Attempts to obtain revival of the lost memories by getting him (*a*) to concentrate his attention on the scene of the shell bursting or of the N dressing station, or (*b*) to record his thoughts when in a state of reverie, were fruitless

How far the patient's memory, so far as it returned, can be trusted is not altogether certain A man of the same regiment happened to be warded here at the time He believes that the patient could not have remained in the trench for longer than an hour after the shell had burst He declares that he saw him get out of the trench and report himself sick to Corporal R, and that he heard Corporal R tell the patient to go off on foot to the M dressing station. Until the day after the patient's arrival at the barn he never saw the patient again, when he was brought in himself there He says that the doctors at the barn considered the patient "off his head" He does not believe that the N Regiment was anywhere in the neighbourhood. He says that the man K. had been mortally hit some days before

On further examination the patient says he has no recollection of reporting himself to Corporal R or of meeting his fellow patient while at the barn, and he is quite certain that *somehow* he reached the N s dressing station before he got to his own.

On the other hand, another fellow patient here happened to belong to the N Regiment and was able to confirm the patient's account by stating that the trenches of the N Regiment were on that day immediately next to those of the M Regiment and that the N and M. dressing stations were situated in the same village, the former in a cottage about three quarters of a mile beyond the latter, so that one would have to pass the M dressing station on the way from the trenches to the N dressing station

CHART 2.



Perimeter charts from Case 3 showing contraction of fields.

There is hence a possibility that the patient wandered in a state of somnambulism from the trench past his own dressing station to that of the N s or that he wandered first into the N trenches and was then brought, as he avers, to the dressing station by men of the N Regiment But of this last point the patient is not now so certain. He still insists that a man stepped into his fallen trench on top of him.

On Dec 30th the patient was transferred to England for further treatment, and on the 31st he was admitted to the London Temperance Hospital under the care of Mr J S Hosford, whence he has, I understand, now been discharged.

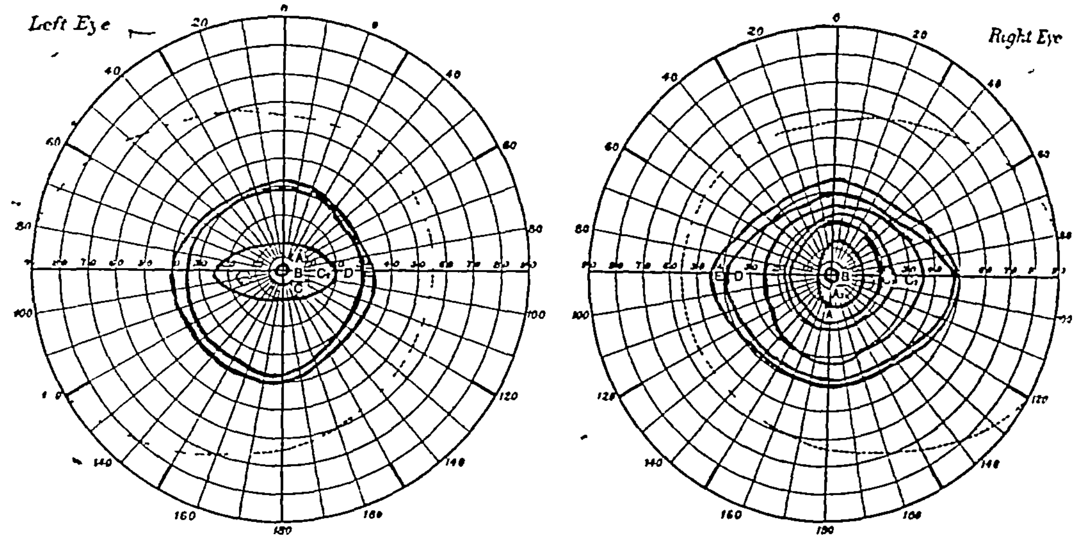
CASE 3 —Private aged 23 Admitted on Jan 26th, 1915 The patient says that he was blown off a heap of bricks 15 feet high owing to a shell bursting close to him. Thinks he must have fallen into a pool of water, as he next remembers finding himself, about 3 P M. the same afternoon in a cellar near a church with his clothes drenched. He does not know how he got there or how he left the cellar, but he remembers being in another hospital before he was admitted here He cannot say if anyone was in the cellar with him He remembers someone in the train talking to him and reminding him of being in the cellar

Present condition —Jan 27th —A healthy-looking man, well nourished but obviously in an extremely nervous condition He complains that the slightest noise makes him start. His legs feel weak, and he has pain in the precordial region His *sight has been very much impaired* since the shock. Distant vision he says is affected, and objects and type become blurred when long looked at He has slept very little the last two nights Heart lungs and joints appear normal. Abdomen general spasm of muscles of wall on being touched. Hands tremulous. Knee jerks normal but the first attempts to evoke them provoked a spasm of the calf muscles and a few general convulsive movements as the patient lay in bed. His hands became very tremulous and his forehead sweated profusely He appeared as if about to faint and says that he felt cold and dizzy and experienced "round and round movements of the stomach" The slightest touch on the legs provoked well marked spasm of the quadriceps muscles of the same thigh. Plantar reflexes not obtainable. Extensor muscles of the toes appeared to be in a state of tonic contraction

Jan 30th —Slept well last night for the first time *Bowels not opened for five days* since the shock. Took an aperient last night and this morning, bowels open to-day *Eyes* Fundi normal. *Fields, distinctly contracted* as in Chart 2. Near vision, either eye, No 14 Jaeger, less for short words Visual acuity (investigated by Colonel Lister, A M S)—at first 6/24 but improved by encouragement and the indiscriminate use of weak + or − lenses to nearly 6/6

The improvement in visual fields is shown on the annexed Chart 1[2] The "functional" character of this restriction of fields is shown by the fact that the patient was never observed to collide with objects when walking, and that he was able to box here when convalescent

CHART 1.



Perimeter charts from Case 2. A Dec 14th A_1 at start A_2 after testing other eye B Dec 21st C Dec 26th C_1 before hypnosis C_2 after hypnotic suggestion D Dec 27th E, Dec 28th.

The improvement in *colour sensibility* was as follows — Dec 14th Half inch square of colour recognised at 22 cm R E, 7 5 cm L E Dec 27th 350 cm R E 50 cm L E The sensibility of the eyes to red appeared to be keener than that to any other colour Thus the red square was recognised at 100 cm by the left eye on Dec 27th, while other colours (yellow, blue, and green) could only be recognised at 50 cm So, too, on Dec 14th the visual field for the recognition of coloured squares was limited in both eyes to the fovea save in the case of red, the field for which in the right eye extended definitely, though slightly, beyond the fovea towards the nasal side of the retina

The improvement in *olfactory acuity* is shown by the fact that on Dec 27th he was able to smell and to recognise ether, peppermint, camphor, and turpentine, although still unable to smell carbolic acid (1 10), tincture of iodine, or methylated spirit

The gradual restoration of *memory* occurred as follows —

Dec 22nd —During hypnosis suggestions made evoked a description of how the ground fell in on him at the trenches He says that he was buried up to the neck and that Sergeant L dug him out Men of the N Regiment (not of his own regiment) took him to their dressing station, but the medical officer there "packed him off" to the dressing station of the M (his own) Regiment He can now remember Captain S (attached to his regiment from the ——) speaking to him and giving him a drink He spoke to him when he reached the barn (the M 's dressing station) While under hypnosis the patient is told that he will remember this when he awakes He does so but cannot explain why he had not been able to recall it before

Dec 23rd —To-day *before hypnosis* he remembers another "big hospital" to which he was taken on leaving the barn—a "big square room with a stove in the centre"—opposite which he was placed But he cannot recall how he got there, or how he left to come here by train He cannot remember being carried on a stretcher until they took him out of the train at Étaples (the railway station for this hospital) He says that there was 'no light' in the barn all the time he was there (24 hours) He remembers struggling in the trench 'for hours" after he was buried Finally he gave it up "I went to sleep and was enjoying myself at home when they started 'messing me about Someone fell on me and woke me up I 'tumbled to things a bit' when they got me out I got up and then fell down and it was all a 'wash out.'"

Under hypnosis he confirms the above, adding that in his struggles in the trench he "said a prayer or two" and that when he fell asleep he thought himself in the R Hotel at S where he had lived for years and is well known 'I was listening to a young lady I know [not intimately] playing the piano I saw Mr S [the landlord] and Mrs S The sleep and dreams kept coming and going It was dark when they dug me out After I got out a chap said 'the fellow s mad' and I said 'You re a liar' Now, I remember a place between the barn and the hospital rather a smart building, a long, low place I was on a stretcher there I must have got there by a horse ambulance but I cannot remember this"

Dec 26th —Before hypnosis he recalls going to the clearing hospital (just mentioned) from the barn in a horse ambulance on a stretcher at midnight He says "I can remember talking to a major the next morning and having a sleeping draught at night Then I went to another hospital at B I had a ride in a motor ambulance on a stretcher, but whether this was from or to that hospital I cannot remember I remember the journey in the train here distinctly There were continual offers of tea cocoa sweets, and cigarettes They wouldn t let us sleep for these things I had a bad headache all the way down from the trenches I did not bother much about my sight, as I thought it was imaginary It wasn't until I got rid of the pain in my stomach which I came in with that I began to find my sight wouldn t let me read"

Dec 27th —While in hypnosis he gives the name of the man in the same trench with him as K He "sees very clearly the position of the trenches their shallowness and covering He remembers that he had been two days in the reserve trenches before he was sent on Dec. 7th to the firing line He says, ' The explosion lifted us up and dropped us again It seemed as if the ground underneath had been taken away I was lying on my side, resting on my hand when the shell came I got my right hand loose but my left was fixed behind a piece of fallen timber At last I dropped off to sleep and had funny dreams of things at home One dream in particular I have thought over many times since I haven't been able to make out why I should dream of the young lady playing the piano I don t know her name and don t think I have seen her above twice"

Dec 29th —Before hypnosis he says that he can now "see" the N s dressing station—a one storeyed house with two non communicating rooms He was taken first into the left-hand room, and later into the other in which the medical officer sat No further information obtainable *under hypnosis* He cannot recall how he got to the N s dressing station from the trenches with water, alcohol and ether, and dried The calcium content of the salt prepared in this way was determined in 6 cases with the following results (i.) 9 4 per cent, (ii) 9 5 per cent, (iii) 9 2 per cent, (iv) 9 3 per cent, (v) 9 4 per cent, and (vi) 9 6 per cent., an average of 9 4 per cent., which corresponds closely to the theoretical calcium content, 9 39 per cent., of a salt with the formula $(C_6H_9O_7)_2$ Ca.

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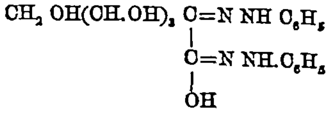
[2] My thanks are due to Colonel Lister A M S who by presenting the hospital with a portable perimeter and test types made these observations now possible

To separate the free acid from the calcium salt it was suspended in water and a stream of carbon dioxide gas passed through for two hours The calcium carbonate precipitate was then filtered off, and the filtrate concentrated by evaporation *in vacuo* over sulphuric acid A thick, yellowish, hygroscopic syrup, from which no crystals separated, even after several months, was obtained It had a sweetish acid taste, was lævorotatory, fermented with brewer s yeast, rapidly reduced alkaline solutions of copper and bismuth, and gave both Seliwanow's and Pinow's tests

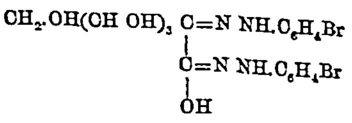
The phenylosazone and parabromphenylosazone were then prepared by the method of Maquenne, and the melting point determined on the "bloc Maquenne" The phenylosazone separated out as rather coarse yellow crystals arranged in sheaves The purified product in all the cases examined had a melting point of 223° C, which is 7° lower than the melting point of dextrosazone and lævulosazone The percentage of nitrogen in the osazone was determined in two cases by Dumas s method, giving in one instance 14 80 per cent and in the other 14 99 per cent These results suggest that the formula of the compound is probably—



$$\begin{array}{l} CH_2\,OH(CH.OH)_3\,C{=}N\,NH\,C_6H_5 \\ \qquad\qquad\qquad\quad\ \ | \\ \qquad\qquad\qquad\quad\ \ C{=}N\,NH.C_6H_5 \\ \qquad\qquad\qquad\quad\ \ | \\ \qquad\qquad\qquad\quad\ \ OH \end{array}$$

—with a theoretical yield of 14 97 per cent of nitrogen.

The parabromphenylosazone was obtained as fine yellow felted needle-like crystals In 4 cases of simple "lævulosuria" it was found to have the following melting points (i) 196° C, (ii.) 197°, (iii.) 197°, and (iv) 198° While in 5 cases in which the substance had been isolated from the urine of diabetics in which dextrose was also present the following results were obtained (i) 198° C (ii) 197° (iii) 198°, (iv) 198°, and (v) 196° The close correspondence of the melting points in diabetic and non-diabetic cases suggests that the lævorotatory substance is the same in both The percentage of nitrogen present in the parabromphenylosazone was determined in two of the cases, one yielding 10 56 per cent and the other 10 40 per cent., results which correspond to the theoretical yield of 10 52 per cent. for an osazone with the formula—

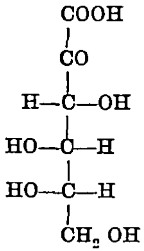


$$\begin{array}{l} CH_2.OH(CH\,OH)_3\,C{=}N\,NH.C_6H_4Br \\ \qquad\qquad\qquad\quad\ \ | \\ \qquad\qquad\qquad\quad\ \ C{=}N\,NH.C_6H_4Br \\ \qquad\qquad\qquad\quad\ \ | \\ \qquad\qquad\qquad\quad\ \ OH \end{array}$$

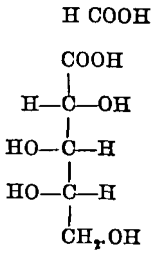
It will thus be seen that the melting point and nitrogen content of the phenylosazone and parabromphenylosazone do not correspond to the osazones formed by true lævulose, but that they point to the lævorotatory substance which occurs in the urine, both in diabetic and non diabetic cases, being a ketonic acid To confirm this a study of its oxidation products was undertaken.

10 c c of the syrup prepared in the manner previously described were dissolved in 100 c c of water and heated with 20 grm of lead peroxide and 10 grm. of sulphuric acid on a water bath for three hours The mixture was then cooled and filtered The filtrate was treated with barium carbonate until the acid was neutralised then boiled and filtered The filtrate was shaken with animal charcoal filtered concentrated to 50 c c and mixed with 100 c c of absolute alcohol After standing for four hours the mixture was filtered The precipitate was then washed with absolute alcohol, dried, and the barium content determined 0 7428 grm was found to give 0 3718 grm of barium sulphate corresponding to 29·46 per cent *of barium* for the original compound This yield corresponds within the limit of experimental error, to the theoretical yield of 29·40 per cent. of barium for barium arabonate $Ba(C_5H_9O_6)_2$, the oxidation product produced by the action of lead peroxide on an acid of the formula, $CH_2\,OH\,(CH.OH)_3\,CO\,COOH$

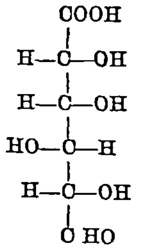
To confirm the presence of arabonic acid a portion of the salt was dissolved in water and the barium precipitated by carbon dioxide gas, the excess of which was subsequently removed by boiling After filtering off the precipitate of barium carbonate, the solution was evaporated *in vacuo* over sulphuric acid In five days white crystals appeared, and these were found to have a melting point of 97° C corresponding to that of arabonolactone These results pointed to a structural formula of—



Isoglucuronic acid.



Arabonic acid.



Glucuronic acid

This substance, from its analogy to glucuronic acid, we propose to name isoglucuronic acid.

In the course of our investigations we have examined specimens of urine from 30 cases of so called lævulosuria and 50 of diabetes, in which a lævorotatory substance was present along with the dextrose, but in none of them could any true lævulose be found, the lævorotatory body in each instance being proved to be isoglucuronic acid The data upon which a diagnosis of lævulosuria has been based in most of the published cases are such that the results obtained might equally well be explained by the presence of isoglucuronic acid, for the reduction of Fehling's solution, a positive Seliwanow's reaction, lævorotation, these properties being abolished by previous fermentation with yeast, and the formation with phenylhydrazine of an osazone which has the melting point of glucosazone are characters shared by both bodies

In some of the more recent cases reliance has been placed upon the formation of a crystalline calcium compound and the separation of a methylphenylhydrazine derivative with a melting point of 153° C, but, as we have shown, isoglucuronic acid forms an insoluble compound with calcium, and we have found that with methylphenylhydrazine it yields an osazone which melts at 150° C The difference between the two melting points is so slight that it cannot be relied upon as a means of differentiating the substances, especially as we have found that the melting point of methyl phenyllævulosazone is not very sharp and is consequently difficult to determine with certainty That this is the case is also suggested by the fact that melting points of 153° C,[3] 159° C,[4] and 158°–160° C[5] for the compound are given in recognised text-books In support of our contention that isoglucuronic acid and lævulose are distinct substances, it may be mentioned further that a mixture of equal parts of the methylphenylosazones prepared under identical conditions has been found to melt at 120–130° C on the bloc Maquenne," whereas the osazone of lævulose melts at 162° C and that of isoglucuronic acid at 155° C The only published case in which it seems to have been conclusively proved that lævulose was present in the urine is that described by Otto Neubauer,[6] for in this instance the sugar was isolated in a crystalline

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[3] Friedmann and Kempf: Abderhalden's Handbuch der Biochemischen Arbeitsmethoden 1910 vol iv p 1437

[4] Pincussohn Med-Chem Lab-Hilfsbuch, 1912, p 359

[5] Neuberg and Strauss: Quoted by Schulz, Neubauer Huppert, Analyse des Harns 1910 p. 443

[6] Münchener Medizinische Wochenschrift, 1905, Band lii 1525

Smell Has complained until to day of a *subjective sensation* of the odour of cordite. This has left him "since the bowels were open" *Left nostril fails to detect* smell of ether, peppermint, eucalyptus, ammonia, carbolic acid, or iodine tincture, all of which, save the last, are at once recognised when placed beneath the right nostril No signs of nasal obstruction *Taste Only tastes very strong* solutions of sugar, salt, and acid, and then only when the tongue has been withdrawn and moved about the mouth, the taste is described as "*faint*"

Feb 1st—He complains that he gets very excited when anyone addresses him He still fails to remember how he got to the cellar, but he now remembers someone there asking him his name and regiment He says 'When I got into the hospital before I came to this one I can now remember being put against a wall and then being taken into a small room to see the doctor, who gave me a ticket and told me I was suffering from concussion I think I must have gone to sleep after this, as I don't remember anything else until I was in the train There a Royal Army Medical Corps bearer brought me a German prisoner to talk to He was in the Bavarian Guard and had just seen his first action

[Patient is still under treatment]

Comment on these cases seems superfluous They appear to constitute a definite class among others arising from the effects of shell shock The shells in question appear to have burst with considerable noise, scattering much dust, but this was not attended by the production of odour It is therefore difficult to understand why hearing should be (practically) unaffected, and the dissociated "complex" be confined to the senses of sight, smell, and taste (and to memory) The close relation of these cases to those of "hysteria" appears fairly certain

I have to thank Captain W P S Branson and Captain H Pritchard, R A M C, in whose wards these patients were placed, for permission to make these investigations, and Major Gordon Watson, R A M C, Commandant, for permission to publish them

THE PSEUDO-LÆVULOSE OF DIABETIC AND OTHER URINES

BY P J CAMMIDGE, M D LOND,

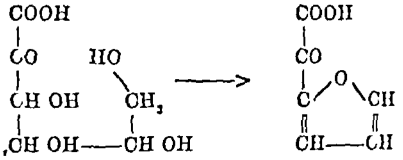
AND

H A H. HOWARD, B Sc

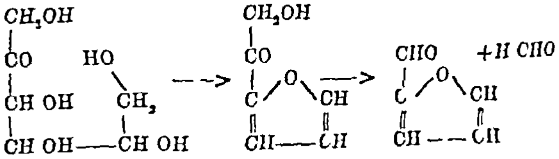
IN a previous paper[1] we pointed out that the lævulose usually met with in urine, unlike the lævorotatory sugar of plant origin, is precipitated from acid solutions by basic lead acetate, resembling in this respect glucuronic acid This observation appears to have been first made by Külz, who published in 1890 a paper[2] giving the result of his analyses of the so called urinary lævulose Like plant lævulose, this substance reduces copper and bismuth in alkaline solutions, is lævorotatory, and is fermented with brewer's yeast Külz also found that with phenylhydrazine it gave an *osazone* which in appearance, melting point (205° C), and on analysis corresponded to dextrosazone According to his analysis it has a formula nCH_2O Unlike plant lævulose, however, it could not be obtained in a crystalline form, but was only secured as a syrup The rate at which it reduced copper solutions, its rapidity of fermentation, and its specific rotatory power, but above all the ease with which it was precipitated by hydrates of the heavy metals, further suggested that urinary and plant lævulose were not identical substances Other workers have since published similar results, but no attempt appears to have been made to establish the exact nature of the substance

In diagnosing lævulosuria reliance has been placed upon a generally positive reaction with Seliwanow's test and the different readings obtained by reduction and the polarimeter Borchardt, using a modification of Seliwanow's test, has claimed that lævulose does not *occur in the urine, and that* previous statements to the contrary were due to want of care in testing for it In his modification the urine is treated with hydrochloric acid and *resorcin, made alkaline* with *sodium carbonate*, and then extracted with ethyl acetate On carrying out this test with a solution of plant lævulose the ethyl acetate extract is coloured red, but with urines giving the ordinary Seliwanow reaction the watery solution retains the pigment and the extract is yellow

These results obtained with Borchardt's test would be explained if, instead *of* lævulose, an acid with the *constitution*, $CH_2OH\,(CH\,OH)_3\,CO\,COOH$ were present The reaction would then be—



—and *this derivative being* a ketonic acid would dissolve in the sodium carbonate solution and not be extracted by the subsequent treatment with ethyl acetate *If, however, lævulose* were *present the following reactions would occur* —



—and the furfuryl derivative being *non* acid in character would not be soluble in the sodium carbonate solution, and hence would be extracted by the ethyl acetate Since the unmodified Seliwanow and Pinow reactions are readily *obtained in* a considerable number of cases, and in view of Borchardt's claim that true lævulose never occurs in the urine when tested *for* by his method, it seemed to us *that the so called* lævulose might be *the hitherto* undescribed ketonic acid, of which we have just given the formula This formula would explain its resemblance to glucuronic acid with respect to lead acetate, and would also admit *of the formation* of an insoluble calcium salt and a characteristic methylphenylhydrazine derivative

In order to investigate these *points* and to establish *the identity* of the substance specimens were prepared by the following procedure —

The urine was concentrated to a fifth of its volume and a saturated solution of lead acetate added using *one-tenth of the original* volume of urine taken The mixture was then heated on a water bath at 90° C, cooled filtered and the precipitate washed with water The precipitate was suspended in 100 c.c. of a saturated solution of sodium sulphate and digested for two hours when it was diluted to 500 c.c., filtered and the filtrate tested for lead When all the lead was found to have been removed the filtrate was mixed with 50 c c of saturated calcium chloride solution and 50 c c. of lime water After standing for two hours the precipitate that had formed was filtered off well washed

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[1] THE LANCET Sept. 26th 1914 p 791

[2] Zeitschrift für Biologie, Band xxvii p 220 1890

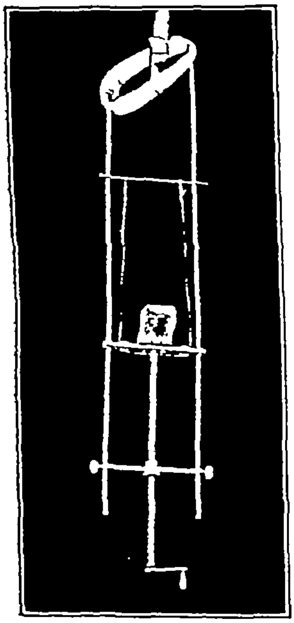
A NOTE ON THE TREATMENT OF GUNSHOT WOUNDS OF THE FEMUR

BY CUTHBERT WALLACE, M B, B S LOND, F R C S ENG,
SURGEON TO ST THOMAS'S HOSPITAL, LONDON AND MAJOR, R.A.M.C BRITISH RED CROSS HOSPITAL, NETLEY

A LITTLE time ago Mr B C Maybury and myself devised a modification of Thomas's knee splint with the idea of producing powerful extension of the leg during the process of plating fractures of the femur or tibia. When the Red Cross Hospital at Netley was opened the difficulty of adequately treating compound fractures of the femur was soon apparent The chief difficulty was in maintaining extension and at the same time providing for efficient dressing and (possibly more important) the comfort of the patient It was determined to try this modified Thomas's splint The result more than came up to expectations, and cases which arrived with bad wounds and suffering great pain during the process of dressing were soon put at their ease and improved rapidly In addition to this, some cases which were admitted six weeks after the injury with 3 inches of shortening were soon restored to their normal, or nearly normal, length, and union in a good position resulted

A short description of the splint (Fig 1) may be of service to those in charge of other hospitals The splint as made consists of the original Thomas's crotch ring with a lateral diameter of 9½ inches The two side pieces are made of mild steel, are parallel, and 8 inches apart Sliding on these parallel side pieces are two transverse bars The upper one is fitted with an ordinary footpiece The lower one is perforated to accommodate a large machine cut screw The top of the screw runs in a collar in the transverse footpiece

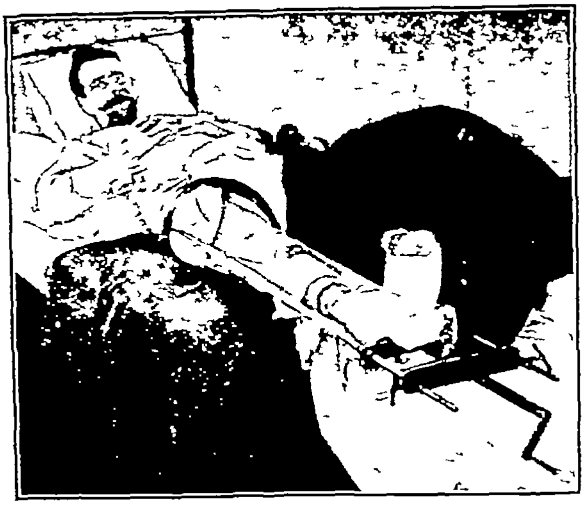
FIG 1.



The splint unapplied Shows the method of obtaining extension by means of a pin Note the wire fastened by rings to the pin and passing over the pulleys in the transverse bar that carries the footpiece The traction screw is longer than is now used.

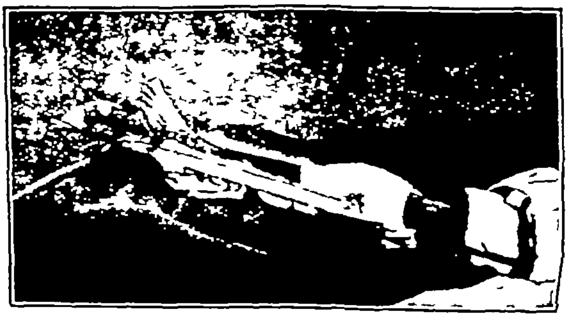
The process of application is as follows The ring is slipped over the foot and adjusted in the ordinary way, care being taken that the inner and back part of the ring gets a bearing on the tuber ischii. As the ring is rather large this is ensured by putting a pad on the outer side of the thigh The foot is then fastened to the footpiece by a stirrup extension or a leather anklet, or by webbing embedded in plaster put on over wool wrapped round foot and ankle The limb is supported in the splint by the two parallel bars in the same way that is usual in the Hodgen splint The lower transverse sliding piece is then fixed to the two parallel bars by screws provided for the purpose, and extension applied to the limb by turning the traction screw The end of the splint is either rested on sandbags or swung by a chain from a masthead or from the roof of the hut (Fig 2) By this means the patient is free to move about in bed within reasonable limits, and the dressing of a posterior wound can be effected without discomfort to the patient by either raising the splint or turning him on one side, the constant steady pull of the screw preventing any undue shifting of the limb and consequent pain to the patient If the limb tends to sag when the patient is turned on his side it can be prevented by loops of bandage fastened to the uppermost bar (Fig 4)

FIG 2.



The splint applied to a fracture in the lower third of the femur The splint is slung to the roof of the hut by a chain. Note the small pillow under the outer side of the ring The man's face is expressive of his comfort.

FIG 3



The splint applied to a fracture in the middle of the femur A pin has bee driven through the bottom of the shaft of the bone and extension produced by a chain. The man's foot had been injured by a bullet, so that a strapping extension could not be applied.

In those cases in which it is impossible to apply the stirrup extension, either because of the state of the skin or from the presence of wounds in the leg, a pin can be driven through the lower end of the femur and the extension applied by a chain or thick picture wire, which runs from one end of the pin down to the transverse footpiece over two pulleys let into this, and up again to the opposite end of the pin The use of the pulleys is to allow form, which is impossible with isoglucuronic acid Moreover, the crystals were found to be soluble in absolute alcohol, but were insoluble in a saturated alcoholic solution of lævulose

While therefore true lævulosuria, or fructosuria, may be met with it is apparently a rare condition, and in the majority of cases it seems probable that the term is a misnomer, and that the lævorotatory reducing substance that occurs in the urine is in reality the ketonic acid, isoglucuronic acid, we have described ' This is differentiated from lævulose by Borchardt's test, by being precipitated from an acid solution by saturation with lead acetate, and the melting point of the parabromphenylosazone

DEATH FROM STRANGULATED INTERNAL HÆMORRHOIDS

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AND

M K JOSHI, M R C S Eng, L R C P Lond,
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INTERNAL hæmorrhoids are an extremely common complaint, but although they give rise to a considerable amount of discomfort and inconvenience, and even disability, it must be very rarely that they are the direct cause of death Cases of death from embolism following thrombosis of varicose veins in the leg are not uncommon, but a fatal issue from thrombosis of veins in the rectum is, in our experience, a very rare event It is obvious that the danger of embolism resulting from thrombosis of the rectal veins is not so serious as when the veins of the leg are involved, for whereas the latter veins drain direct into the general circulation, and consequently the detached portion of clot can reach the heart, in the case of thrombosis of the rectum the embolus is more likely to be in the liver, where it would not have such serious consequences

A case is recorded in THE LANCET of Sept 23rd, 1911, by Dr David A Alexander of portal pyæmia following thrombosed internal piles This patient had all the symptoms of portal pyæmia—rigors, ascites, œdema of the legs and abdomen, and a high temperature The patient was very seriously ill for a period of six months, after which he appeared to recover, only to have a relapse three months later, from which, however he again recovered The only cause for the portal pyæmia that could be found was a limited tract of thrombosis in the hæmorrhoidal veins

The following case, which was under our care at St Mark's Hospital, is evidently of a similar nature, but unfortunately ended fatally Although we think there was portal pyæmia in this case it was not so marked as in Dr Alexander's case The patient died apparently from septicæmia, the result of extensive gangrene of the rectum and neighbouring tissues, but had he survived longer we have very little doubt that the typical abscesses in the liver would have been evident The only treatment which would appear to have given the patient any chance of recovery was an early colotomy, which would have enabled the bowel to be kept clear of fæcal material It was, however, obviously unjustifiable to perform colotomy for thrombosed veins in the rectum, and by the time it was obvious that the whole of the rectum was gangrenous it was too late for this method to have had any chance of success, while the patient was certainly too ill to undergo any operation. The following are the notes of the case

The patient, a man aged 43 was admitted to St Mark's Hospital on Nov 14th, 1914, for internal piles He stated on admission that he had suffered from internal piles for about 25 years, and that of recent years the piles had prolapsed readily when he walked or on the least exertion and that they had to be replaced There had also been considerable bleeding at times Within the last few years he had had "several attacks of piles" which had necessitated his remaining in bed for some days The piles had evidently become strangulated during these "attacks," and he had been unable to replace them

The patient was very much afraid of an operation and he had put off coming to the hospital for a long time on this account A severe attack of strangulation of the piles, which had occurred two days before his admission, had finally brought him to the hospital and on admission he was suffering from strangulation of several large piles He was very anæmic and seemed ill and in obvious pain His skin was of a waxy colour, there was considerable puffiness beneath the eyes and slight œdema of both feet The lips and ends of the fingers showed a considerable degree of anæmia. There were a number of large varicose veins on the back of both thighs The patient was very short of breath, apparently from anæmia Examination of the chest showed slight œdema of both lungs The heart was somewhat dilated and there was a well marked hæmic bruit His liver was slightly enlarged Examination of the urine showed no albumin or sugar Examination of the rectum showed a good deal of swelling round the anus and several large prolapsed hæmorrhoids which were thrombosed and of a dark, bluish colour Examination was very difficult as the parts were exceedingly tender He was therefore examined under an anæsthetic and it was then found that not only were the piles thrombosed, but that all the veins of the rectum appeared to be involved for some two inches up the bowel The whole of the plexus of veins in the lower part of the rectum was thrombosed and swollen It was quite impossible to do anything of an operative nature, or even to replace the piles

The patient was sent back to bed and treated with hot fomentations, &c, to try to reduce the swelling Instead of improving the condition became worse. Five days after admission there were signs of sloughing of the rectum and an acute inflammatory swelling began to be evident behind the anus This was incised, and a great deal of foul serum escaped. Two days later a swelling occurred on the left side of the anus and had to be incised The whole of the rectum at this time was gangrenous for some four or five inches The patient had lost all control, he was suffering from almost continuous diarrhœa and was very ill The pulse rate was 110 the temperature fluctuating between 99° and 101° F He also began to complain of severe pain in the abdomen

On the sixteenth day after admission a slough 1¼ inches wide and 4½ inches long which appeared to consist of all the coats of the rectum came away The whole of the buttocks and perineum at this time was œdematous and in a sloughing condition Examination of the urine showed no albumin or pus The patient was very seriously ill During the third week the patient was very tender over the liver and complained frequently of abdominal pain There were a number of large dilated veins on the abdominal wall and extensive œdema of the lower limbs The temperature was still fluctuating, but there were no rigors There was still severe diarrhœa in spite of all treatment Two severe hæmorrhages occurred at the end of the third week, and the patient died two days later, apparently from septicæmia and general weakness

Complete gangrene of all the coats of the rectum as the direct result of thrombosed internal piles seems to us a sufficiently rare condition to be worth recording We are of the opinion that the condition was rendered possible by the secondary anæmia from which the patient was suffering

B. typhosus. Whether they are suffering from active typhoid infection or not can only be determined by repeating the agglutination test at intervals in order to ascertain whether the titre of agglutination shows marked changes or remains practically constant. Such changes are in any case of greater importance in the diagnosis than is the absolute degree of agglutination. They can only be detected with certainty by making use of a standard culture of killed typhoid bacilli and employing the macroscopic method of determination, which is both simpler and more reliable than the microscopic.

A standard culture is readily prepared by the method previously described by one of us (G. D.).

The bacillus (B. typhosus, B. paratyphosus, &c.) is grown for 24 hours at 37° C. in large flasks in a peptone veal bouillon which has been sterilised in the autoclave at 115° C. for not more than 15 minutes. The culture must be made from a young bouillon culture of a typhoid bacillus which has been subcultivated daily in bouillon, preferably throughout several weeks. At the end of 24 hours the flasks are well shaken and 0·1 per cent. of commercial (40 per cent.) formalin is added. They are again shaken and placed in cold store at about 2° C. At intervals on the same day and on subsequent days for four or five days the flasks are again thoroughly shaken in the cold store. After three or four days they will always be found to be absolutely sterile. The bacterial suspension is subsequently diluted with sterile normal saline solution (containing 0·1 per cent. of formalin) to a standard opacity. Should it happen that the suspension is not entirely homogeneous it is filtered through sterile cotton wool and bottled for use in sterile vessels, either sealed or corked.

The standard culture has the following advantages: (1) It is sterile; (2) it is as sensitive to agglutination as the fresh culture, or even more so; (3) it keeps unchanged almost indefinitely if stored in a cool and dark place; and (4) it renders all observations strictly comparable. For the present purpose the agglutination test is made with the patient's serum against B. typhosus, B. paratyphosus (A), and B. paratyphosus (B) simultaneously in parallel experiments.

Method.—Place 15 small narrow sedimentation tubes in a stand in three rows of 5 each. With a proper dropping pipette measure out into a test-tube 54 drops of tap water. Dry out the pipette and with it add 6 drops of the serum to be examined, giving a dilution of 1 in 10. Wash out the pipette carefully.

In tube 1 of each row place 0 drops of tap-water.
" 2 " 5 "
" 3 " 8 "
" 4 " 9 "
" 5 " 10 "

Dry the pipette and use it to add—

To tube 1 in each row 10 drops of the serum dilution (1/10).
" 2 " 5 "
" 3 " 2 "
" 4 " 1 "
" 5 " 0 "

Wash the pipette carefully, and then add to each tube in row 1 15 drops of standard B. typhosus suspension, to each tube in row 2 15 drops of standard B. paratyphosus (B), and to each tube in row 3 15 drops of standard B. paratyphosus (A). Shake each tube thoroughly in order from right to left (beginning with the weakest dilution). Place in the water bath at 55° C.

In tube 1 the serum acts in a dilution is 1 in 25.
" 2 " " 1 in 50.
" 3 " " 1 in 125.
" 4 " " 1 in 250.
Tube 5 without serum is the control against spontaneous agglutination.

Higher dilutions are followed out in a similar manner if the limit of agglutination is not reached within the first series. In inoculated persons who have not had typhoid (or paratyphoid) fever agglutination in a dilution of 1 in 25 justifies a strong suspicion of typhoid (or paratyphoid) infection. But in such a case the test must be repeated in the course of a day or two. Marked agglutination in a dilution of 1 in 50 or more is nearly always diagnostic of active typhoid (or paratyphoid) infection.

The reaction is completed in about two hours if the tubes containing the dilutions are maintained at a temperature of 55° C. in a water bath (50–55° C.). If left at the room temperature 24 hours must be allowed. Obviously the former procedure is to be preferred.

Inoculated persons may give a very high agglutinating titre, as may be seen in Table I. It is therefore necessary to explain briefly the character of the agglutination curve, and the manner in which the results of successive examinations of the serum are to be interpreted.

In the chart the main curve (broken line) shows the course of agglutination in an actual case of typhoid fever. It is indistinguishable in form from the curve obtained by an experimental inoculation with antityphoid vaccine, though its maximum is lower and its decline more rapid than is usual in the inoculated subject. In the same diagram are given observations on three different patients carried out by the method just described. They illustrate some of the chief points which we wish to bring out.

(α T) exhibits the high agglutination titre (1 in 1500) against B. typhosus of the serum of an individual inoculated in September, 1914. It shows no change in three successive observations in the course of six days. During the same period the paratyphoid (B) agglutination (α B) rises rapidly from 1 in 300 to 1 in 700. The agglutination of paratyphoid (A) (α A) is *nil*. Clearly the case is one of paratyphoid (B) infection at an early stage.

(β T) again shows the high and steady typhoid agglutination titre (1 in 1250) of an individual inoculated in August, 1914. Paratyphoid (B) agglutination (β B) during the same period undergoes a striking fall. Paratyphoid (A) agglutination (β A) is *nil*. Again a case of paratyphoid (B) infection.

(γ T) exhibits the steady but now lower typhoid agglutination titre (1 in 250) of an individual inoculated in India as long ago as 1908. His paratyphoid (A) (γ A) and (B) (γ B) agglutination are both *nil*. The patient had neither typhoid fever nor paratyphoid fever.

Apart from the cases of infection occurring in inoculated individuals in which both typhoid and paratyphoid bacilli are agglutinated, other cases occur in the *non-inoculated* where more than one micro-organism is agglutinated by the patient's serum. Here, also, it is necessary to determine the maximum dilution in which each organism is agglutinated, and to follow the agglutination curves in a series of successive observations.

The following statements will afford a sufficient guide in such cases. They are the result of extended general experience, and space does not allow us to present on this occasion the evidence upon which they are based.

1. That bacillus which exhibits the greatest agglutinability (highest agglutination titre) is the infective agent (or the principal infective agent) in the case under examination.

2. If the case is one in which the agglutination of a second micro-organism is due to the presence of *co-agglutinins* the curve of co-agglutination will be found to run parallel to the curve of principal agglutination, but at a lower level.

containing equal quantities of B typhosus, B paratyphosus (B), and B paratyphosus (A) Men already inoculated against B typhosus should also be inoculated against paratyphoid infection, since the antityphoid inoculation offers no appreciable protection against paratyphoid bacilli. The epidemics of typhoid fever reported to be occurring among the belligerents (who are all known to practise antityphoid inoculation) are probably to an important extent epidemics of paratyphoid

2 Unless all cases of "enteric" fever are properly differentiated into typhoid and paratyphoid infection the statistics regarding the value of antityphoid inoculation among our forces in the present war will be most seriously vitiated It is probable that the absence of accurate bacteriological diagnosis in the past explains the fact that the statistical results arrived at in our army have not always been so convincing as would otherwise have been the case

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Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF OPHTHALMOLOGY

Cerebral Degeneration associated with Macular Changes—Exhibition of Cases and of a Trench Periscope

A MEETING of this section was held on Feb 3rd, Mr PRIESTLEY SMITH, the President, being in the chair

Dr F E BATTEN and Mr STEPHEN MAYOU contributed a paper on Cerebral Degeneration associated with Macular Changes, and gave a pathological description of a case Dr Batten said that in these cases a curious pigmentation occurred at the macula, and usually also around it, and considerable optic atrophy was also present Several of the examples of the condition which had been under his care died at Darenth Asylum He exhibited the pedigrees of two families In one case the changes in the macula were the last occurrences in the march of degeneration The brains of these patients did not present any macroscopic abnormality, and they had the usual convolutional pattern, as well as the normal weight and relationship to the cerebellum The brain and nervous system were examined by several staining methods There was found to be some degeneration in the medullated fibres, in the cerebellum the myeline was breaking down and degeneration was present in the cells of Purkinje The most profound change was in the Betz cells, instead of the Nissl granules there was a curious accumulation of fine granules around the nucleus In the cerebellum were large granular cells not normally seen and he could not say what their significance was The most marked change was found in the child who had had the disease longest—namely, for three and a half years Th[illegible] ark[illegible] es in the fundus a shrinking of the c[illegible] the Betz cells were too dege[illegible] group was similar to [illegible] family [illegible]iocy, bu[illegible] confined to the retina, but varied enormously in different parts of the fundus The principal change was round the macula region The internal nuclear layers had disappeared altogether, also the rods and cones, and there was some migration of pigment from the retinal pigment cells—The paper was discussed by Mr J H PARSONS and Mr TREACHER COLLINS, and Dr BATTEN and Mr MAYOU replied

Mr A. BERNARD CRIDLAND showed a case of Glass-workers' Cataract in an iron smelter ("puddler"). He brought the case forward to give an opportunity for the discussion of the type of case in ironworkers in relation to industrial diseases, as these men were not included in the schedule Considering the number of hours of exposure to the glare of the molten metal, his surprise was that there were not more cases, especially as these men rarely wore protective goggles He suggested that a more inclusive term should be applied to the cases of cataract so caused such as "ray cataract"—Mr O B GOULDEN said he had a case now under care in a welder, and he thought an investigation would disclose that the condition was more common among ironworkers than was generally believed The man who preceded his patient at the work also lost his sight It was not until quite late that the workers complained, because owing to the dilatation of the pupil they were able to see round the cataract—Dr T M LEGGE (Home Office) asked as to the proportion of ironworkers afflicted with this condition, as it was necessary in considering the scheduling of diseases to proceed tentatively In the case of glass-blowers' cataract there could be no question as to scheduling as he examined the lenses of 513 glass-blowers, and found cortical cataract in 64 in the right eye and 72 in the left—Mr PARSONS said that as secretary of a Royal Society committee on the subject he sent many inquiries to ophthalmic surgeons practising in ironworks districts, and the negative replies he mostly obtained led him to the belief that it was the custom for moulders to wear tinted glasses He asked for further evidence for his committee to continue their investigations—The PRESIDENT suggested the name "furnace-workers' cataract," seeing that furnace work was common to all

Dr E A. COCKAYNE and Dr J ATTLEE showed a case of Amaurotic Family Idiocy in an English child, not Jewish, as was the rule

Mr N BISHOP HARMAN showed a case of Spontaneous Rupture of Cornea in Secondary Glaucoma caused by dislocation of the lens An injury caused total dislocation of one lens into the posterior chamber, where it was loose. The resulting glaucoma was absolute and vision was lost The cornea was anæsthetic and the iris quite retracted and immobile The condition remained so for two years without ulceration of cornea or splitting of Descemet s membrane Three months later, however, without any further accident the cornea was split horizontally and membranes prolapsed the cause having been retrochoroidal hæmorrhage

The PRESIDENT showed a form of Trench Periscope he had just designed At the top of a narrow shaft, 6 feet in length, is fixed at an angle of 45° a plane mirror, about 2½ inches in diameter, and an exact counterpart lower down, the distance from the first being adjustable by pegs and holes Only the top mirror projects above the trench and this can be largely concealed by a piece of earth By looking straight into the lower mirror all movements can be plainly discerned without incurring danger—Lieutenant-Colonel ELLIOTT pointed out how necessary, in order to estimate the distance of the enemy, it was to have the binocular form of periscope.

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF OBSTETRICS

Fixed Chronic Retroversion of the Uterus—Exhibition of Specimens

A MEETING of this section was held on Jan 15th, Dr [illegible] GIBSON the President being in the chair [illegible] ETHEL SOLOMONS read a paper on Fixed Chronic [illegible] of the Uterus in which he condemned all s[illegible] tments as vaginal douches tampons [illegible] use, firstly, they seldom or never cured, [illegible] the patient a chronic invalid for [illegible]

B typhosus Whether they are suffering from active typhoid infection or not can only be determined by repeating the agglutination test at intervals in order to ascertain whether the titre of agglutination shows marked changes or remains practically constant Such changes are in any case of greater importance in the diagnosis than is the absolute degree of agglutination. They can only be detected with *certainty* by making use of a standard culture of killed typhoid bacilli and employing the macroscopic method of determination, which is both simpler and more reliable than the microscopic

A standard culture is readily prepared by the method previously described by one of us (G D)

The bacillus (B typhosus B paratyphosus, &c.) is grown for 24 hours at 37° C in large flasks in a peptone veal bouillon which has been sterilised in the autoclave at 115° C for not more than 15 minutes The culture must be made from a young bouillon culture of a typhoid bacillus which has been subcultivated daily in bouillon, preferably throughout several weeks At the end of 24 hours the flasks are well shaken and 0 1 per cent of commercial (40 per cent) formalin is added. They are again shaken and placed in cold store at about 2° C At intervals on the same day and on subsequent days for four or five days the flasks are again thoroughly shaken in the cold store After three or four days they will always be found to be absolutely sterile. The bacterial suspension is subsequently diluted with sterile normal saline solution (containing 0 1 per cent of formalin) to a standard opacity Should it happen that the suspension is not entirely homogeneous it is filtered through sterile cotton wool and bottled for use in sterile vessels, either sealed or corked.

The standard culture has the following advantages (1) It is sterile, (2) it is as sensitive to agglutination as the fresh culture or even more so, (3) it keeps unchanged almost indefinitely if stored in a cool and dark place, and (4) it renders all observations strictly comparable For the present purpose the agglutination test is made with the patient's serum against B typhosus, B paratyphosus (A), and B paratyphosus (B) simultaneously in parallel experiments

Method —Place 15 small narrow sedimentation tubes in a stand in three rows of 5 each. With a proper dropping pipette measure out into a test-tube 54 drops of tap-water Dry out the pipette and with it add 6 drops of the serum to be examined giving a dilution of 1 in 10 Wash out the pipette carefully

In tube 1 of each row place 0 drops of tap-water
„ 2 5 „
3 „ 8 „
„ [illegible] 9 „
5 „ 10 „

Dry the pipette and use it to add—

To tube 1 in each row 10 drops of the serum dilution (1 10)
2 „ 5 „ „
3 „ 2 „ „
4 1 „ „
5 „ 0 „ „

Wash the pipette carefully, and then add to each tube in row 1 15 drops of standard B typhosus suspension to each tube in row 2 15 drops of standard B paratyphosus (B) and to each tube in row 3 15 drops of standard B paratyphosus (A) Shake each tube thoroughly in order from right to left (beginning with the weakest dilution) Place in the water bath at 55° C

In tube 1 the serum acts in a dilution is 1 in 25.
2 „ „ „ 1 in 50
3 „ „ 1 in 125.
[illegible] „ 1 in 250

Tube 5 without serum is the control against spontaneous agglutination

Higher dilutions are followed out in a similar manner if the limit of agglutination is not reached within the first series In inoculated persons who have not had typhoid (or paratyphoid) fever agglutination in a dilution of 1 in 25 justifies a strong suspicion of typhoid (or paratyphoid) infection. But in such a case the test must be repeated in the course of a day or two Marked agglutination in a dilution of 1 in 50 or more is nearly always diagnostic of active typhoid (or paratyphoid) infection

The reaction is completed in about two hours if the tubes containing the dilutions are maintained at a temperature of 55° C in a water bath (50–55° C) If left at the room temperature 24 hours must be allowed Obviously the former procedure is to be preferred.

Inoculated persons may give a very high agglutinating titre, as may be seen in Table I It is therefore necessary to explain briefly the character of the agglutination curve, and the manner in which the results of successive examinations of the serum are to be interpreted.

In the chart the main curve (broken line) shows the course of agglutination in an actual case of typhoid fever It is indistinguishable in form from the curve obtained by an experimental inoculation with antityphoid vaccine, though its maximum is lower and its decline more rapid than is usual in the inoculated subject In the same diagram are given observations on three different patients carried out by the method just described They illustrate some of the chief points which we wish to bring out

(αT) exhibits the high agglutination titre (1 in 1500) against B typhosus of the serum of an individual inoculated in September, 1914 It shows no change in three successive observations in the course of six days During the same period the paratyphoid (B) agglutination (αB) rises rapidly from 1 in 300 to 1 in 700 The agglutination of paratyphoid (A) (αA) is *nil* Clearly the case is one of paratyphoid (B) infection at an early stage

(βT) again shows the high and steady typhoid agglutination titre (1 in 1250) of an individual inoculated in August, 1914 Paratyphoid (B) agglutination (βB) during the same period undergoes a striking fall. Paratyphoid (A) agglutination (βA) is *nil*. Again a case of paratyphoid (B) infection.

(γT) exhibits the steady but now lower typhoid agglutination titre (1 in 250) of an individual inoculated in India as long ago as 1908 His paratyphoid (A) (γA) and (B) (γB) agglutination are both *nil* The patient had neither typhoid fever nor paratyphoid fever

Apart from the cases of infection occurring in inoculated individuals in which both typhoid and paratyphoid bacilli are agglutinated, *other* cases occur in the *non inoculated* where more than one micro organism is agglutinated by the patient's serum Here, also, it is necessary to determine the maximum dilution in which each organism is agglutinated, and to follow the agglutination curves in a series of successive observations

The following statements will afford a sufficient guide in such cases They are the result of extended general experience, and space does not allow us to present on this occasion the evidence upon which they are based.

1 That bacillus which exhibits the greatest agglutinability (highest agglutination titre) is the infective agent (or the principal infective agent) in the case under examination

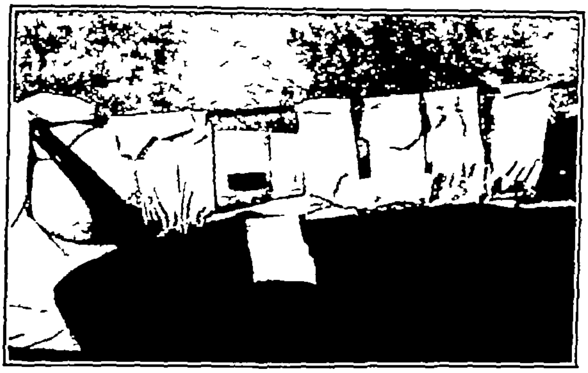
2 If the case is one in which the agglutination of a second micro organism is due to the presence of *co agglutinins* the curve of co agglutination will be found to run parallel to the curve of principal agglutination, but at a lower level.

the strain on either side of the limb to be equal, which it is difficult to ensure if the ends of the pin are fastened to the corresponding ends of the transverse footpiece (Figs 1 and 3)

The distance between the parallel bars ensures the easy application of the dressing, and also enables an operation to be performed while the limb lies stretched in the splint If relaxation is required this can be obtained by reversing the foot screw, and then when extension is required to get the ends in position the screw can again be tightened The essential part of the splint is the screw, and no other method which has been tried produces a like amount of extension with so little discomfort to the patient

This splint has been made by Messrs Allen and Hanbury, of Wigmore street, London, W The cost is somewhat heavy, but I do not think it is out of proportion when the results obtained by the splint are considered In addition, the expenditure is a capital one, and when a number of splints are in hand they can be passed from one case to another, and even sent across the water to accommodate other people in their transit to this country A man once in this splint can be moved with very little discomfort, and constant extension of the limb is maintained in spite of the inevitable movement from bed to stretcher which the wounded have to undertake in the process of removal to the base If one type of splint is to be used for all cases, which can well be done, it is necessary to have the side bars 54 inches long in order to take the limb of a 75 inch man A 66 inch man wants side bars 43 inches long There is no disadvantage in having the long splint except that it sticks over the end of the bed I am, however, having some splints made so that side bars of different lengths can be screwed into the crotch ring This arrangement has the advantage that the splint can be packed flat It would also be possible to have one traction screw attachment for many splints if the transverse foot bar was provided with fastening thumb screws

FIG 4



Shows the patient turned on his side for dressing a posterior wound (represented by a black piece of paper) Note the small cushion under the junction of the side bar and crotch ring The limb is kept from sagging by means of loops of bandage passing round the limb and fastened to the upper side bar They cannot be seen as they are hidden by the slings

A number of these splints have been provided by the British Red Cross Society and are now in use at this hospital

The British Red Cross Hospital Netley

TYPHOID AND PARATYPHOID INFECTION IN RELATION TO ANTITYPHOID INOCULATION,

TOGETHER WITH REMARKS ON THE IMPORTANCE OF THE USE OF PROPHYLACTIC PARATYPHOID INOCULATION[1]

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AT the present time when the prophylactic value of antityphoid inoculation has been fully recognised by the authorities, but is still vehemently opposed in certain quarters, it may prove not only of interest, but perhaps also of considerable value, to record briefly the results of observations made on patients in the Base Hospital at Oxford

In the light of these observations we wish to emphasise, firstly, the extreme importance of classifying *all* cases returned as cases of "enteric" fever in accordance with the results of detailed bacteriological examination, particularly as regards the precise and careful differentiation between B typhosus and B paratyphosus For if this be not done a large number of cases of paratyphoid fever are likely to be returned as cases of "enteric" The consequence will be that the statistics regarding the protective value of antityphoid inoculation will become seriously vitiated

Secondly, we wish to urge again the importance of making prophylactic inoculations against certain other bacterial infections, some of which have already appeared during the war And on the present occasion we refer particularly to paratyphoid infections, which seem to be occurring with considerable frequency, both in inoculated (antityphoid) and uninoculated individuals The prophylactic paratyphoid inoculation suggested can readily be effected simultaneously with the antityphoid inoculation by using a mixed vaccine, and, so far as the evidence goes, this procedure does not lead to any notable increase in the severity of the reaction produced

The Diagnosis

The agglutination test is the quickest method of diagnosis Blood cultures and cultures *from* the urine and fæces will usually enable the observer to isolate the micro organism where opportunity exists for carrying out repeated examinations But under war conditions the agglutination method is the one on which reliance must be placed Accurate differential diagnosis, however, can only be obtained by *routine* testing of the *serum* of the patient against the three micro organisms B typhosus and B paratyphosus (A) and (B), in parallel series of observations, and by always determining the *maximum* dilution of the serum in which agglutination takes place Individuals who have been inoculated with antityphoid vaccine within a period of some months or even years will give a high agglutination titre against

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[1] The expenses of this work have been defrayed out of a grant received from the National Medical Research Committee.

(see table) Secondly, it will always show a definite and measurable diminution of titre in the course of a week or two, while in (antityphoid) inoculated individuals whose titre has by lapse of time fallen to a similarly low level no measurable change will be found within the same period.

Prophylactic Paratyphoid Inoculation

Paratyphoid vaccines have been studied by Castellani, Cummins and Cumming, Kabeshima and others This is not the occasion on which to enter into any detailed discussion of their results But the recent work of Kabeshima affords full evidence, both from animal experiment and from extended observations carried out on the personnel of the Imperial Japanese Navy, of the great protective value as well as the innocuous character of the paratyphoid inoculation. Kabeshima used a mixed vaccine containing equal numbers of typhoid, paratyphoid (A), and paratyphoid (B) bacilli About 12,000 men have been inoculated with the mixed vaccine The following table from Kabeshima shows the results recorded in five naval hospitals in Japan during the period 1909–1911 after the introduction of inoculation with the mixed vaccine —

TABLE II —*Kabeshima s Results*

Disease	Total numbers of cases.	Cases in inoculated subjects		Cases in non inoculated subjects	
		Sick	Dead	Sick	Dead
Typhoid	367	68	5	299	40
Paratyphoid (A)...	229	71	2	215	5
Paratyphoid (B)...	447	0	0	447	0

TABLE I.—*Results in Agglutination Tests*

Case number	Clinical diagnosis.	Typhoid agglutination			Paratyphoid (B) agglutination.			Paratyphoid (A) agglutination			Antityphoid inoculation.		Bacteriological diagnosis as regards typhoid and paratyphoid infection
		First examination	Second examination	Third examination	First examination	Second examination	Third examination	First examination	Second examination	Third examination	Whether inoculated	Date of inoculation	
5	Typhoid.	>1/250	—	—	0	—	—	0	—	—	0	—	B typhosus.
8	? Enteric.	>1/500	—	—	0	—	—	0	—	—	0	—	"
15	Typhoid	>1/500	—	—	0	—	—	0	—	—	0	—	
20	? Enteric.	>1/500	—	—	0	—	—	0	—	—	0	—	
24	?	>1/500	—	—	0	—	—	0	—	—	0	—	"
37		>1/500	—	—	0	—	—	0	—	—	0	—	"
48	Enteric.	>1/500	—	—	0	—	—	0	—	—	0	—	"
57	?	>1/500	—	—	0	—	—	0	—	—	0	—	"
10	?	0	—	—	>1/500	—	—	0	—	—	0	—	B paratyphosus (B)
21	? Enteric.	0	—	—	>1/250	1/125	—	0	—	—	0	—	"
41	?	1/1,250	1/1,250	—	1/5,000	1/2,500	—	0	—	—	0	—	
42	?	1/1,250	1/1,250	1/125	1/500	1/125	1/50	0	—	—	+	Aug 1911 Aug., 1914	
62	?	1/12,500	1/12,500	—	1/5,000	1/12,500	—	1/2,500	1/5,000	—	+	Sept. 1914	* B. paratyphosus (B) and (A)
63	? Enteric.	1/2,500	1/2,500	—	1/12,500	1/25,000	—	1/12,500	* 1/25,000	—	+	Oct., 1914	* B paratyphosus (B) and (A)
49	? Enteric	1/2,500	1/2,500	—	0	0	—	0	0	—	+	Aug 1914	No typhoid or paratyphoid.
51	? Enteric.	1/5,000	1/5,000	1/500	0	0	0	0	0	0	+	Sept., 1914	
52	? Dysentery	1/1,250	1/1,250	—	0	0	—	0	0	—	+	1902, 1904, Sept 1914	"
53	?	1/2,500	1/2,500	—	0	0	—	0	0	—	+	Oct. 1914	"
58	? Dysentery	1/250	1/250	1/250	0	0	0	0	0	0	+	1903.	"
61	?	1/1,250	1/1,250	—	0	0	—	0	0	—	+	Oct 1914	" "

When no agglutination occurred in a dilution of 1 in 25 the record is entered as 0

* In these two cases which are quite recent, it is still uncertain whether the agglutination observed is due to the presence of co-agglutinins or the result of a mixed infection with B paratyphosus (B) and (A)

In view of these results it is unnecessary to adduce further evidence of the fact that by the use of a suitable mixed vaccine adequate protection can be obtained against B typhosus, B paratyphosus (A), and B paratyphosus (B)

As regards the reaction produced, Kabeshima states that when the vaccine used is made up of equal quantities of the three micro organisms concerned, so that the total number of bacilli in the dose does not exceed the usual number present in a dose of antityphoid vaccine, the severity of the reaction (both local and general) is not significantly greater than that following ordinary antityphoid vaccination. Should the question arise as to whether it is better to employ a mixed vaccine of this character or to carry out immunisation against each separate micro organism separately, it may be stated that the former method is preferable Obviously it saves time, and it avoids the frequent repetition of periods of brief temporary disability Moreover, there is ample evidence from observations of Jörgensen, Schroeder, Dreyer, and others that in successive immunisation with these micro organisms the immunity evoked against those organisms which are injected later in the series is less than the immunity obtained when they are mixed together and injected simultaneously, unless a considerable interval is allowed to elapse between the inoculations And this result is independent of the order in which the different micro organisms are employed

Conclusions

1 It is of the utmost importance that our troops should be protected against paratyphoid infection as well as against the B typhosus This can readily be done by the use of a mixed vaccine

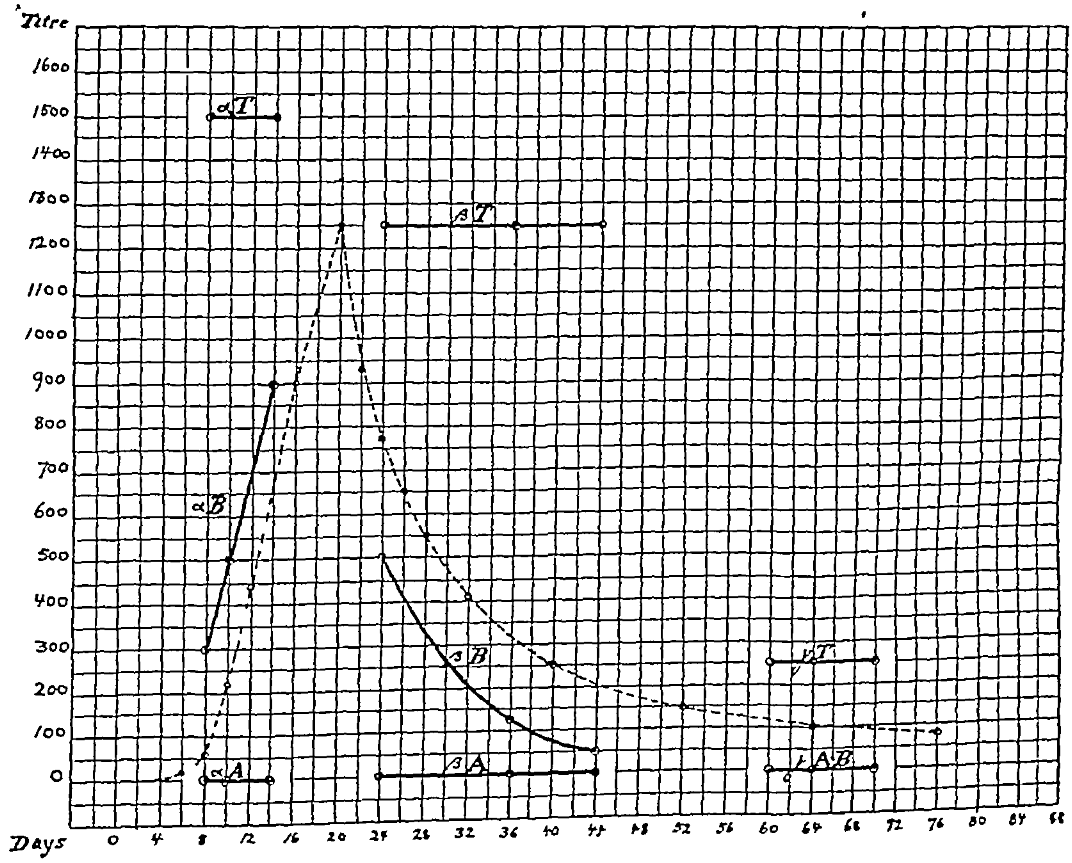
3 *If the case is one of mixed infection with two different organisms their respective curves of agglutination are not parallel, but exhibit totally independent courses, which may even cross one another*

Results

The results of observations carried out on patients in the Base Hospital at Oxford may now briefly be recapitulated. Table I gives all necessary details

Table I contains all those cases out of the large number examined in course of ordinary routine which yielded positive results in agglutination tests It will be seen that of these 20 cases *suffering from continued fever* 8 were diagnosed bacteriologically as typhoid fever and 6 as paratyphoid fever, while the remaining 6 were neither typhoid nor paratyphoid fever

CHART SHOWING COURSE OF AGGLUTINATION



Of the cases of paratyphoid fever one (Case 41) though not inoculated and denying that he had ever had typhoid fever showed a steady typhoid agglutination of 1 in 1250 Up to the present it has not been possible to isolate the B typhosus either from the urine or fæces of this patient. And we do not know yet whether he is a typhoid carrier or has recently passed through a mild unrecognised typhoid infection followed by infection with B paratyphosus (B)

Cases 62 and 68 in the table are of special interest. Both individuals were inoculated against typhoid fever last autumn Both have been in France but never in any other foreign country so far as can be ascertained In each case the serum strongly agglutinates both B paratyphosus (B) and B paratyphosus (A). The cases are either very striking examples of co-agglutination or else as is more probable, they constitute examples of mixed infection From the fæces in each case paratyphoid bacilli (but no typhoid bacilli) have been isolated In each case also two distinct types of paratyphoid bacilli are present. But whether these are merely variants of B paratyphosus (B), or whether the one type is in reality B paratyphosus (A) the other being certainly B paratyphosus (B) has not yet been finally determined The two individuals had never been in contact before the present illness.

The following are the points of chief importance from the table —

1 *No case of typhoid* fever has been found among (antityphoid) inoculated individuals

2 Of *six cases of paratyphoid* infection three occurred in (antityphoid) inoculated subjects Had these cases been returned as cases of "enteric" fever the value of antityphoid inoculation as here exhibited would have been greatly diminished

3 So far as this limited series of cases goes paratyphoid fever has occurred with *equal frequency* among (antityphoid) inoculated and non inoculated individuals This is in agreement with the finding of Kabeshima and others in long series of observations that *antityphoid inoculation affords no appreciable protection against paratyphoid infection*

4 *In no case other than cases of active paratyphoid infection* has the serum of the patient agglutinated B paratyphosus (B) or (A) in a dilution of 1 in 25, even when the titre of typhoid agglutination was very high This statement holds good both for (antityphoid) inoculated individuals and for non inoculated persons suffering from typhoid fever

5 The typhoid agglutination found in *convalescents* from typhoid fever is easily distinguishable from that of inoculated individuals First it is (with very rare exceptions) of *low titre* as contrasted with that of persons recently inoculated whose typhoid agglutination titre remains high

calculus called for immediate operation to save life.—Colonel T H Hendley, I M S, commented upon Mr Bishop Harman's specimens, and cited a case of sympathetic ophthalmia following perforation of one eyeball by a single pellet of shot.—Dr Saunders having been called away, Dr Morton referred to the skiagrams he had made of the cases of early pulmonary tuberculosis in children These were from children in whom the physical signs were either entirely absent or so few and slight as to make it impossible to form any definite opinion on their condition. The X ray appearances in all of them were quite definite, and such as are found in cases proved to be tuberculous Considering the importance of an early diagnosis in indicating the proper treatment at the earliest possible time he urged the advisability of a radiographic examination of the lungs in those children who while presenting no definite signs of any particular disease, were not thriving and enjoying life as others of the same age. With regard to the lung picture before and after sanatorium treatment, here as elsewhere once the bacillus had obtained a footing for a definite period of time a permanent mark was left as evidence of the unwelcome visitation The markings in the lungs after successful treatment followed the same general plan as before, some of the finest 'mottling" might have disappeared but the chief difference might be described as one of diminished contrasts in the picture —Mr Lloyd was not so sure as to how much reliance was to be placed on the X ray findings, and considered that while the radiographic method might be a useful adjunct to other methods of diagnosis it had by no means superseded them At the same time he paid a tribute to the advances made in radiography in recent years

Reviews and Notices of Books.

Pharmacology, Clinical and Experimental

By Dr HANS H MEYER, of Vienna, and Dr R GOTTLIEB of Heidelberg Professors of Pharmacology Authorised translation into English by JOHN TAYLOR HALSEY M D With 65 text illustrations 7 in colour London and Philadelphia J B Lippincott Company 1914 Pp 604 Price 25s net

TAKEN in its widest sense experimental pharmacology is the relation of organisms under chemically changed conditions of environment, and must therefore be regarded as a department of biology The authors treat the subject from two aspects, organotropic—i.e , the action of drugs on function—and etiotropic, their action in disease The pharmacology of the following systems is dealt with in succession—motor nerve endings, central nervous system, sensory nerve endings, the vegetative system, eye, digestion, genital organs, circulation, respiratory organs, the renal function, sweat secretion, metabolism, muscle, blood, temperature, and inflammatory phenomena A special chapter discusses pharmacological effects on the causes of disease and deals with antiseptics, anthelmintics, and antitoxins, acquired immunity, serum therapeutics, the serum treatment of tetanus and diphtheria, and bacteriolysis The last chapter is devoted to the conditions necessary for the action of medicaments, such as solubility, concentration of the drug in the blood the condition of the organism itself to be acted on, antidotes and antagonism, and the various refractive or hypersensitive conditions that are included under the term idiosyncrasy—not for getting anaphylaxis

In the chapter on motor nerve endings curare is very fully dealt with—although it is but little used in medicine—because it gives such a good example of localised action, as well as affords a typical instance of how the action of a drug can be studied As to the pharmacology of the central nervous system, drugs may either increase or diminish its functions, but cannot change these functions qualitatively This section is treated in a lucid, practical, and even masterly manner First those drugs that excite, such as strychnine, and then those that depress and paralyse central nervous functions are discussed, special attention being given to the morphine group Morphine itself occupies a peculiar position owing to its striking and wonderful property of subduing pain, although morphine does not diminish the excitability of the brain and cord to the same extent as such narcotics as alcohol and the chloroform group Special attention is drawn to its action on the respiratory centre Alcohol and inhalation anæsthesia, including ether and chloroform, are next considered Chloral and its cumulative perils are set forth, while trional, veronal, and their allies are discussed and their uses and dangerous effects commented on The well known theory of narcosis of Meyer and Overton is elaborated and the importance of lipoids is emphasised Local anæsthesia is fully treated, most emphasis being laid on cocaine and its allies There is a good coloured plate illustrating the sympathetic nervous system The monograph on the eye in relation to drugs is concise and practical The pharmacology of the digestive tract is treated discreetly in about 60 pages, while 100 are given to the circulatory organs The treatment of the action of digitalis is particularly good

We have instanced only a few points why we cordially commend this treatise to all interested in the progress of pharmacology in relation to scientific medicine Much praise is due to the translator, who is professor of pharmacology, therapeutics, and clinical medicine in Tulane University

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A History of the Indian Medical Service 1600–1913

By Lieutenant-Colonel D G CRAWFORD, Bengal Medical Service (retired list) London W Thacker and Co 1914 Pp 529 + 535 Price 28s net

IN two handsome octavo volumes there has at length appeared a detailed history of the Indian Medical Service worthy of its subject and fit to rank with any of the regimental histories of the British army hitherto published Of the 45 chapters the first 12 are concerned with the early history of European medicine in India before the formation of the Bengal Medical Service in 1763 The next 15 describe the chief features in the official history of the three separate medical services in Bengal, Madras, and Bombay, and also give a large amount of information on many matters of professional and social interest Chapters XXVIII to XXXIV give in more detail special records of distinguished medical men of the Indian establishment, and in the following 10 chapters are discussed the recent history of the Service and medical matters in India generally

His brother officers, and all concerned with medical practice and education in the East, are indebted to Colonel Crawford for his researches and for the clear manner in which they have been presented to the reader Many curious sidelights are thrown on old time Anglo Indian life which will make the book interesting to the lover of the past, but its main purpose has been to record the gradual evolution of the present homogeneous and uniform service from the small beginnings of the seventeenth century, showing how in the true British way mistakes are made, and order and success

Mr SHEILL showed photographs of a child born with an unusual frænum between the upper maxillary bone and the lip It was not considered of great consequence at the time and was left, but as the child grew older it grew rapidly, and at the time of the development of the teeth he had to cut the frænum, which came level with the tips of the two central incisors He suggested that an epithelial inclusion had been pressed out through the two mesial nasal processes —Mr G P MOORE speaking from the dental surgeon s point of view, said that the condition was better dealt with early, as when it was not treated until after the eruption of the permanent teeth it caused excessive space between the centre incisors and often great irregularity and projection forward of the incisors, which was difficult to cure and very unsightly

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY

Marsupialisation of Degenerated and Infected Fibroids —Rupture of Uterus with Fatal Result —Exhibition of Specimens

A MEETING of this society was held in Manchester on Jan 15th Dr J H WILLETT (Liverpool), the President, being in the chair

Dr W E FOTHERGILL (Manchester) mentioned two cases of Large Fibroids he had met with—one in 1899 and the other in 1914—whose adhesions were so dense and so universal that the growths could not be removed In each case the degenerated tumour was scraped away by hand through the abdominal incision until nothing but a thin shell was left The capsule was then stitched to a portion of the abdominal incision In one case the cavity was packed with gauze while in the other double drainage was provided by a long rubber tube, one of whose ends passed down into the vagina while the other opened through the abdominal wound The latter method gave the better result as to rapidity of healing

Dr FOTHERGILL also described the injuries in a case in which the medical attendant performed version and subsequently discovered a complete Rupture of the Uterus The patient was aged 40, and the labour was her tenth at full term She had also had five abortions On admission to hospital the pulse rate was 144 and the patient had lost so much blood that she was gasping The abdomen was opened and its wall above the pubic symphysis was seen to contain extravasated blood The peritoneum was torn from the pubic symphysis in front to a point near the lower pole of the right kidney The bladder was exposed, with the exception of its trigone and the lower part of its left lateral aspect The ureter and the blood vessels on the right side could not be traced through the mass of blood clot and lacerated tissue which occupied the right side of the pelvis and lower abdomen The cæcum and appendix were torn from their bed The uterus was quickly removed and the peritoneum was drawn together A gauze drain was left *in situ for 48 hours* The patient did well for four days but *suppuration occurred* which was confined to the pelvis and she died on the sixth day The records show that this was the seventeenth case of serious rupture of the uterus treated by abdominal hysterectomy at St Mary s Hospitals Manchester the first having been done by Dr Walls in 1905 Of these 17 cases 12 were successful and these 12 women doubtless owed their lives to the removal of the uterus Suture of the rent was not enough in serious cases of uterine rupture.

Dr W K WALLS (Manchester) exhibited the following specimens 1 A Rupture of the Pregnant Uterus through an Old Cæsarean Section Scar removed from a patient aged 30 who had had three previous Cæsarean sections The patient was seven months pregnant when sudden severe abdominal pain commenced, followed soon after by general collapse The abdomen was opened and the peritoneal cavity was found to be full of blood which was *oozing* from the top of the old Cæsarean section scar in the uterus Supravaginal hysterectomy was performed, but the patient died from shock the same evening 2. Cæsarean Section for Accidental Hæmorrhage oozing from the Scar of a previous Cæsarean Section This patient had had one previous Cæsarean section and was within ten days of full term pregnancy for the second time when she commenced with symptoms of accidental hæmorrhage. For this reason Cæsarean section was performed during which the abdominal cavity was found to contain a large quantity of blood This was oozing from the lower part of the old Cæsarean section scar in the uterus which was very broad and thin and would probably soon have opened out along its whole length Supravaginal hysterectomy was performed, and the patient made a good recovery

Dr W FLETCHER SHAW (Manchester) exhibited a specimen of Spontaneous Rupture of Old Cæsarean Section Scar in a Full term Pregnant Uterus This patient had had one previous Cæsarean section and was within a week of full term in her second pregnancy, for which Cæsarean section was again going to be performed, when severe abdominal pain commenced during the night while the patient was in bed. Six hours later she walked to the hospital arriving in a collapsed condition still complaining of severe pain in the middle line of the abdomen from the umbilicus to the pubes and this portion of the abdomen was very tender The pulse was fluttering and uncountable and the temperature subnormal The abdomen was opened and the old uterine Cæsarean scar then found to have completely opened up so that the child was delivered without any enlargement of this wound being required The placenta was on the anterior surface of the uterus and plugged the wound At the time of operation no further bleeding was taking place but the lower part of the abdominal cavity was filled with blood clot. Supravaginal hysterectomy was performed, and the patient made a good recovery

WEST LONDON MEDICO-CHIRURGICAL SOCIETY — A pathological meeting of this society was held on Feb 5th Mr Aslett Baldwin, the President being in the chair The President showed specimens of (1) an Innocent Tumour of the Submaxillary Gland which simulated malignant disease, (2) Stricture of the Transverse Colon, and (3) (with Dr Reginald Morton) radiographs of a Large Ureteral Calculus in a youth aged 15¾ years One of the radiographs was taken after collargol had been injected up the ureter This completely surrounded the calculus and thus verified its position At the operation the ureter above the calculus was found dilated to about the size of the small intestine —Mr McAdam Eccles showed specimens of (1) Gall stones (*a*) causing obstruction (*b*) loose in dilated gall bladder, (*c*) blocking the cystic duct, (2) Vermiform Appendices showing (*a*) mucocele (*b*) papilloma, (*c*) perforation protected by omentum (*d*) colloid carcinoma, (*e*) diverticulum from the side opposite the mesentery —Dr E A Saunders and Dr R K Elworthy showed specimens of two cases of Congenital Disease of the Heart with death from broncho pneumonia.—Dr Elworthy also showed a number of interesting pathological specimens, including one of Aneurysm of the Posterior Communicating Arteries, and also one to illustrate Recurrent Laryngeal Palsy in a child aged 2 years —Dr Saunders and Dr Morton showed radiograms illustrative of Progressive Stages of Early Pulmonary Tuberculosis in Children, also radiograms showing the Lung Picture in Early Pulmonary Tuberculosis before and after sanatorium treatment —Dr H J F Simson showed specimens of Ovarian Cysts Uterine Carcinoma and the Fallopian Tubes from a case of Tuberculous *Peritonitis*— Mr N Bishop Harman showed specimens illustrating (*a*) Spontaneous Rupture of the Cornea in Secondary Glaucoma caused by Dislocation of the Lens, (*b*) Panophthalmitis due to hatpin wound, and (*c*) Sympathetic Ophthalmitis *following sub conjunctival* rupture of the sclerotic —Dr Saunders also showed specimens of the Indian Leech recently introduced by the efforts of Professor A E Shipley to counteract the present shortage of the usual supply from the continent —Commenting on the President s specimen of intestinal obstruction Dr Seymour Taylor pointed out that while obstruction due to malignant disease was placed among the chronic forms rightly in most cases clinical experience showed that malignant obstruction might be acute and cases occurred in which the sufferer was entirely ignorant of the grave disease he had until some urgent condition called for the advice of his medical attendant — The President and Mr F G Lloyd referred to the very interesting series of specimens shown by Mr McAdam Eccles some of them almost unique Particular mention was made of the size to which gall stones and other concretions could reach without giving rise to any serious symptoms, and conversely how frequently a comparatively small students intending to take up chemistry as a profession, particularly in its industrial applications The late Dr Campbell Brown, who was professor of chemistry in the University of Liverpool, possessed an intimate acquaintance with the relations of chemistry to the every day affairs of human life, and at this moment when great opportunities are opening for extending our chemical industries his essays on such subjects as "A French View of German Industries," "What is Technical Education?" "Chemistry as a Profession," "Analytical Chemistry as a Profession," "The Ethics of Chemical Manufacture," come opportunely in this publication His counsels are good and most interesting in view of the "decadence of English chemical industry" (see ill informed writers *passim*)

The Midwives' Companion By FÉLICIE NORTON London J and A. Churchill Pp 101 Price 1*s* net—This book is intended for the use of senior students and midwives In our opinion the author is ill advised to lay so much stress upon asepsis and to say so little about antisepsis, a much better practice for midwives than any attempt to carry out strict asepsis We cannot agree with the recommendation of Schultze's method for the revival of a child suffering from white asphyxia, and we entirely disagree with so called aseptic plugging of the vagina by a midwife for a case of placenta prævia The author might have been more careful in her revision of her proofs

Manual of Training for Jungle and River Warfare London T Werner Laurie Pp 124 Price 3*s* 6*d* net—Major Gordon Casserly, of the Indian Army, has put together in this little book a great deal of useful information From the medical point of view his advice generally is sound and clearly expressed Many native terms are used which might have been translated or explained, and it would have been useful if he had stated what are "the usual precautions" to prevent contamination of a water supply It is not customary to carry an enema syringe in a "pocket case (p 83), and 1 in 100 carbolic acid is not an efficient application to wounds The preventive measures against malaria might have been given more fully On practical matters regarding warfare in the jungle and on river banks the book is most useful It is well illustrated by the author

The Book of Prescriptions By E W LUCAS, F.I.C., F C S Tenth edition London J and A Churchill. 1915 Pp 371 Price 6*s* 6*d* net—The enormous number of drugs brought into use since the last edition of this book was printed would have rendered a fresh issue imperative, even in the absence of a new determining cause in an alteration in the list of official drugs A new British Pharmacopœia, casting out many drugs and absorbing a few fresh articles which have found favour with the medical profession, has led to a revision which is likely to be of great service As a member of the British Pharmacopœia Reference Committee Mr Lucas had already done work which has received special acknowledgment and it may therefore be assumed that he will be a safe guide in many of the pitfalls presented by the new standard The prescriptions should be frequently consulted by beginners who are anxious to adopt the metric system, they are printed in parallel columns with a formula of familiar appearance on the left hand, and with the equivalent in the metric system on the right These object lessons will be very useful to those who wish to move with the times Information relating to many new unofficial remedies has been included, but there is no indication of its unofficial character, it might have been well to mark such paragraphs with an asterisk or other sign The list of synonyms on page 15 appears rather antiquated in attempting to encourage mystification When preparing the next edition with greater leisure it would be well to secure more consistency and to employ the official names and contractions, on the first page it is a surprise to find "hexamethylenetetramine" where the official title "hexamine" should have appeared We meet with Spirit Chlorof and with Sp Chloroformi, with P Saponis and Pulv Saponis, with P Boracis and Pulv Boracis These minor blemishes, however, do not materially detract from the general utility of the book, they are more than counterbalanced by the precision of the text and by the numerous hints to prescribers and dispensers

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MISCELLANEOUS VOLUMES

NEVER did the British Empire and race stand in more urgent need of the greatest possible excellence in mothercraft than at this present time, when the European nations are engaged in a death struggle The National Association for the Prevention of Infant Mortality and for the Welfare of Infancy has done well in putting forth, under the title of *Mothercraft* (London The National League for Physical Education and Improvement 1915 Pp 244 Price 3*s* net), a course of lectures delivered under its auspices during the winter quarter of last year at the Royal Society of Medicine and Charing Cross Hospital Medical School. These lectures are 16 in number and cover the subject of antenatal preparation of the mother, various forms of infant feeding, the general and special ailments of children, and the establishment and working of infant welfare centres The medical contributors are Dr C W Saleeby, Dr Amand Routh, Dr Harold Waller, Dr F Langmead Dr Eric Pritchard Dr H C Cameron, Dr Ronald Carter, Dr D Forsyth, Lieutenant-Colonel E Roberts M B, Mr Sydney Stephenson, Mr Macleod Yearsley Mr C E Wallis Mrs Florence Willey M D, and Dr F J Allan Marion Fitzgerald writes on How to Visit Homes, and Miss M B Synge adds a chapter on the Clothing of Infants To the end that the book may be widely read by Englishwomen of all classes it would seem desirable that a much cheaper edition should be published.

An interesting series of lectures on *Science and Religion*, delivered by eminent men of science in Browning Hall, London during Science Week, 1914, has recently been published (London W A. Hammond Holborn Hall E C Pp 138 Price 1*s* net) The lectures are as follows Help from the Unseen, by Sir Oliver Lodge F R S, the Supreme Intelligence in and above Nature, by Professor J A. Fleming, F R.S Religion the Crowning Stone of Science, by Professor W B Bottomley, F C S, the Witness of Geology to Revelation, by Professor Edward Hull, F R.S, Science and the Unknown, by Mr John Allen Harker F R.S, the Origin of Life, by Professor G Sims Woodhead, F R.S, Religion and Science their Alleged Incompatibility, by Professor Silvanus Thompson F R S In these essays the reputed incompatibility between the fundamentals of religion and the facts and principles established by science in its various branches is critically investigated by men of established reputation in the scientific world, who put forward reasons for holding that a study of the material aspect of nature, so far from negativing the grounds for a belief in a spiritual substratum and origin entirely supports such a view An introduction describes the aim the speakers and the meetings while Mr J E Stead F R S, adds a rider in the shape of a suggestion that religion must be scientific, by which is meant that its further investigation must be conducted by scientific methods The book contains portraits and brief biographical notes of the speakers and is well worth reading eventually attained by the means of these mistakes As the author quotes from Emerson "They builded better than they knew" We may mention that each chapter has an appropriate poetical heading, which relieves the somewhat dry recital of records and regulations We regret to learn that the time honoured story of the cure of Shah Jehan's daughter by Gabriel Boughton, and the consequent bestowal on him of a grant in favour of the Honourable East India Company, has no foundation The Bengal Medical Service was founded in 1763, on two occasions, in 1766 and 1796, it was divided into two separate services, military and civil, and each time the separation was found to be impracticable, and the two branches were again united Administrative officers of the Army Medical Department were first appointed to India in 1825, and friction appears soon to have arisen between the two services

Colonel Crawford is doubtful as to the suitability of the present system of instruction for I M S officers He considers that Indian diseases would be better studied in India, in the large hospitals of the Presidency towns, which provide an extensive field for research, and are now well equipped with modern appliances The recent history of the Service is treated of in detail as regards scientific, military, civil, and professional matters The author believes that the regimental hospital system will be abolished in the Indian as it was in the British Army It "has outlived its usefulness" A closer relationship between the military and civil branches is desirable How it is to be brought about is not yet apparent Professor Maclean's Christian names were William Campbell, not William Charles, G C B stands for Grand Cross, not Grand Commander, of the Bath (p 210) A list of Fellows of the Royal Society in the Indian Medical Service would be acceptable

Colonel Crawford is to be highly congratulated on the successful accomplishment of his task, while the volumes are extremely well printed and well got up

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Flies in Relation to Disease Non Bloodsucking Flies

By G S GRAHAM SMITH, M D Cantab Cambridge University Press 1914 Pp 389 Price 12*s* 6*d* net

WE have already noticed the first edition[1] of this handbook, but the second edition is not merely a reprint with a fresh preface It is an amended and enlarged replica of the original edition, though appearing only a year later Even with such excellent assistance as is offered by the *Zoological Record* it is hard to be sure that a bibliography upon a given zoological subject is exhaustive, and the difficulty obviously increases with the length of the list of titles of works given The author finds 25 pages fairly closely printed necessary for bringing the reader in view of what has been written concerning the muscidæ and other non biting flies It is not therefore surprising to learn that Dr Graham Smith has found that he neglected a few memoirs in the earlier edition These are duly intercalated in their proper places in the present revised bibliography The work to which these papers refer is however, separately dealt with in an appendix together with more recent work which has appeared since the first edition of the book was published This appendix occupies nearly one hundred pages, and is a testimony to the immense output of scientific work nowadays It appears from an inspection of the lists of titles that a large amount of this collected work is from British sources, much also is American, much French, and rather less Italian. The Germans do not bulk so largely

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Gonorrhœa and its Complications in the Male and Female

By DAVID WATSON, M B, C M Glasg, Surgeon Glasgow Lock Hospital, Dispensary Surgeon for Venereal Diseases Glasgow Royal Infirmary, &c. With 72 illustrations and 12 plates, 9 of which are in colours London Henry Kimpton 1914 Pp 375 Price 15s net

IT is only within recent years that the importance of gonorrhœa has been recognised, even by the medical profession, and still it is regarded as a trivial affection by the general public It is now acknowledged that there is room for discussion whether it is not on the whole a more serious disease than syphilis, when all its numerous complications and sequelæ are borne in mind This book contains one of the best accounts that we have seen of this disease and its treatment, it is comprehensive, it is eminently readable, and above all it is extremely practical The author, while mentioning carefully the various methods which have been employed in treating the different conditions which may occur, explains the grounds on which choice between them should be based With regard to the use of gonococcal vaccine he speaks very definitely, he says that though he is convinced that the vaccine has a specific power to modify the disease, yet he is equally convinced that as yet we have not worked out the data necessary to enable us to use the vaccine with sufficient control over its therapeutic action to justify its indiscriminate employment

The absence of references to original papers should be corrected in future issues

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LIBRARY TABLE

Text book of Massage and Remedial Gymnastics By L L DESPARD, Member and Examiner, Incorporated Society of Trained Masseuses Second edition London Henry Frowde, Oxford University Press, and Hodder and Stoughton 1914 Pp 413 Price 12*s* 6*d* net—Those who practise massage require to have a knowledge of a certain amount of anatomy, but it is by no means easy to determine what are the exact limits of the anatomy they should be taught In this volume we cannot help thinking that the author has included too much, though perhaps this is an error in the right direction It is surely unnecessary to include in such a work as this details as to the surfaces of the fibula or the origin and insertion of the pectineus muscle At all events, we may rest assured that very few students of massage ever learn such details as these Apart from these structures we have nothing but good to say about this book, the student of massage will find all that he needs in it The large number of illustrations add to the value of the work those representing anatomical structures come from "Cunningham's Anatomy"

Essays and Addresses By the late JAMES CAMPBELL BROWN, D Sc Lond, LL.D Aberd With a portrait and 22 illustrations London J and A Churchill 1914 Pp 208 Price 5s net—We can cordially recommend these essays to the notice of

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[1] THE LANCET March 1 th 1914 p. 755

THE LANCET.

LONDON SATURDAY, FEBRUARY 13, 1915

The Invalid and the Fighting Line

WE called attention recently to a striking manifestation of patriotism shown by subjects of aortic insufficiency who, while quite aware of the nature of their disability, had nevertheless been found in the fighting line of the French army. A recent report to the Academie de Medecine has shown that this display of heroism has been widespread, incidentally proving that compensation in quite serious cardiac lesions is for a time often very complete. The situation, however, that may arise from the successful attempt upon the part of a physically damaged man to enrol himself in the army as sound may be so serious that while we admire we regret such exploits. And the French army is not singular in providing examples. The experience of the medical men who passed recruits for enlistment in our rapidly created army was, as is known, satisfactory on the whole; it entirely contradicted the more gloomy prognostications of the untiring prophets of our physical decay as a *nation*, while the summary inspection led to the immediate remedy in many cases of minor evils which in all probability would have otherwise gone unattended, inasmuch as their subjects had finished their school careers before the national system of inspection was in effective order. The good health now maintained in our army is a proof that in physique and stamina there has not been the widespread deterioration which in many magazine articles we were asked to face, while on the other hand the capacity shown by masses of men drawn from every class, varying in age by 20 years, and in many cases not distinguished by external signs of rude health or muscular vigour, to endure the shocks of actual war as well as the strenuous labour of military training, has been surprising. There has, of course, been from time to time sickness in different camps, but by treatment and prevention, by the coöperation of the medical and sanitary branches with military chiefs who understood the importance of hygiene, the health of our troops has been conserved in a wonderful manner. But undoubtedly a certain number of unfit men were accepted. The work of the recruiting medical officers in the *first days* of stress was done at full speed, and we have all heard of individual cases of recruits whose disabilities for a military life were manifested very quickly. And it was quite well known that the enrolment of some of these men was not due so much to the hurry of the recruiting procedure as to that very spirit of heroism which has been so markedly displayed by cardiac subjects in France.

At the meeting of the Academie de Medecine of Paris M. Ch. FIESSINGER reported some truly remarkable cases in which the subjects of other forms of heart disease showed as much staying power as those suffering from aortic insufficiency. The declaration of war caused, said M. FIESSINGER, the national energies to manifest themselves in an "élan incomparable," and under the stimulus failing organs worked better for a time. Those who had good reason to remain at home ignored medical advice and went to the frontier like the others. M. FIESSINGER referred to 12 cases, in 6 of which the patients were retired officers. The remaining 6 were officers in the army, who would no longer incur the shame of being considered "infirmes" and followed their comrades. The diseases present in these 12 cases were as follows: in 5 affections of the myocardium (myocarditis or renal heart), paroxysmal tachycardia in 1, and valvular disease in 6 (3 cases of mitral regurgitation, 1 of *mitral* obstruction, and 2 of aortic insufficiency). The treatment usually followed was administration of 1/10th of a milligramme of crystalline digitalin for two or three consecutive days as a prophylactic when the heart was not failing, and the same dose for 10 consecutive days with intervals of four days when there were signs of myocardial failure. As might have been foreseen, the subjects of valvular disease stood the campaign better than those who had myocardial disease. An infantry captain and two lieutenants who had well-compensated mitral disease were able with the aid of digitalin to endure the fatigue of the life of combat. An officer, aged 23 years, who had retired from the army in consequence of aortic insufficiency, rejoined and took part in the battle of the Marne, but forgetting to take his digitalis his heart dilated. He rested for a fortnight and then returned, but was discharged in spite of his protestations. An officer, aged 26 years, who had retired from the service in consequence of aortic insufficiency, re-engaged as an aviator. In the middle of August he fell with his machine from a height of 20 metres. His shoulder was dislocated and he was covered with bruises. He came to M. FIESSINGER for examination of his heart. He was doing well, and he soon resumed aerial work. A major in the medical corps suffering from mitral obstruction remained alone on the field with more than 700 wounded after the disaster in Lorraine to the 15th Corps. He was taken prisoner and afterwards exchanged for a German army surgeon taken prisoner by the French. He rejoined his corps and passed many days and nights at the *front* until increasing dyspnœa vanquished him. To M. FIESSINGER's advice to take a fortnight's rest he replied that it was impossible. He kept his bed for 48 hours and then rejoined. Two officers—one an "intendant general" in the Army Service Corps, on whom depended the supplies of food of 350,000, the other a major in the veterinary service, who slept on straw for several weeks at a time, treating men more often than horses, and giving numerous injections of

The Balkan Cockpit, by W H CRAWFURD PRICE (London T Werner Laurie Pp 369 Price 10*s* 6*d* net), is a pleasantly written chronicle of the war of 1912–13 between the Balkan Alliance (Bulgaria, Greece Montenegro, Serbia) and Turkey, together with the ensuing war between the Allies—namely, Bulgaria against the other three The downfall of Turkey in the first instance and the defeat of Bulgaria in the second are still bearing fruit in the present general European conflict From a medical point of view the most interesting portion of the book is the account which Mr Price gives of the admirable paper organisation of the Turkish military medical force and its hopeless breakdown in action Further, although the Turkish Red Crescent organisation worked well the authorities thereof refused to lend a helping hand to their military brethren, whose hospitals were lamentably understaffed and were without food, medical comforts, bandages or medicines

Miss ETHEL C HARGROVE went to Portugal on the invitation of the Sociedad Propaganda de Portugal as a member of the British International Association of Journalists, and her book, *Progressive Portugal* (London T Werner Laurie 1914 Pp 276 Price 6*s* net), is a brightly written, if superficial, account of what she saw and did there Portugal, which has been Britain's ally from the time of the Crusades, is a country with a most interesting history Its climate, architecture, and vegetation are all fascinating and but little known to the majority of British travellers The recent change of government has apparently been of an awakening nature, and Miss Hargrove points out that the Republic took early steps to reorganise the public institutions, especially the hospitals, which are now being modernised all round. The book is supplied with a map and with numerous illustrations, but we have also noticed an unduly large number of misprints.

Of books for students of the résumé class there are two kinds—those that should be unhesitatingly condemned for inherent defects and those that are not dangerous unless improperly used, and may even serve a useful purpose if used merely to systematise knowledge To the latter class belongs *Aids to Pathology*, by Dr HARRY CAMPBELL (London Baillière, Tindall, and Cox 1915 Pp 228 Price 3*s* net, in cloth 3*s* 6*d* net) The third edition of this book contains much additional matter on immunity A chapter on diseases of the heart has been added, and there is considerable amplification in other directions

JOURNALS

British Dental Journal —The first January issue of this journal contains a paper by Mr W Hern on Oral Hygiene and Prophylaxis After recounting the various conditions giving rise to gingivitis Mr Hern discusses the most efficient means of keeping the mouth in a state of cleanliness He seems to think that reliance can be placed upon the use of the tooth brush, and suggests patterns of brushes to be used as well as the methods for brushing the teeth He discusses briefly the value of tooth powders, and incidentally does not place much reliance upon the use of antiseptic washes The discussion on the paper is printed, and many of the speakers obviously thought that the question of oral hygiene and prophylaxis should be approached from rather a broader point of view than that suggested by Mr Hern—viz, on the broad lines of dietetics and efficient mastication —Mr W H Gilmour reports an interesting case of fractured teeth from a bullet, the bullet having indentations on both upper and lower surfaces —Mr Arthur Underwood contributes a very interesting letter on the question of the scarcity of dental practitioners and thinks that the cause rests in the unsatisfactory condition of dental legislation —The issue for Jan 15th contains an article by F W Broderick on The Relation between Calcium Metabolism and Dental Diseases The author discusses the manner in which calcium is found in the body and describes how the calcium balance is maintained He considers that caries is the result of a deficient calcium output which reduces the alkalinity of the saliva while he regards periodontal disease as due to calcium saturation the excess salts being deposited around the necks of the teeth and acting as mechanical irritants press the gum margins away and lay them open to infection There is a reprint of a lecture by Mr Howard Mummery on Calcification, also two letters dealing with the question of shortage of qualified dentists

New Inventions.

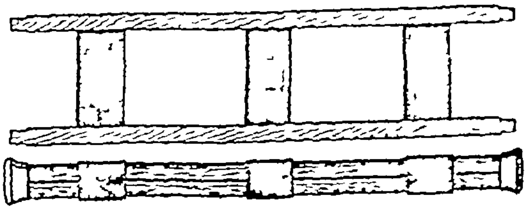
VENTILATED ELASTIC STOCKINGS FOR VARICOSE VEINS

THE medical profession will, I think, be glad to have their attention called to a ventilated stocking which I have recently been employing in cases of varicose veins associated with eczema. In these cases patients often complain bitterly of the almost intolerable itching provoked by the heat inseparable from the use of stockings of solid elastic The substitution of perforated bandages is but a partial remedy for the drawback the necessary overlapping of the folds of the bandage neutralising to some extent the effect of the perforation The intense irritation suffered in an exceptionally severe case of mine prompted me to consult Messrs Maw Son, and Sons as to the practicability of constructing an elastic stocking on the principle of cellular clothing The attempt was made, and made successfully, for I have tried the stocking in a number of appropriate cases and have found that it admirably fulfils the desired purpose of affording support without heat The stocking composed of finely meshed silk and elastic, supports the distended veins not less effectually than does a stocking of solid elastic while permitting free ventilation For obvious reasons in cases in which there is discharge it must not be applied until the exudation has ceased Where economy is an important consideration cotton can be substituted for silk and, whether made of the one material or of the other, the stocking can be employed with advantage in cases of uncomplicated varicose veins as well as in those in which there is associated eczema

Harley street W MALCOLM MORRIS, F R C S Edin

THE "STICK" LEG REST

THIS ingenious little invention consists of a very stout stick split in halves the halves being joined by bands of webbing as shown in the picture The halves closed and secured by a thick rubber cap on each end make a stout walking stick When the halves are separated the stick becomes a leg rest of a very comfortable sort in any position, each half is converted into an adjustable splint the leg resting comfortably on the webbing The length of the stick is 33 inches so that as a rest the apparatus just fits across the seat of a railway train The removing the caps to open up the stick is simple, and the caps are very substantial so that they may not be worn out by use as ferrules The price of the stick leg rest is 4*s* 6*d* and all communications should be made to Mr George Marshall Seymour Works, Seymour place Bryanston square, London, W



BELGIAN REFUGEES UNDER THE INSURANCE ACTS —A circular of the Local Government Board addressed to local refugee committees has given explanations as to the position of Belgian refugees towards insurance when they obtain employment in this country Employers have to pay the same contributions whether they employ their countrymen or Belgians The refugee in certain circumstances may claim exemption, as may the British subject The Belgian if insured must obtain a card and either join an Approved Society or remain outside as he may prefer His benefits from the society will be such as it is in a position to give in return for his contributions He will in fact be in the position of an ordinary foreigner By joining an Approved Society he will usually become entitled to medical and sanatorium benefits at once but will not be in the same position as a British subject with regard to other benefits stimulation. This stimulation is assumed to be due by some observers to an increase in the oxidising powers of the oxidising enzymes, so that destruction of the hindering compounds can be accomplished as quickly as they are formed, growth thus continuing more rapidly. Manganese possibly intervenes as a catalytic agent in the material changes of which plants are the seat, and the metal thus participates in an indirect manner in the building up of the tissues and in the production of organic matter. And this great accelerated synthetic result is the outcome of an application of a solution containing 1 part of the salt in 100 million parts.

In considering the experimental work that has so far been done on the subject of poisoning and stimulation Dr BRENCHLEY concludes that it is not true to maintain the hypothesis which some have done that all inorganic plant poisons act as stimulants when they are present in very small quantities, for while some poisons do increase plant growth under such conditions others fail to do so in any circumstances. It is more probable that some inorganic poisons act as stimulants when present in small amounts, the stimulating concentrations varying both with the poisons used and the plants on which they act. The researches on this subject have attracted considerable attention, and their development will be watched with the keenest interest. The particular work on agricultural applications apart, it is obvious that as these investigations are pursued they may help to clear up much of the obscurity which surrounds the remarkable action of small entities in the human body.

Annotations.

"Ne quid nimis."

FAMILY RESEMBLANCES

HAD the "Slingsby Case" been tried in less stirring times it certainly would have attracted a greater share of public attention, particularly from those who are interested in the inheritance of physical characters. Mr Justice Bargrave Deane recognised a close degree of resemblance between the boy defendant and his father, Mr Charles Slingsby, particularly in the case of the lower jaw, Sir George Frampton detected a likeness between the ears of the boy and his mother. On the day on which the learned judge gave his judgment a well known anthropologist, an anatomist famous for his accuracy, descended in a lift with two men and a boy, all three of whom stared stolidly at the advertisements on the wall. One of the men was short and dark, the other fair and of medium height. The expert at once assigned the little boy as son to the fair man from their close resemblance. As the lift gates swung open the boy took the dark man by the hand, called him 'dad,' while the fair man went his own separate way. In telling us his experience he adds: "Another case of misidentification came under my notice on the evening of the same day. An intelligent and experienced lady called on a friend who took her up to the nursery to see the latest born. The visitor found two nurses and two babies, and exclaimed, 'Well, I need not ask which it is, this one is your image.' She then selected the wrong child." From such cases one must conclude that general resemblances may prove misleading. But it is otherwise with particular features, such as the Hapsburg lip. Medical men are well aware of such features, a nose, an eye, or an ear may have such a pronounced shape that a family identification may be made with certainty. Individuals with pronounced features are in the minority. There is no question that such features may be and are inherited. In many instances the characteristic form is not apparent in the young, it becomes fully developed after adolescence, and this is especially true in the case of the nose, and is also the case with the lower jaw. The boy defendant is 4 years of age, in the next 16 years his jaw will be remodelled over and over again to make room for the permanent molar teeth, the teeth which will replace his milk set and to fit the growth of the upper jaw, it would be at maturity we should expect a real, not an apparent, resemblance of the paternal form of jaw to appear. The ear offers a more certain means of identification of likeness, but very few men have studied this complex structure so closely as to be in a position to offer an expert opinion as to degree of likeness. In the photographs which have been published of the parties in the Slingsby case an expert has little difficulty in recognising what was apparently regarded as a striking feature of the "Slingsby" ear. The resemblance lies in the degree to which the hinder border of the ear is folded over so as to form a welt. It is well known that the folding of the ear margin is a result of retrogression, the more the border is folded over the greater is the degree of developmental retrogression. There is no folding of the border of the ear in the more primitive apes, in some of the higher apes, especially in the orang, there is a high degree of infolding, for the ear of the orang is more retrograde than that of most human races. A considerable degree of infolding of the ear is so common that an anthropologist would give it only a slight value in working out resemblances. Sir George Frampton's method of observation we do not know, but we must admit that sculptors have certainly a right to express an opinion. It was Thomas Woolner who drew Darwin's attention to the presence of a nodule on the welt of the human ear which the great evolutionist recognised as a remnant of the ancient pointed tip. That all parties concerned in the Slingsby case should show a trace of the ancient tip is not a matter for surprise, the ear is exceptional which shows no sign of this ancient mark.

MEDICAL RECIPROCITY WITH BELGIUM

THE Executive Committee of the General Medical Council at its last meeting on Jan. 22nd had before it the recent Order in Council extending Part II of the Medical Act of 1886 to the kingdom of Belgium.[1] The committee considered evidence submitted to it by Belgian professors, graduates, and others with regard to the course of study and examinations which candidates had to undergo in order to obtain the degree of Doctor of Medicine in the universities of Belgium and the legal authorisation antitetanic serum—suffered from renal heart with tachycardia and cardiac gallop Yet they have been through the campaign for over three months and are still well Such devotion, said M Fiessinger, is a magnificent page in the annals of France

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[1] THE LANCET, Jan. 16th, 1915, p. 143.

We have every sympathy with the urgent desire of him who, despite some physical condition that might prove a bar, desires to enlist, but a good physical standard of all is an absolute necessity for the common safety of an army Modern conditions of war have made that standard much more elastic, place has been found in the ranks for the small man, for the man who is too tall (theoretically) for his weight, for the man who wears glasses, and for much other first class material that formerly could not be employed, but there should be no leniency shown towards the applications of those whose infirmities might prove a source of danger to others The recruit who deliberately conceals his epileptic history is not serving his country really, he cannot remain in the ranks while subject to such a disease, and his detection may be the sequel to a tragedy It is possible to condone the case of the healthy middle aged man who confuses his chest measurement with his age in entering himself as 37, many victims of cardiac disease do not themselves know their plight, and if they are admitted to the army the fault is not theirs, but those who conceal conditions difficult to diagnose which, if known, would rightly debar them from military service, make an error—even though a gallant one, for they might break down at a moment when upon their efficiency depended the safety of many comrades

The Physiology of the Minute Quantity

A good many years ago chemists talked of catalytic action, and the expression then was, as most must confess, merely a convenient expression What it really meant was that a chemical reaction between two agents was highly stimulated by a third, albeit this third body was infinitesimal in quantity and unchanged We now possess a quite large number of examples in which catalysis plays an important and even essential part not only in inorganic chemical changes but in life processes also Taking an example of pure chemistry first, the union of hydrogen and oxygen in practically unlimited quantity may be effected, as is well known, by mere traces of colloidal platinum, while without its intervention the elements might remain for ever apart The common and striking feature of catalysis is that the quantity of the catalyst is very small compared with the quantities of the main reacting substances, and this feature is also illustrated in the action of the organic catalyst, the enzyme The enzymes, in fact, bear a close analogy to the ordinary inorganic catalysts Thus the enzyme invertase is capable of inverting 100,000 times its own weight of cane sugar, and its activity is practically unimpaired through the process, particularly when the ultimate product is removed as fast as it appears

A more recent development of catalysis has been made in plant physiology, which promises to be of the utmost importance to agriculture, while the circumstances in which we live necessarily turn the attention of thoughtful people to the productivity of the soil It has been found that minute traces of certain mineral bodies may promote or hinder healthy plant growth, just as the presence of a minute quantity of iodine in the thyroid gland determines its activity In a suggestive monograph forming one of the agricultural series issued from the Cambridge University Press,[1] Dr Winifred Brenchley records the results of some experiments made at Rothamsted experimental station on the influence of certain metallic compounds on vegetable growth The trials are by no means complete, but they indicate that a very interesting and entirely unexplored field is being approached The prospect at any rate is opened up of the possibility of utilising certain stimulating compounds as artificial manures, and Dr Brenchley points out that as only small traces are beneficial, larger amounts being poisonous to the plant, it is obvious that only small quantities would be needed Again, the compounds are not usually very expensive and thus a considerable increase of crop for a relatively small outlay might be anticipated if no complicating factors intervened In this interesting investigation a very limited number of plant poisons were investigated, but sufficient evidence was adduced to show that even these few differ considerably in their action upon plant life While, to quote some examples, certain compounds of copper, zinc, and arsenic are exceedingly poisonous, compounds of manganese and boron are far less deleterious, so that a plant can withstand the presence of far more of the latter substances than of the former The tested compounds of copper, zinc, and arsenic do not seem to stimulate growth, even when they are applied in the smallest quantities, whereas very dilute solutions of manganese and boron compounds decidedly increase growth A differentiation, however is shown even in this stimulative action, for while manganese is the more effective in stimulating barley, boric acid is far more potent for peas, the shoots being particularly improved The minute quantity of manganese sufficient to produce stimulation is very remarkable, since 1 part of the sulphate in 100 millions was found to exercise a beneficial action The yields were increased in some experiments by as much as 41 per cent in the case of spinach, 19 4 per cent in the case of peas 13 9 per cent in the case of flax, and 5 3 per cent. in the case of barley In some investigations carried out with rice in Japan the harvest of grains was increased by one third owing to careful manganese

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[1] Inorganic Plant Poisons and Stimulants By Winifred E Brenchley, D.Sc F.L.S Cambridge University Press

REMUNERATION ON THE PANELS

It is fairly evident that if there had been no war there would have been a considerable amount of disappointment and resentment felt by medical men on the panels of many districts owing to their receiving as their remuneration for 1914 less than they had reason to expect, and owing to their only receiving the balances acknowledged to be due by the committees after appreciable delay In the present circumstances the war is responsible for an increase in the difficulty of the position owing to the number of insured persons who have enlisted There are no contributions made by them or on their behalf by their employers, and owing to the drain upon clerical staffs everywhere arrears of work have accumulated, with general dislocation of business It is too early to say what may be done in the future in order to relieve the situation, but it seems very doubtful whether committees can be compelled to find money and make payments where the ordinary working of the Insurance Act does not provide it At the same time the hardship to the medical profession and to the druggists must be great when payments which they have had every right to expect are postponed or withheld The medical practitioners have had to arrange the organisation of their professional work to meet the demands of their insured patients upon their time and attention, and the druggists have had to meet anticipated requirements by laying in stocks of drugs which have to be paid for Both have to contemplate the return of many insured persons serving in the army with wounds or with impaired health, and a general alteration of the probabilities with regard to their need for medical care For the rectification of some part at any rate of legitimate causes of complaint it may be necessary to wait until the war is over and legislation can proceed upon more normal lines than now At present it may be urged on behalf of the medical men affected that they are entitled to demand payment upon all patients on their lists until they have been notified as provided for by Regulation 29, and that if the financial provisions of the Insurance Act do not meet the needs created by war, legislation should supply the deficit

THE ADMINISTRATION OF THE PHARMACY ACTS

The annual report of the Registrar of the Pharmaceutical Society, which was presented to the council at the February meeting shows that as regards membership the steady progress which has been revealed by these reports during the last ten years or more is well maintained The number of members is now well over 8000, which is about half the number of registered persons, the majority of the non members no doubt consist of qualified chemists who are not yet in business on their own account There is also an increase in the number of names on the Pharmaceutical Register, and although this increase is only slight it is satisfactory to know there is an increase, while the fact that there has been a considerable accession to the ranks of the registered students is very promising From the general point of view the most interesting part of the report is that which deals with the administration of the penal clauses of the Pharmacy Acts The number of cases of alleged infringement that require investigation is still large, but smaller than it was during the previous year During 1914 1113 cases were investigated, and in 239 cases proceedings were instituted, and the council was successful in all but one or two The list of offenders is headed by unqualified drug store proprietors, of whom 93 were proceeded against, the offence generally being that of keeping open shop for the sale of poisons Among the persons by whom penalties were paid there were also a number of qualified pharmacists who had committed one or other of the irregularities which are offences under the law regulating the sale of poisons The list of offenders also includes unqualified assistants in drug stores, unqualified managers and assistants to chemists, executors to chemists, limited companies trading as chemists and druggists, unqualified directors of limited companies, grocers, herbalists, general storekeepers, and one ironmonger, one seedsman, one oilman, one manure agent, and one unqualified assistant to a doctor It is evident from the variety of the occupations of the persons proceeded against that the task of preventing the irregular sale of poisons is no light one In five cases of alleged infringement of the Pharmacy Acts which had been reported it was found upon analysis that the poison asked for had been omitted from the articles purchased, and proceedings could not, therefore, be taken under these Acts, but pursuing the policy decided upon some years ago the council proceeded in two of these cases under the Merchandise Marks Acts, and the defendants were convicted for selling goods to which a false trade description was applied.

THE STREPTOCOCCUS VIRIDANS IN INFECTIONS OF THE UPPER RESPIRATORY TRACT

An interesting paper is published in the *Archives of Internal Medicine* for Jan. 15th by Dr Russell L Cecil, of New York He adopts the classification of streptococci put forward by Schottmueller, based on the appearances of the colonies on blood agar—namely, S hæmolyticus (longus, pyogenes), S viridans (mitior), and S mucosus Dr Cecil states it to have been found by many investigators that clinically the S hæmolyticus produces suppurative or phlegmonous inflammations, while the S viridans usually leads to catarrhal processes His own work has been specially devoted to determining the part played by the latter organism in infections of the upper respiratory tract From the study of 89 cases of such infections he found the S viridans to be the predominant organism in 50 cases, or 56 2 per cent In general these infections were characterised by a mild course and a tendency to chronicity with frequent recurrences, which he attributes to the short duration of the acquired immunity These infections of the upper respiratory tract due to S viridans, especially those of the tonsils, sinuses, and the tooth sockets, are frequently associated with endocarditis and arthritis, and he is of opinion that there is a good deal of evidence that the latter conditions are secondary to the former He has found autogenous vaccines to be of considerable value in cases where the structural changes are not too advanced, but he takes care to point out that in cases of bronchitis with emphysema or bronchiectasis, old sinus infections with thickened walls, and advanced pyorrhœa with retraction of the gums, vaccines can bestow only limited benefits. He believes that vaccines are more especially to practise in that country The committee was satisfied with the evidence produced, and resolved as follows —

> That so long as the Order in Council of Jan 7th, 1915, remains in force any person who produces evidence satisfactory to the Registrar that he has obtained the degree of Doctor of Medicine in the Belgian universities of Brussels, Ghent, Liége, and Louvain, and is legally authorised to practise medicine, surgery, and midwifery in Belgium, and who satisfies the Registrar as to the other particulars specified in Section 12 of Part II of the Medical Act, 1886, shall be entitled to be registered in the Foreign List of the Medical Register

Further communications received by the Registrar of the General Medical Council, through the clerk of the Privy Council and His Majesty's Minister at Havre, from the Belgian Government, afford official confirmation of the evidence placed before the Executive Committee as to the education and examinations on which medical qualifications are conferred by Belgian universities and colleges The Acting Minister of the Interior, in the course of his note to Sir Francis Villiers, used the following appreciative words "Veuillez croire, Excellence, que le Gouvernement Belge est très sensible a cette nouvelle marque de la sympathie de l'Angleterre et qu'il en remercie vivement les autorites de votre pays" In the absence of complete information on Jan. 22nd, the question of the recognition of Belgian dental diplomas was held over until the next meeting of the Executive Committee

THE HUMAN STOMACH AND THE CANALIS GASTRICUS

It has been commonly supposed that fluids and solids on being swallowed must necessarily be mixed up in the stomach, but there is now much important evidence to show that such a view must be revised It is held that fluids can be swallowed, in fact usually are swallowed, and yet not mix with other ingesta within the lumen of the stomach, they pass on, by the aid of a special arrangement to be immediately noted, direct from the cardiac orifice to the pylorus Comparative anatomy has shown that such an arrangement holds good for ruminants, and at a later time it was discovered that carnivora possess the same faculty, despite the fact that in them the stomach is a single chamber Recently Dr F T Lewis has called attention to a canal along the lesser curvature of the human fœtal stomach, he has called it the "canalis gastricus' He says ' it suggests a continuation of the œsophagus and may become a tube during its physiological activity, by the approximation of its lips" Some recent radiographic and anatomical researches by Dr Geoffrey Jefferson in the *Journal of Anatomy and Physiology* (1915, vol xlix, p 165) give further strong support to the likelihood of some action such as this persisting in adults and realising in this way a selective course to the pylorus for fluids Screen examinations of 22 normal people after being given a mixture of bismuth oxychloride and milk of the consistency of thin cream showed that in 18 instances the fluid was confined to the lesser curvature, in the other 4 cases it spread rapidly over the sides of the stomach, but these stomachs were atonic That such a course does not merely represent the shortest path gravity would demand is shown by the holding up of some portion just below the cardiac orifice Nor does Dr Jefferson agree wholly with Dr Hertz that the normal empty stomach is contracted down like a piece of small intestine, the localised stream being accounted for in this way That the stomach really makes a coördinated effort to direct the fluid into a channel at its lesser curvature is thus suggested by X rays Finally, there must be recognised the active part played by the oblique muscle of the stomach in accomplishing this local canalisation It is probably by the contraction of its upper fibres that the bismuth, as seen by the screen, was so constantly held up below the cardiac orifice This sheath of muscle, in fact, is of more importance than was supposed, and its action aids in forming this functional "canalis gastricus" Further proof of the specialisation of the lesser curvature of the pars cardiaca for some function other than that of slowly pressing the food out into the outer pyloric part is shown by the marked difference in the action of the muscle along the lesser curvature as seen by X rays, the change occurring at the incisura angularis The whole diameter of the pars pylorica takes part in active peristaltic waves coursing towards the pylorus It is, however, very rare to see any indentation of the lesser curvature in the pars cardiaca There thus seems to be a fundamental functional difference between the two parts, which gains its best explanation from the facts above discussed

SMALL-POX, VARICELLA, AND "ALASTRIM"

The discussion at the Royal Society of Medicine[1] arising out of a paper read by Dr W G Armstrong on the subject of the epidemic of small pox at Sydney in 1913 was in many respects interesting and suggestive The peculiar feature of the epidemic in question was the mildness of the symptoms, although the population affected was largely unvaccinated Thus, in many instances there were but few cutaneous lesions, while in a patient who presented a severe confluent eruption on the face and extremities the constitutional disturbance was so slight that the man's complaint was only of the insufficient food given him and of the soreness of his feet if he tried to stand on them There was only one death among over 1000 cases of the disease Coincidently with this epidemic of small pox there was an increase in the prevalence of varicella, but the behaviour of the two diseases with regard to vaccination negatived any possibility of the epidemic being of hybrid character Epidemics of specially mild small pox have been observed in many parts of the world and have received different names, such as milk pox, Cuban itch, Spanish measles, and "alastrim , and doubt has prevailed as to the identity of these mild forms with true variola Dr C J Martin quoted a report by Ribas, of São Paulo, who upheld the diversity of the local disease known in Brazil as "alastrim ' from small pox owing to its low mortality, its trivial degree of constitutional disturbance, the absence of the characteristic smell and the possibility of successfully vaccinating patients within a short period after the attack On the whole, the evidence is in favour of regarding all these conditions as mild variola, and the success of Dr J Burton Cleland and Dr E W Ferguson in inoculating calves with material derived from patients in the Sydney epidemic affords powerful support to this view Dr Martin, however suggests that the three diseases—small pox, chicken pox and "alastrim'—are of common parentage but have become so far differentiated as to breed true at the present time

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[1] Proceedings of the Royal Society of Medicine December [illegible] Section of Epidemiology

A MONTHLY RECORD OF ATMOSPHERIC POLLUTION

COMMITTEE FOR THE INVESTIGATION OF ATMOSPHERIC POLLUTION

Summary of Reports for Month ending Nov 30th, 1914

1	2	3	4	5	6	7	8	9	10	11	12
			Metric tons of deposit per square kilometre during month								
		Rainfall in millimetres	Insoluble matter			Soluble matter			Included in soluble matter		
Place.	Correspondent		Tar	Carbonaceous other than tar	Ash.	Loss on ignition	Ash	Total solids	Sulphate as (SO_4)	Chlorine (Cl)	Ammonia (NH_3)
ENGLAND—											
Birmingham Central	Dr J Robertson M O.H	86	0·11	4·17	10·05	1·47	6·30	22·10	3·66	0·52	0·06
Aston	,	79	0·04	1·44	3·58	0·56	4·28	9·90	2·15	0·56	0·04
S W	,	78	0·02	0·65	1·34	0·47	2·35	4·83	0·96	0·43	0·03
Bolton	Dr J E Gould M.O H.	156	0·10	1·77	3·89	7·12	14·25	27·13	8·46	2·63	0·14
Exeter	Mr F Southerden.	81	0·03	1·21	2·12	1·94	3·75	9·06	1·67	0·65	0·04
Kingston upon Hull	Mr A. R Tankard Public Analyst	55	0·05	2·05	2·94	1·10	3·91	10·05	2·33	0·60	0·06
Liverpool	Dr E W Hope M O H	79	0·24	3·22	6·85	3·15	4·41	17·87	3·57	1·34	0·21
London—											
Meteorological Office ..	Director THE LANCET Laboratory	74	0·14	1·63	4·29	3·89	5·36	15·30	2·98	1·21	0·11
Embankment Gardens	Mr J Ollis Chief Officer Public Control Department L.C C	64	0·21	2·84	5·84	2·55	3·95	15·40	2·73	0·79	0·10
Finsbury Park..	,	40	0·14	2·58	5·21	1·85	3·79	13·59	1·57	0·37	0·03
Ravenscourt Park ..	,	51	0·10	1·13	2·84	1·01	2·73	7·81	1·33	0·39	0·07
Southwark Park ..	,	69	0·06	2·86	5·17	1·51	5·77	16·37	2·99	0·63	0·08
Wandsworth Common	,	42	0·08	0·36	1·04	0·41	2·57	4·49	1·37	0·29	0·02
Victoria Park		42	0·04	0·92	1·76	1·25	4·49	8·46	2·65	0·31	0·04
Golden Lane	Dr W J Howarth, M O H	74	0·07	3·78	4·67	2·06	6·59	16·67	3·67	0·89	0·16
Malvern ..	Mr W Osborne Thorpe Engineer U.D C	61	0·01	0·18	0·27	0·95	0·97	2·38	0·63	0·36	0·01
Manchester*—											
School of Technology	Mr J Warrington Secretary Air Pollution Advisory Board	91	0·14	3·69	6·16	1·27	6·40	17·66	3·77	1·38	0·10
University ..		86	0·13	3·01	6·82	1·62	5·82	17·40	3·17	1·25	0·09
Newcastle-on Tyne ..	Dr H Kerr M O H	82	0·19	4·22	6·81	2·46	6·08	18·77	3·00	0·67	0·21
Oldham ..	Dr J B Wilkinson M O H	112	0·26	6·55	14·60	2·68	7·60	31·70	4·36	0·79	1·84
Sheffield—											
Attercliffe Burial Ground	Prof W P Wynne The University	72	0·12	4·01	9·35	1·80	7·61	22·90	3·59	1·74	0·05
Hillsborough Park		91	0·06	1·44	4·86	1·17	4·90	12·43	2·66	1·08	0·03
Meersbrook Park	,	78	0·05	1·18	3·13	0·75	5·48	10·59	2·32	1·00	0·04
Weston Park	,	87	0·11	2·04	5·77	1·60	4·51	14·03	2·39	0·97	0·03
York	Dr E M Smith, M O H.	70	0·13	1·92	3·03	1·68	3·64	10·41	2·10	0·67	0·50
SCOTLAND—											
Coatbridge	Mr A. G Dutch Chief Sanitary Inspector	107	0·14	2·33	5·54	1·15	2·14	11·30	1·39	0·33	0·10
Greenock	Mr J Devine Sanitary Inspector	118	0·09	1·58	2·37	1·50	3·81	9·36	1·69	0·89	0·14
Leith	Mr Thomas Bishop Sanitary Inspector	55	0·07	1·88	4·47	2·83	1·41	10·66	1·65	0·48	0·32
Paisley	Mr W W Kelso Sanitary Inspector	137	0·33	4·97	7·10	6·05	5·50	23·95	2·03	1·23	0·14

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* Other Manchester records lost by bursting of bottles by frost.

Col 4 includes all matter insoluble in water but soluble in CS_2 Col 5 includes all combustible matter insoluble in water and in CS Col 6 includes all earthy matter fuel ash &c. One metric ton per sq kilometre is equivalent to (*a*) Approx. 9lb per acre (*b*) 2·56 English tons per sq mile (*c*) one gramme per sq metre (*d*) 1/1000 millimetre of rainfall (see Col 3)

The analytical work involved in the above return was undertaken respectively by J F Liverseege F I C Birmingham Harry Hurst, B Sc F I C Bolton F Southerden B Sc F I C Exeter A. R Tankard F I C Kingston upon Hull W H Roberts M Sc. F.I C Liverpool S A. Vasey F I C Director THE LANCET Laboratory (London Meteorological Office collections) J H Coste, F I.C (Embankment Gardens Finsbury Park Ravenscourt Park Southwark Park, Wandsworth Common Victoria Park collections) London F L. Teed D Sc Golden lane London E C C C Duncan F I C Malvern E Knecht Ph.D M Sc. Cheadle Davyhulme Fallowfield School of Technology University Whitefield (Manchester collections) J J Dunn D Sc. Newcastle-on Tyne Professor W P Wynne, Attercliffe Burial Ground Hillsborough Park Meersbrook Park, Weston Park (Sheffield collections) S H Davies M Sc York J W Biggart, F I C Greenock A. Scott Dodd B Sc. F I C and R M Clark B Sc. Leith and Paisley respectively Messrs R. R. Tatlock and Thomson Coatbridge The correspondents referred to in col 2 are for the most part public health authorities.

THE CORNWALL COUNTY ANALYST AND PRESERVATIVES IN FOOD —At the last meeting of the General Purposes Committee of the Cornwall County Council the county analyst (Dr Kitts) reported that during the past four years slightly over 1 per cent of the milks had been treated with a preservative and 5 per cent of the butter samples In margarine 95 per cent of the specimens examined had contained a boric compound in small quantities Dr Kitts stated that when preservatives had been used in other articles of diet the user had sometimes not even known the name of the powder he had used to say nothing of its possible physiological effects, the vendors persuaded the users that the substances were perfectly harmless Dr Kitts added that it was outrageous that the public should be constantly dosed with ' medicinal substances ' by persons having no knowledge of their proper use or effects upon the human system.

BRISTOL INSURANCE COMMITTEE —At the last meeting of this committee it was reported that the total number of persons on the 'doctors lists " was now 106 704, an increase of 7000 upon the previous year The number of prescriptions dispensed during 1914 was 382,000, a rate of over 1000 a day

SCARLET FEVER IN BELFAST —The attempt to limit the spread of scarlet fever in Belfast by closing the public schools last Christmas has not succeeded During the week ended Jan 16th there were 41 notifications of the disease as compared with 37 in the previous week, while in the week ended Jan 23rd 55 cases were notified Indeed, there seems to be a recrudescence of the epidemic which has now prevailed so many years in Belfast In the progress of preventive medicine the inability to restrict scarlet fever is the most striking exception.

valuable in the prevention of recurrences, and suggests that prophylactic vaccination against infections of the upper respiratory tract deserves more attention He states that his own experience indicates that most persons who suffer from frequent colds are susceptible to one particular organism with which they are constantly being reinfected Dr Cecil's paper is an interesting and practical contribution to a subject of general interest

ON Wednesday next, Feb 17th, at 5 P M, before the Historical Section of the Royal Society of Medicine, Sir Alexander Simpson, of Edinburgh, will read a paper on *Jean Astruc (1684–1766)*, of the Montpellier School, the historian of syphilis, but nowadays more famous in theological circles as the founder of the higher biblical criticism This is the aspect which will be specially considered, we understand, by Sir Alexander Simpson

THE Morison lectures will be delivered before the Royal College of Physicians of Edinburgh by Dr W H B Stoddart within the hall of the College, 9, Queen street, Edinburgh, on Monday, Wednesday, and Friday, March 8th, 10th, and 12th, commencing each day at 5 o clock P M The subject of the lectures will be the New Psychiatry

THE annual meeting of the British Medical Association, which was to have been held at Cambridge this summer, will not take place The statutory annual general meeting of the Association and the annual meeting of Representatives will, however, be held

MEDICINE AND THE LAW

Medical Certificates and the Education Authorities

AT the Bangor police court recently a summons taken out by the education authority against Ernest Kenrick, the father of a boy who had been kept back from school on the ground of ill health, was dismissed by the bench after hearing the evidence of Mr Helsby, the boy's medical attendant Mr Helsby stated that in his opinion the boy was too delicate to attend school, and he had advised that he should be kept at home during the winter He had given no certificate because he did not think that the education authority could compel parents to obtain and pay for medical certificates in such circumstances, and he knew that the authority did not pay for them In other districts where the education authority paid for certificates he had given them He was always willing to give the required information to school attendance officers The clerk to the magistrates advised the bench that it was doubtful whether the education authority had any right to put parents to the expense of obtaining medical certificates, especially as the attendance officers could always call upon the medical men He advised the magistrates that they had no option but to dismiss the case Mr Helsby explained that he might spend a great deal of time in writing certificates which the majority of parents could not afford to pay for, and that he attended the court in order to maintain his position on the question of principle He is to be congratulated upon having done so with complete success, and it is to be noted that his conduct in the matter was not only legally correct but reasonable and conciliatory, as he was willing to give verbal information to the attendance officer Presumably that official would not find it necessary to call upon the medical man in all cases where illness was alleged as a ground for failure on the part of a pupil to attend school, but would satisfy himself as to the fact of illness by a visit to the child's home Otherwise the tax of personal answer to inquiries would fall as heavily upon the medical man as that of signing certificates without remuneration It would be fairer and more businesslike if all education authorities adopted a uniform practice of requiring and paying for certificates in cases where any uncertainty indicates that they are desirable

Prescription by Telephone

At an inquest at Burton on Trent lately it was proved that death had been caused by the error of a dispenser to whom the medical man attending the deceased had telephoned, instructing him to send a solution of a certain drug containing 1/75th of a grain for hypodermic injection. In taking down the message the dispenser mistook 1/75 for 0·75, and adopted the latter figure in preparing the solution, with the result recorded The mistake should be noted, as all of us who use the telephone are familiar with the mistakes made in telephoning with regard to figures, even when the listener is a practised operator

A Pernicious Quack Sentenced

Arthur Denison Light, described as principal of the British Health Institute and publisher of a periodical called "Power, Purity, and Progress was sentenced to three months' imprisonment at the Old Bailey recently upon a charge of attempting to obtain money by false pretences Light, against whom *Truth* had frequently warned the public, pretended to treat diseases of the sexual organs and sold books and appliances of the character usual with such gentry One of Light's ingenious devices was to offer to make examinations of urine free of charge He was met here by the ingenuity of a detective, Inspector Wagstaff, who submitted an example consisting of cold tea and soap, and was informed that the patient supposed to have passed it was suffering from catarrh of the bladder Inspector Wagstaff and a Mr Leader, a member of a young men's association called the 'Alliance of Honour," who got into communication with the prisoner and placed the correspondence in the hands of the police, are to be congratulated upon having secured for him a sentence which, if inadequate, will serve as a warning to him and others

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND —The next meeting of this association will be held at 11, Chandos street Cavendish square London, W, at 3 15 P M on Thursday next Feb 18th under the presidency of Dr David G Thomson A paper will be read on Meningo-Vascular Syphilis by Dr Roy M Stewart with lantern demonstration. There will be no quarterly dinner

LITERARY INTELLIGENCE —Messrs Smith, Elder, and Co announce for publication under the title of "The Minor Horrors of War" a number of articles which have appeared since the beginning of the war in the *British Medical Journal* by Professor A E Shipley the Master of Christ's College Cambridge These articles deal with various insect and other pests which cause discomfort and often disease amongst our troops now fighting in all quarters of the globe should come upon them for gratuitous advice This is all the harder to bear as so many patients who used to give reasonable fees are now so impoverished that they really cannot pay anything There is as much, indeed more work to be done, but much less to receive than formerly Thus I called on a non panel doctor who I found had been kept from his dinner by nine army dependents After giving them gratuitous advice a tenth visitor came, but instead of a paying patient he proved to be the water rate collector

After-effects of the Air Bombs

It may not, perhaps, be generally realised that the airship bombs have materially increased the amount of work falling upon the medical practitioners It is not the casualties that count two killed three wounded, and minor injuries make but little difference in the total number of patients ill from all causes But there has been a great amount of illness and some deaths among those who were not struck People with weak hearts, startled by the noise and alarm, had violent attacks of palpitation, and several of the deaths a few days after the bombardment were due to the shock. Then there are the highly nervous or neurotic persons One case was that of a woman who could not be induced to sit still but was constantly springing to her feet pacing up and down the room, wondering what she would do if Zeppelins dropped more bombs In another patient the pulse, previously normal continued beating at 105 per minute a fortnight after the explosions These certainly did make a very great noise and being absolutely unexpected were all the more startling Now that the people are a little more accustomed to such aggression it is probable that another attack would occasion much less disturbance. Nevertheless, the emotion they cause must seriously affect persons with weak hearts or highly nervous temperaments.

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned has been granted a temporary commission as Surgeon in His Majesty's Fleet Arthur Ernest Des

The following appointments have been notified —Staff-Surgeon B R Bickford to the *Pembroke*, additional Temporary Surgeons G M Oakden to the *Prince George* D R. Bedell Sivright and G S Aspinall to the *Victory* additional, for Haslar Hospital W B Cunningham and W L Glegg to the *Pembroke* additional, for Chatham Hospital all as additional medical officers A. G Stewart and D S MacKnight to the *Vivid*, additional, for disposal

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon W H. Bleaden to the *Pembroke* additional

ARMY MEDICAL SERVICE.

Colonel John C Culling is retained on the Active List under the provisions of Article 120 Royal Warrant for Pay and Promotion, 1913, and to be supernumerary (dated Feb 7th)

ROYAL ARMY MEDICAL CORPS

Brevet Colonel Frederick Smith, D S O is retained on the Active List under Article 120 Royal Warrant for Pay and Promotion and to be Supernumerary (dated Feb 8th)

The undermentioned are granted temporary rank as follows —To be Lieutenant Colonel Dated Jan 19th Robert Thomson Leiper To be Lieutenants Dated Jan. 19th Reginald Percy Cockin and John Gordon Thomson

The undermentioned relinquish their temporary commissions with the Allied Forces Base Hospital —Dated Feb 1st Major Arthur G Whitehorne Cole, Major Barnard Hudson Major Philip M Heath Captain Ernest D Roberts Lieutenant Oswald T Dinnick and Lieutenant William M S Robinson

Sydney George Leyland Catchlove to be temporary Captain (dated Jan 11th)

Lieutenant Gwilym L Pierce relinquishes his temporary commission (dated Jan 23rd)

Temporary Lieutenant James G Ferguson resigns his commission (dated Feb 4th)

The undermentioned to be temporary Lieutenants —Dated Jan 16th Dominic Francis Curran John Hastings Glover William Pritchard Airey, and James Morrison Dated Jan 18th Herbert William Fankhausen James Churchill Dunn Wilfred Conrad Stanley Wood Donald Watson Fergus Hay Young George Allan Maling Stanislaus Reader Walter Netherwood Rishworth, Leonard Andersen Pearce Hurt and Samuel Ridley Mackenzie Dated Jan 20th Charles Patrick Valentine MacCormack Archer Ryland Charles James Glasson, James Ninian George William McMorris, and Henry William Doll Dated Jan 21st: James Tate, Frank Llewellyn Gill, William Alfred Taylor, Charles Birch Arthur William Hunter Donaldson, Henry Sydney Colchester Hooper, John Frederick Venables, Edward Benjamin Sunderland Clive Watney Roe, Frank Cyril Greig, John Phillips Blockley Desmond William Beamish, William Leslie, Robert Walpole Murphy, James Parker Arthur Poole, Gerald Robinson, Cyril Carlyle Beatty, Patrick Steele, William Armour Brown Reginald Hannay Fothergill, and Desmond Manus MacManus. Dated Jan 22nd William Gerald Ridgway, Robert Aikin Wright, James Hill, Bevil Molesworth Collard, Thomas Joseph Redmond Maguire, and Harold Myrie Cory

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

Lieutenant Robert Dunlop Goldie to be Captain

Supplementary to Regular Units or Corps Royal Army Medical Corps

The undermentioned Lieutenants are confirmed in their rank John S Dockrill Henry P Whitworth, Thomas H S. Bell, Francis A. Duffield John J D La Touche Joseph H Baird, John J Molyneaux, John Stephenson, James Purdie, Clark Nicholson, William S Wallace Samuel D G McEntire, Gerald G Alderson, Arthur A. Smalley, Wilfrid B. Wood, Francis A. Roddy, Harold A. Crouch, Herbert S Milne John S Pooley, Quentin V B Wallace, William H. Nicholls, Henry Alcock, John Kennedy, and Thomas F Kennedy

The undermentioned to be Lieutenants (on probation) Henry Richard Sheppard, Cadet of the Officers Training Corps, and Robert Harvey Williams, ex-Cadet of the Officers Training Corps.

TERRITORIAL FORCE

Royal Army Medical Corps

2nd London (City of London) Field Ambulance Captain (Honorary Lieutenant in the Army) William E Rielly, from the Territorial Force Reserve, to be Captain

2nd London (City of London) General Hospital Maynard Horne to be Captain (temporary) Lieutenant Horace G L Haynes from 2nd North Midland Field Ambulance, to be Lieutenant

Sanitary Service Alfred Ernest Williams to be Captain, whose services will be available on mobilisation

3rd Northern General Hospital Norton Milner to be Captain, whose services will be available on mobilisation.

1st Southern General Hospital Robert Beatson Dennis Hird to be Captain, whose services will be available on mobilisation

South Eastern Mounted Brigade Field Ambulance Captain Charles Holt Caldicott, from Attached to Units other than Medical Units to be Captain Captain Arthur Lewis Heiser, from Attached to Units other than Medical Units, to be Captain

2nd Home Counties Field Ambulance Captain James Dundas, from Sanitary Service, to be Captain. Lieutenant Ernest Mannering Morris, from Attached to Units other than Medical Units, to be Lieutenant.

1st London (City of London) Sanitary Company Andrew Alexander McWhan to be Lieutenant.

2nd North Midland Field Ambulance Lieutenant Hubert Pinto-Leite, from the 2nd London (City of London) Field Ambulance, to be Lieutenant

2nd Lowland Field Ambulance To be Lieutenants Stephen Anderson MacPhee and Colin Cameron Philip (late Cadet, Edinburgh University Contingent, Senior Division, Officers Training Corps)

2nd Northumbrian Field Ambulance William Smith to be Lieutenant

Attached to Units other than Medical Units—To be Lieutenants William Brown and William Alfred Phillipps

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50 000 persons at the last census, 8650 births and 6995 deaths were registered during the week ended Saturday, Feb 6th The annual rate of mortality in these towns, which had been 18 8, 18·0 and 19·2 per 1000 in the three preceding weeks, further rose in the week under notice to 20·1 per 1000 of their aggregate population estimated at 18 134,239 persons at the middle of 1914 During the first five weeks of the current quarter the mean annual death-rate in these towns averaged 19 1 against 20·0 per 1000 in London The annual death rate last week ranged from 10·3 in Ilford, 10·9 in Swindon 11 8 in Southampton 12·5 in Edmonton and in Warrington and 12·9 in Wakefield to 29·9 in Great Yarmouth, 31·6 in Brighton 32 5 in Merthyr Tydfil, 35 2 in Stockton-on Tees, and 40·7 in Cambridge

MEDICAL PRACTICE ON THE EAST COAST THE POSITION AT GREAT YARMOUTH

(BY OUR SPECIAL COMMISSIONER)

Great Yarmouth Feb. 8th.

To counterbalance the inevitable economical pressure felt by a nation at war we have generally some communities more thriving than others, because they can provide some of the varied material—ships, guns, weapons, clothes—needed for the prosecution of hostilities, other localities receiving no such set-off will necessarily suffer as more and more money is consumed Prominent among the English towns which have to bear the burden of war time stands Great Yarmouth, which has been attacked directly and twice by the enemy, and suffers indirectly by the collapse of its main sources of income Fortunately, the first attack, a bombardment, did no harm Presumably the German ships mistook the distance, for all their shells fell short of the town This first attack occurred, it will be remembered, at the beginning of November, and its memory was fading away when on the night of Jan 19th airships hovered over the town dropping bombs—this time with fatal effect in that several lives were lost, but no great destruction of buildings occurred Financially speaking, rumour did vastly more harm to Yarmouth than the German bombs

The netting of fish and the letting of lodgings are the principal sources of income at Yarmouth, and the war has dealt hardly with both A considerable proportion of the inhabitants rent houses with the intention to secure lodgers for a part of them, and render themselves liable to pay rent and rates far and away above what they would pay in either direction for their personal use Of course, they count on making up the difference advantageously by letting rooms or by taking in boarders The season at Yarmouth is very short, it reaches its climax in September and was commencing at the end of July War was declared on Tuesday, August 4th Of the visitors who were already at Yarmouth hardly any remained beyond the end of that week and none came to take their place the following week Gradually braver spirits returned, but the town never recovered its holiday population as some more fortunate watering places further south appear to have done Perhaps if there had been fewer sinister rumours floating about, the season might not have been so completely spoilt, but every parent who looked at an atlas recognised that if attack was possible Yarmouth was a very vulnerable spot, and decided not to venture there with children Mere digging of trenches would not have frightened the public away from Yarmouth any more than it did from Broadstairs But being nearly opposite the German naval base, it was but too correct to conclude that Yarmouth would be attacked if attack became feasible, while experts were aware of the possibility of a dash from fast enemy cruisers Therefore, those who, in spite of the war were not disposed to forego their seaside holiday selected some place that seemed less exposed than Yarmouth

The Effect on the Local Industries

The next source of income in Yarmouth is the fishing industry, especially the herring trade. This gives employment to a large number of fishermen, and also to regiments of Scotch women, who follow the fishing smacks along the coast to clean and pack the herrings They arrive just after the sea bathing season concludes and in the South Side near the fish-docks fill the lodgings abandoned by the holiday folks But as most of the herrings are packed in barrels, preserved in brine, and exported to the North Sea and Baltic ports this trade is paralysed by the war It so happens that the herring women have found during the collapse of their trade a valuable method of earning money Exposed to all weathers, they know how to knit themselves warm woollen underclothing To-day they can find employment knitting clothes for the soldiers at the front, but they do this at home in Scotland, not at Yarmouth. The poorer lodging house keepers, those for instance who used to receive the women employed in fish cleaning are doing very well in billeting soldiers On their side the soldiers are more comfortable than usual, for being housed by lodging house keepers the cooking and attendance generally are better than in private families which do not make a business of receiving strangers

The Prosperous Inhabitants Suffer Most

The lodging house keepers, however, who are able to balance the loss of their ordinary business by attending to soldiers do not belong to the class which best pays its medical attendants The central and richer part of the town suffers most, and its inhabitants are not likely to ask for help Employees of different sorts in commercial spheres provided modest payments for board and lodging during the winter months on condition that they retired to small rooms during the summer holiday rush. Last year there was no summer rush, and many of these winter clients have enlisted. The health authorities, I found, do not think there is as much poverty as usual among the labouring class and those sections of the community who in normal times suffer most. But other sections who, as a rule do not suffer at all are badly hit, and they are the best ratepayers and the medical practitioners' principal source of income The municipal authorities are greatly concerned, for they do not like to prosecute good citizens The medical practitioner feels the same compunction about pressing for his fees Thus one medical practitioner told me that a patient could not pay what she owed him because her lodger owed her £18, and the lodger could not pay because his occupation had practically ceased at the outbreak of war Then those connected with the law have little or nothing to do No one is going to institute legal proceedings while the war lasts Jewellers, tailors dressmakers all suffer The war is a good reason for wearing out all the old clothes Persons who have private means cannot realise their investments, and those who have placed money in German or Austrian enterprises may never see any of it again Tradespeople who deal in objects that are not absolutely necessary do very little trade, and it will be seen that these are just the very classes among whom medical practitioners find their best paying patients Even those who have money feel unsafe and think it more prudent to economise Therefore they only send for their doctor when it is absolutely necessary Or, worse still, they profit by the fact that they have the means to leave the town altogether, though this is not the general rule

The personal economy and the cessation of trade in certain directions could of course be paralleled all over the country, but in Yarmouth the depression is accentuated by the collapse of the two great industries

Vast Gratuitous Medical Attendance

The poorer sections of the community are if anything better off than before the war The labourers readily find employment, while many of them have enlisted, and there is a good deal to do for those who remain. But the abolition of the militia by the establishment of the Special Reserve has been a great loss to the town of Yarmouth The Norfolk Militia was almost a crack regiment His late Majesty Edward VII, was their colonel, and he used to come down to Yarmouth to review them, thus bringing much money to the town Many of the old militiamen accepted a small fee to become reservists From the town of Yarmouth alone, out of its 57 000 inhabitants no less than 500 were called to the flag as reservists A large proportion not only of these reservists but of those who enlisted since the beginning of the war, were insured persons, but their wives and children were paying patients Now this important source of income is lost to the profession for the wives and children of those with the Flag are being attended in the main gratuitously

The Dependents of the Soldiers

Yielding to a generous and patriotic impulse practically all the practitioners at Yarmouth agreed to attend gratuitously the dependents of those who enlisted The chemists, on their side, offered not to charge for the work of dispensing the drugs and the Prince of Wales's Relief Fund was looked to to reimburse the bare cost of the drugs consumed. But quite a large proportion of these dependents are better off than they were before the outbreak of war The allowance they get from the War Office is in many cases higher than what their husbands could afford to give before they enlisted and yet in those days they had to pay for medical attendance Now the dependents can claim the services not only of the panel but of the non panel doctors and neither chemist nor doctor receives any remuneration The Yarmouth practitioners are beginning to wonder why dependents who are generally speaking, better off than they were formerly

CANADA

(From our own Correspondent)

Aid for the Belgian Doctors and Pharmacists

At the request of Sir Rickman Godlee, Dr Herbert A. Bruce, Toronto, has successfully organised a strong and representative committee of the leading physicians and pharmacists of Canada, having for its object the relief of Belgian doctors and pharmacists The central committee is located in Toronto, where meetings are being held regularly and the work prosecuted with vigour Dr Walter McKeown acts as secretary and Dr David Gibb Wishart as treasurer Its personnel consists of presidents of the national and provincial medical societies, presidents of the various Medical Councils, the editors of the medical journals, and the deans of the medical departments of the universities Although just organised there has already been made a number of substantial contributions from the members of the professions in Toronto as well as from some private citizens

Medical Reciprocity in Ontario with Great Britain

Late in December a special meeting of the newly elected Medical Council of Ontario was called in Toronto, and the subject of medical reciprocity was fully discussed It was resolved unanimously to approve of the principle of medical reciprocity, and the Legislative Committee of the Council was instructed to lay the matter before the Ontario Legislature for sanction, and also to bring the proposition before the General Medical Council of the United Kingdom When Ontario falls in line that will make five provinces in Canada having reciprocity with the motherland—namely, Prince Edward Island, Nova Scotia, New Brunswick, and Quebec It will only remain then for the four western provinces to complete the arrangement for all Canada.

The Canadian Medical Profession and the War

It is reported that already Canada has 160 medical men serving the Empire either in England or at the front, and many more are in line for the front with Canada's second contingent Many of the leading men have volunteered for service, and others have actually taken training Altogether in Toronto, after the second contingent has been supplied, there is a waiting list of nearly 200 McGill Medical Department will send in the spring a complete hospital staff from the members of the medical faculty and the student body, the nurses being selected from the various hospitals of the city Dean Birkett will be in command Queen's University Medical Department, Kingston, Ontario, has also offered a complete general hospital. And now comes another offer from the French Canadian medical men and students at Laval University, Montreal, for still another general hospital. Not only for active service, but for relief, the medical profession of Canada is well to the fore An example of what medical societies are doing is seen in the case of a recently organised society in Toronto, the Æsculapian Club, of some 70 members This society has practically donated all its reserve funds to the Patriotic Fund, $100 Ladies Comforts for Soldiers Fund, $50, Belgian Relief $200 and for surgical supplies to wounded in Northern France and Belgium, $50

Toronto University and German Professors

The University of Toronto has been very much in the public eye during the past two or three months owing to having retained on its teaching staff three German professors One of the governors, a prominent financier, died suddenly, but left a letter which deprecated retaining these professors on the staff in war time, or of even permitting them to retain their connexion with the University, although released from their duties on full pay Still another leading financier and public man, Sir Edmund Osler, protested, and resigned over the matter The result has been the departure of two of the German professors for the United States, whilst the third remained in Toronto and took out naturalisation papers So far that professor has been allowed to provide a substitute This has brought the president of the University, whose rule is practically predominant, owing to recent legislation, into difficulties

Queen's University and the War

When the war began no university in Canada responded to the call so promptly or did so well as that of Queen s at Kingston This was due to the splendid work of the Faculty of Applied Science A company of engineers was sent to Valcartier, which was the only organised contingent at that camp Of the work they did there professional soldiers and others qualified to speak have done so in the highest terms With the second Canadian contingent another well trained corps will go, being again the only Canadian university to send an organised unit Of the 80 members of this unit 70 are members of the Kingston School of Mining, the other 10 being picked from the Faculties of Arts and Medicine

Jan. 27th.

Correspondence.

"Audi alteram partem."

THE VALUE OF TINCTURE OF IODINE AS A BACTERICIDE

To the Editor of The Lancet.

Sir,—In The Lancet of Jan. 2nd Dr Alexander Brown asks if the tincture of iodine, or a 2 per cent solution, can destroy bacteria and their spores Since there are several hundred varieties of bacteria recorded as excitants of disease, and as there may be wide differences in their resistance to antiseptics, much more experimental work must be undertaken before a comprehensive answer to Dr Brown's inquiry can be given. The following experiments, which I made two years ago, though they offer a very partial answer to the question, may be of interest at the present moment I had been asked by Dr J R. Bentley, of Limpsfield, to suggest a douche for a case of cystitis The patient had had his prostate removed, to his great relief, but his cystitis persisted despite a partial relief from an autogenous vaccine of the B coli present in his urine The failure to clear up the infection was attributed to the sacculated condition of the bladder An emulsion of living B coli, obtained from a catheter specimen of the urine, was divided into six equal portions To each portion an equal volume of solution of tincture of iodine in varying strengths, distilled water being the diluent, was added. Thus—

Tubule No 1 = 2% tincture of iodine in distilled water
" No 2 = 1% " " " "
" No 3 = 0 5% " " " "
" No 4 = 0 25% " " " "
" No 5 = 0 125% " " " "
" No 6 = 0·0625% " " " "

The 6995 deaths from all causes were 302 in excess of the number in the previous week, and included 513 which were referred to the principal epidemic diseases, against numbers increasing from 454 to 483 in the three preceding weeks Of these 513 deaths, 210 resulted from measles, 123 from whooping-cough, 72 from diphtheria, 68 from infantile diarrhœal diseases, 22 from scarlet fever, 17 from enteric fever, and 1 from small pox. The mean annual death rate from these diseases was equal to 1 5 against 1·4 per 1000, in each of the two preceding weeks The deaths attributed to measles, which had been 195, 206, and 191 in the three preceding weeks, rose to 210 last week, and caused the highest annual death rates of 2 5 in Plymouth, 2 7 in Grimsby, 2 8 in Wigan, 3 1 in Gateshead, 3 5 in Darlington, 3 6 in Cambridge, 4 1 in St Helens, 4 8 in Rotherham, 6 7 in Merthyr Tydfil, and 9 7 in Stockton-on-Tees The deaths referred to whooping-cough, which had been 76, 93, and 99 in the three preceding weeks, further rose to 123 last week, the highest recorded rates from this cause were 1 2 in Blackburn, 1 7 in Reading and in Bristol, 1 9 in Rhondda, 2 4 in Sunderland, 3 1 in Gloucester, and 3 7 in Merthyr Tydfil The fatal cases of diphtheria, which had been 63, 83, and 77 in the three preceding weeks, further fell to 72 last week and included 16 in London, 4 each in Southampton and Halifax, and 3 each in Tottenham, West Ham, Stoke-on-Trent, Birmingham, Manchester, Salford, and Bradford The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 75, 62, and 73 in the three preceding weeks, fell to 68 last week, of which 13 were registered in London, 7 in Liverpool, 5 in Bristol and 4 in Manchester The deaths referred to scarlet fever, which had been 34, 23, and 31 in the three preceding weeks, fell to 22 last week, of which 7 were recorded in London The fatal cases of enteric fever, which had been 11, 12, and 12 in the three preceding weeks, rose to 17 last week, and included 5 in London and 2 each in Wallasey, Manchester, and Leeds The death from small pox was registered in London, and belonged to the borough of Fulham

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily declined from 5035 to 3647 in the ten preceding weeks, had further fallen to 3395 on Saturday last, 365 new cases were admitted during the week, against 338, 303, and 326 in the three preceding weeks These hospitals also contained 1659 cases of diphtheria, 175 of measles, 56 of enteric fever, and 27 of whooping-cough, but not one of small pox. The 1859 deaths from all causes in London were 101 in excess of the number in the previous week, and corresponded to an annual death rate of 21 5 per 1000 The deaths referred to diseases of the respiratory system, which had been 472, 417, and 450 in the three preceding weeks, further rose to 497 last week, and were 150 above the number recorded in the corresponding week of last year

Of the 6995 deaths from all causes, 216 resulted from different forms of violence and 530 were the subject of coroners' inquests, while 1864 occurred in public institutions The causes of 61, or 0·9 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in London and in its 14 suburban districts, in Sheffield, Leeds, Bristol, Bradford, Hull, and in 51 other smaller towns Of the 61 uncertified causes of death 15 were registered in Birmingham, 11 in Liverpool, 5 each in Manchester and Preston, and 2 each in West Bromwich, Bootle, Blackburn, and Darlington

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2 345 500 persons at the middle of this year, 1224 births and 1036 deaths were registered during the week ended Saturday Feb 6th The annual rate of mortality in these towns which had been 22 8, 21 7, and 22·4 per 1000 in the three preceding weeks further rose to 24 1 per 1000 in the week under notice During the first five weeks of the current quarter the mean annual death rate in these towns averaged 23 1, against 19 1 per 1000 in the large English towns Among the several towns the death rate last week ranged from 16·4 in Clydebank, 17·0 in Kilmarnock, and 20 8 in Edinburgh, to 29·5 in Coatbridge, 32 3 in Perth, and 39 1 in Dundee

The 1036 deaths from all causes were 77 in excess of the number in the previous week and included 147 which were referred to the principal epidemic diseases, against numbers rising from 92 to 128 in the three preceding weeks Of these 147 deaths, 86 resulted from whooping-cough, 17 from scarlet fever, 16 from infantile diarrhœal diseases 13 each from measles and diphtheria and 2 from enteric fever but not one from small pox. The mean annual death rate from these diseases was equal to 3 3 against 1·5 per 1000 in the large English towns The deaths attributed to whooping cough, which had increased from 23 to 82 in the six preceding weeks, further rose to 85 last week, of which 47 occurred in Glasgow, 22 in Dundee 6 in Edinburgh, 4 in Motherwell, and 3 in Greenock. The deaths referred to scarlet fever, which had been 16, and 12 in the three preceding weeks, rose to 17 las week, and included 9 in Glasgow and 2 each in Edinburgh, Hamilton, and Clydebank The fatal cases of diarrhœa and enteritis (among infants under 2 years) which had been 7, 8 and 15 in the three preceding weeks further rose to 16 last week, 8 deaths belonged to Glasgow 3 to Dundee, and 2 to Hamilton The deaths attributed to measles, which had averaged 7 in the four preceding weeks, rose to 13, of which 11 occurred in Dundee The deaths referred to diphtheria which had been 10, 8 and 10 in the three preceding weeks, further rose to 13 last week, and comprised 4 each in Glasgow and Edinburgh, 2 each in Aberdeen and Paisley, and 1 in Ayr The fatal cases of enteric fever were recorded in Glasgow and Edinburgh

The deaths referred to diseases of the respiratory system, which had been 275, 238, and 272 in the three preceding weeks, further rose to 302 in the week under notice, and were 123 in excess of the number recorded in the corresponding week of last year Thirty six deaths were associated with different forms of violence, against 30 in each of the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland with an aggregate population estimated at 1,212,380 persons at the middle of this year, 661 births and 609 deaths were registered during the week ended Saturday, Feb 6th The annual rate of mortality in these towns, which had been 24·4, 24·0, and 24 7 per 1000 in the three preceding weeks further rose to 26 2 per 1000 in the week under notice During the first five weeks of the current quarter the mean annual death rate in these towns averaged 25 2, against 19 1 and 23 1 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 30 5 in Dublin (against 21 5 in London and 22 7 in Glasgow) 25 2 in Belfast, 27 9 in Cork, 29 1 in Londonderry, 23·0 in Limerick and 15 2 in Waterford while in the 21 smaller towns the mean death rate was 20 7 per 1000

The 609 deaths from all causes were 34 in excess of the number in the previous week, and included 38 which were referred to the principal epidemic diseases, against numbers declining from 48 to 32 in the three preceding weeks Of these 38 deaths 13 resulted from whooping cough, 10 from infantile diarrhœal diseases 6 from measles 5 from scarlet fever, 3 from diphtheria, and 1 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 1·6 against 1 5 and 3 3 per 1000 in the English and Scotch towns respectively The deaths attributed to whooping-cough which had been 10, 9, and 11 in the three preceding weeks, further rose to 13 last week, of which 7 occurred in Dublin and 4 in Belfast The deaths of infants (under 2 years) referred to diarrhœa and enteritis which had been 14, 4, and 8 in the three preceding weeks, rose to 10 last week, and comprised 6 in Dublin 3 in Belfast and 1 in Larne The fatal cases of measles, which had been 12 15, and 4 in the three preceding weeks, rose to 6 last week, of which 4 belonged to Belfast The 5 deaths attributed to scarlet fever were slightly in excess of the average in recent weeks, and comprised 4 in Belfast and 1 in Waterford Of the 3 deaths referred to diphtheria, 2 occurred in Dublin and 1 in Cork The fatal case of enteric fever was registered in Limerick In addition to the above deaths, 3 fatal cases of typhus were recorded in Londonderry and 1 in Dublin

The deaths referred to diseases of the respiratory system which had been 164 137, and 160 in the three preceding weeks, further rose to 172 in the week under notice Of the 609 deaths from all causes, 173 or 28 per cent, occurred in public institutions and 6 resulted from different forms of violence The causes of 27, or 4·4 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest in the English towns the proportion of uncertified causes did not exceed 0 9 per cent

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THE IRISH ROYAL COLLEGES AND BELGIAN STUDENTS —The Royal Colleges in Ireland have agreed upon two important concessions to Belgian medical students who are in forced exile from their own country In the first place the curriculum of the four Belgian Universities will be accepted as qualifying to sit for the examinations of the Conjoint Committee of the Royal Colleges In the second place, the Conjoint Committee is authorised to remit the fees in the case of Belgian students who are unable to pay them men to the voluntary hospitals and double the staff of such This number can be increased by 10,000 in one week by appointing local district visiting staffs At Liverpool the majority of the visiting doctors are entitled to charge full fees to hospital patients occupying pay beds and pay wards Local doctors will not be excluded from making a fair wage if appointed. Only a little common sense is required to meet the "scarcity of doctors" bogey Will the "men in possession" agree?

I am, Sir, yours faithfully,

Liverpool, Feb 8th 1915. R R RENTOUL, M D

TUBERCULIN TREATMENT OF PULMONARY TUBERCULOSIS

To the Editor of THE LANCET

SIR,—In Dr E G Glover's communication on this subject in THE LANCET of Feb 6th occurs the following statement —

> There is one other point which deserves notice, although perhaps it is a minor one, and it is that the dangers noted after reactions—i.e , extension of disease, increased activity, pleurisy, and pneumothorax—are unfortunately, as the Registrar General will testify, the dangers of the disease itself.

Such a remark has no bearing on the danger or otherwise of administering tuberculin. No sound critic of tuberculin ever imputed to tuberculin a capacity to do more than increase the disease, and because the disease spreads and produces the above results in many untreated cases, this in no way removes tuberculin from the list of agents which may hasten the above calamities

I am, Sir, yours faithfully,

Ayrshire Sanatorium Feb 6th 1915 EDWARD E PREST

LEECHES AND THE WAR

To the Editor of THE LANCET

SIR —With regard to Mr J D Marshall's offer in THE LANCET of Feb 6th, it may be of interest to state that leeches of the official variety are obtainable to a limited extent through the ordinary trade channels at a cost less than one fourth that mentioned by Mr Marshall for Limnatis granulosa This institution received a small number of leeches of French origin this week

I am, Sir, yours faithfully

London Hospital Feb. 6th 1915. F A HOCKING

⁂ But the price of a leech might vary with its capacity — ED L.

THE DEARER LOAF

To the Editor of THE LANCET

SIR,—As a result of the appearance of your leading article with this title on Jan. 30th, I have been asked by the Corn Products Company, Limited, to forward you some loaves made from a mixture of wheaten flour and cornflour My son, Mr William C Jago, who now controls the Jago Laboratories, has had some loaves baked for me in a test bakery Samples of these, numbered 1, 2, 3, and 4, were forwarded to you yesterday

The following are particulars of the mixtures from which the respective loaves were made 1 London Town household flour only, with salt yeast, and water 2 Mixture of 90 parts same flour with 10 parts cornflour, in addition gelatinised cornflour at the rate of 4 lb to the sack of 280 lb , and dry corn starch sugar at the rate of 2 lb to the sack were used Other ingredients as before 3 Mixture of 80 parts same flour with 20 parts cornflour Additions, &c , as in No 2 4 Mixture of 66 parts same flour with 20 parts cornflour and 14 parts peaflour Additions, &c , as in No 2 The volumes of the resultant loaves, each made from 560 grammes of the flour or flour mixture, were as follows (1) 2839 c c., (2) 2676 c c , (3) 2593 c c , (4) 2022 c.c The mixed flour loaves were all smaller than that from unmixed flour, but in every case they were of fair volume and good open texture The loaves themselves will, however, best show you the general characters of the resultant bread I think you will agree that in colour and general appearance Nos 2 and 3 are fairly equal to No 1, and would prove quite as digestible The employment of No 2 mixture would increase the available supply of breadstuffs from 100 parts to 111 parts, while in the case of No 3 the increase would be from 100 parts to 125 parts

In the case of No 4 the object of the experiment was somewhat different—viz., to prepare bread that should have about the same protein value as the white flour used in the preceding *mixtures A sample* of the flour yielded 10 per cent of protein on analysis Taking the protein content of peaflour at 25 per cent., a mixture of two parts of peaflour to three parts of cornflour would also contain 10 per cent of protein, and might therefore be used in any desired proportion with the wheaten flour without altering its protein content In the case of No 4, two parts of wheaten flour were taken to one part of the pea and corn flour mixture This represents a somewhat large addition to a flour which, to start with, was somewhat on the weak side The dough was naturally very friable in the handling, but nevertheless made a fair loaf. Again, the sample itself will best show you the nature of the bread. (In all cases please make allowance for the staleness and effects of packing on the loaves when they reach you) I think you will agree that this bread is not at all unpleasant in either appearance or flavour Judging from its physical character I should say such bread would be very digestible and its proteins capable of very good absorption. In all probability the ratio of absorption would be slightly higher than is the case of the white bread. The use of such a mixture, if necessity arose, would raise the amount of available bread stuffs from 100 to 150 parts and with no loss of nutritive value

At present market prices the No 4 mixture works out slightly lower in price than the flour There is not likely to be any shortage in the world's supply of cornflour, and in addition to peas there are lentils and soya beans to draw on as auxiliary sources of protein. The latter especially is exceedingly rich in flesh formers, and yields a flour which is light in colour and of pleasant flavour

I am, Sir, yours faithfully,

Hove Sussex Feb 6th 1915 WILLIAM JAGO

⁂ The results are quite interesting The loaves received appeared to us to be quite acceptable in regard to texture, flavour, and appearance —ED L.

LONDON UNIVERSITY EXAMINATIONS AND THE NEW PHARMACOPŒIA —The regulations for the second examination for medical degrees Part II., have been amended by the insertion of the following footnote At the examinations in pharmacology held in March and July 1915 students will be permitted to base their replies either on the old or on the new edition of the Pharmacopœia provided that they shall be required to state on which edition such replies are based In and after March 1916, replies must be based on the new edition of the Pharmacopœia.

These tubules were at once placed in the incubator at 37° for five minutes only and directly afterwards an equal volume from each was pipetted into a tube of gelose The inoculated culture tubes were incubated at 37° for 24 hours and no growth occurred in any of them The deduction was that the tincture of iodine solution, in each of six strengths (2 per cent down to 0 0625 per cent), had proved an effective bactericide Irrigation of the bladder with 0 2 per cent strength was recommended This proved to be quite unirritating, and cultures taken on the following day showed marked diminution in the number of colonies of B coli

The coliform group of bacteria is a very large one, very widely spread, and plays a most important rôle in many infections, though perhaps not often the leading part Its vitality in most strains is above that of many other common pathogenic microbes Yet its resistance, if one may safely argue from the above tests, to iodine solutions falls far below that strength (tincture, or 2 per cent solution) generally employed by surgeons

Some years ago I had considerable experience of very severe accidents amongst the Durham miners Extensive lacerated wounds, always badly contaminated with the highly septic pit dust, were very frequent, and I generally brushed them over freely with tincture of iodine Where this was done subsequent occurrence of suppurating cellulitis was very rare For bad compound fractures I preferred to rely upon free irrigation with 1 in 5000 solution of perchloride of mercury The latter solution never let me down in major midwifery operations, under the most unfavourable sanitary conditions, even when puerperal septicæmia was epidemic in the district, provided that the uterus and vagina were thoroughly irrigated at the conclusion of the labour When, in deference to various authorities, who said that perchloride was futile because it formed a surface coagulum, I abandoned my routine for other antiseptics I not infrequently had serious trouble

With regard to the action of iodine upon spores, my experience is limited to a few of the common, innocuous bacteria of the spore producing species Some of the B vulgatus family occur not infrequently as contaminations in the preparation of vaccines from throat cultures or from pyorrhœa. For three years I have made a practice of adding 0 5 per cent of tincture of iodine to the emulsions after heating for an hour at 55° on three successive days Subsequent cultures have invariably proved sterile, and I have attributed that sterility to the action of the iodine, since spores would probably have survived the comparatively low heat used

I am, Sir, yours faithfully,

H LYON SMITH, M D Durh

Bentinck street, W , Feb 8th 1915

LICE AND RHEUMATISM AMONGST SOLDIERS

To the Editor of THE LANCET

SIR,—I have read with very great interest Sir Lauder Brunton s letter with this title in your issue for Feb 6th, but among the remedies for body lice he does not mention paraffinum liquidum (B P), which can also be obtained in a crude state The B P preparation is very largely used at our cleansing station in Poplar in the treatment of verminous children After the bathing of the children liquid paraffin is smeared on the heads so that any lice may be killed as they are hatched from nits which have not been removed by combing the hair with a fine tooth comb dipped in methylated spirit or by application of the same by dabbing any discovered nits If a little mercury perchloride, half grain to the ounce, is added to the spirit it makes the application more effectual A very common household method of loosening the nit is the application of vinegar or acetic acid Respecting Dr S Monckton Copeman's article on p 273 of the same issue, I have known many mothers use the ordinary paraffin, but this is dangerous the flash point being low, but that of liquid paraffin (B P) is high Two handbills are circulated in the borough of Poplar *re* body and head lice, and the liquid paraffin (B.P) is not only recommended for the head but also, when dried after a bath, for gently rubbing over the whole body, except the face, leaving a thin layer of the liquid

I am, Sir, yours faithfully,

FRED WM ALEXANDER,

Medical Officer of Health Metropolitan Borough of Poplar

Bow-road E , Feb 6th 1915

To the Editor of THE LANCET

SIR,—In THE LANCET of Feb 6th you publish a letter from Sir Lauder Brunton under the above heading in which he enumerates 11 drugs as useful for the cure of the former and sulphur powder applied externally as a remedy for the latter disease

In my book on "The Treatment of Diseases of the Skin," under the chapter on pediculosis, the following paragraph occurs on p 169 "Sulphur wrapped up in a piece of flannel or in a porous bag and worn about the person next to the skin acts in many cases as a preventative" If our soldiers resorted to this very simple remedy they might remain free from both complaints

I am, Sir, yours faithfully,

W KNOWSLEY SIBLEY

Cavendish place W Feb. 7th, 1915

THE SHORTAGE OF RESIDENT MEDICAL OFFICERS

To the Editor of THE LANCET

SIR,—In THE LANCET of Feb 6th Mr W M Wilcox, secretary of the East London Hospital for Sick Children, suggests that there is a shortage of resident doctors Perhaps if a reasonable payment be given the very "alleged" shortage will disappear The local educational authorities now pay not less than £250 to freshly qualified doctors, while the equally fresh tuberculosis medical officers under the National Insurance Acts receive up to £350 I am told that about 3000 doctors have entered their names at the Admiralty and War Office Each accepted will receive about £1 per day on service May I add that many of the steamship companies are now paying their surgeons £15 to £20 per month, a bonus of £50 per annum the right to charge fees to saloon passengers, and admission to membership for the pension fund The present resident doctor at voluntary hospitals is paid a lost dog s wage and is financially on the same degrading level as the Poor law medical officer Even residents in Poor law infirmaries now obtain over £250 per annum, extra fees, with board, lodging, and washing—i e , about £450 Let Mr Wilcox attempt to do away with the dog in the manger policy of doctors now acting as visiting

	£	s	d.
Mr J W Leach ..	1	1	0
Dr McGowan	1	1	0
Dr Martland ..	1	1	0
Dr Pochin ..	1	1	0
Dr Radcliffe ..	1	1	0
Dr Ross	1	1	0
Dr W B Yates ..	1	1	0
Dr R. Bowes	1	0	0
Dr H Gill	1	0	0
Dr Broomhead ..	0	10	6
Dr Mawdsley ..	0	10	6
Dr Wilkinson ..	0	10	6
Dr Wood	0	10	0
Dr Thompson. ..	0	5	0
Dr A. J Turner	2	2	0
Capt Shingleton Smith I M S ..	30	0	0
Messrs. Dolbear and Goddall ..	1	1	0
Dr Alex. MacLennan	1	1	0
Mr J P Ellerington (La Pharmacie Française (fourth donation)	5	0	0
Dr H. J Roper ..	2	2	0
Dr G Ransford ..	2	2	0
Dr S E Whitnall	0	10	6
Lieutenant-Colonel D G Crawford I M.S	5	0	0
Sir Donald MacAlister K.C.B	10	0	0
Ontario Medical Association (per Dr J Gibb-Wishart) ..	102	13	4
Dr James Arthur	1	1	0
Anon (per Mr J Y W MacAlister)	2	8	0
Messrs Jay Richard Attemborough & Co Limited	1	1	0
Dr R Prosser White ..	2	0	0
Mr Lawrence Jones	3	3	0
Lincoln Chemists Association (per Mr John Hague Treas) ..	3	3	0
Dr E G Boon ..	1	1	0
Mr H. Betham Robinson	2	2	0
Staffordshire Branch South Staff Division B M.A. (per Dr H C Mactier Hon. Sec.) —			
Dr J A. Codd	1	1	0
Mr F W Joynes ..	1	1	0
Mr H Ruskin Hancock	1	1	0
Dr David Mann	1	1	0
Dr Edith Serjeant	1	1	0
Dr H C Mactier ..	1	1	0
Dr Irene Bastow ..	1	1	0
City Division B.M.A. (per Dr C F Hadfield, Hon Treas.)—			
Dr J O Adams ...	5	0	0
Anon.. ..	1	1	0
Dr Frank Butler ..	1	1	0
Dr Effie Brander	1	1	0
Dr N Benoly ..	1	1	0
Dr Oliver Beddard	1	1	0
Dr Reginald Brown	1	1	0
Dr E H Crisp	5	0	0
Dr Leslie Durno	2	2	0
Dr Cuthbert Dixon	1	1	0
Dr J C Dunn	1	1	0
Dr I Dorran ..	1	1	0
Dr O E Evans	1	1	0
Dr G E. Froggatt	1	0	0
Dr F W Goodall	2	2	0
Dr Major Greenwood	1	1	0
Dr A Withers Green	1	0	0
Dr C F Hadfield	1	1	0
Dr J W Hunt	1	1	0
Dr J Moore Hall ...	1	1	0
Dr G B Hicks ..	1	1	0
Dr J Jaffe ..	1	1	0
Dr H L. Jenkins ..	1	1	0
Dr Gerald Johnston	3	3	0
Dr A. D Lewis ..	1	1	0
Dr G Lowsley ..	1	1	0
Dr J J Macnaboe ..	1	1	0
Dr G I Moriarty	0	10	6
Dr J Mansie	1	1	0
Dr T W Maddison	1	1	0
Dr I B Muirhead	3	3	0
Dr E J Moore	1	1	0
Dr J Maguire ..	1	1	0
Dr A. L. Marshall ..	5	0	0
Dr J O Dwyer	1	1	0
Dr David Petty ...	1	1	0
Dr H. C Powell	1	1	0
Dr J H Porter ..	1	1	0
Dr H. Vaughan Pryce	1	1	0
Dr T Rushbrooke	1	1	0
Dr B Rowlands	2	2	0
Dr David Ross ..	1	1	0
Dr A. H Rideal ..	1	1	0
Dr A.G Southcombe	1	1	0
Dr Montague Smith	1	1	0
Dr Rowland Smith	1	1	0
Dr A. T Swan	1	1	0
Dr R Taylor ..	1	1	0
Dr Wm Taynton	1	1	0
Dr W Whitelaw	1	1	0
Dr A. W Webb	0	10	6
Dr Elizabeth Wilks	2	2	0
Dr T C Winn	1	1	0
Dr S Wilson ...	1	1	0
Dr John Young ..	1	1	0
Dr A C Williams	1	1	0
Dr W J O Ray ..	1	1	0
Eastern Hospital Homerton grove (per Dr J Whitaker)—			
Dr J Harvey ..	1	0	0
Dr J Enright	1	0	0
Dr M. Mayers	1	0	0
Dr J Whitaker	1	0	0
Corner Whist Club (per Dr Des Voeux)	5	0	0
Dr F D Bennett	2	0	0
Mr Alban Doran ..	1	1	0
Dr J B Martin Kennedy	1	1	0
Dr H Willingham Gell	2	2	0
Mr Harold Barwell	3	3	0
Dr William Clow	1	1	0
Dr E M Skeete ..	1	0	0
Mr W H Battle	10	0	0
Mr Somerville Hastings	3	3	0
Birmingham Local Committee (per Dr Robert Saundby Hon. Sec.) sixth donation —			
Dr W H Pollard (Ambulance Class fee)	5	5	0
Dr F R Sutton	2	2	0
Dr D S Murray	1	1	0
Dr Frank Hues ..	1	15	0
Dr R S Ellis	1	1	0
Collected by Mr Pollard of Worcs.—			
Mr T P Gostling	1	1	0
Dr T P Cavenagh	1	1	0
Dr H F Seymour	1	1	0
Dr C Pollard (addit)	1	1	0
Dr H. A. Watson ..	0	10	6
Dr A. H Williams	0	10	6
Mr C S Legge ..	0	10	6
Dr G W Crowe ..	0	10	6
Dr S W Coombs	0	10	6
Dr T Bates jun.	0	10	6
Dr R. T Slinger	0	10	6
Dr D Bower ..	2	2	0
Cardiff Pharmacists Association (per Mr W R Williams) ..	25	0	0
London Pharmaceutical Association Script" Shilling Fund (per Mr H. Skinner)	20	6	6
Public Pharmacists and Dispensers Association (collected by Mr G W Gibson) ..	2	10	0
Mr A. Hagon ..	1	1	0
Mr R. T Clarke	0	10	6
Miss E Hardwicke	0	10	0
Miss M Gibson	0	5	0
Mr R. J Perkin ...	0	5	0
Mr A. Hodgson	1	1	0
Dr G E Armstrong ..	20	0	0
Dr A. H Martin President Postal Medical Officers Association of England and Wales	1	1	0

Subscriptions to the Fund should be sent to the treasurer of the Fund Dr H A Des Vœux at 14 Buckingham gate, London S W and should be made payable to the Belgian Doctors and Pharmacists Relief Fund and crossed Lloyds Bank, Limited These will be acknowledged by post direct, and a list will appear in THE LANCET weekly

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries ackowledges with thanks the receipt of surgical instruments kindly contributed by the following donors since the publication of the last list —

Anonymous per the Oldham Medical Society Dr W L W Marshall Huddersfield Dr G W Collins Wanstead, Essex Dr Cosgrave George Colwyn Bay

The War.

THE TROOPS AND ANTITYPHOID INOCULATION

REFERENCE is made in our Parliamentary Intelligence this week to a leaflet on the subject of antityphoid inoculation which is being distributed to the troops The leaflet is addressed "To All Soldiers," and Lord Kitchener himself supplies a preface in these words —

"I commend to the careful attention of every Soldier the following statement, to which, in the interests of the health of the Army, I attach great importance —KITCHENER, F.M"

The statement is as follows —

> In every campaign typhoid fever is a serious element In the South African War there were many more casualties from typhoid fever than from wounds
>
> In the present war the best is being done to prevent typhoid fever by extreme precautions in the matter of water-supply, as well as other sanitary measures, but in spite of this a number of men have been affected by the disease
>
> **Inoculation Gives the Body Power to Resist Infection**
>
> It is a means of protection in the efficiency of which those who have studied the question have complete confidence.
>
> Inoculation has nothing to do with vivisection
>
> The great value of inoculation is shown clearly in the following figures —
>
> **Of the 421 cases in the present campaign among British troops. 305 cases were in men who were NOT INOCULATED within two years.**
>
> **In the 421 cases there have been 35 deaths**
>
> **Of these deaths 34 were men who had NOT BEEN INOCULATED within two years.**
>
> **ONLY ONE DEATH OCCURRED AMONG PATIENTS WHO WERE INOCULATED and that man had only been inoculated once, instead of the proper number of times—namely twice**
>
> For your own sake, for your country's sake, and for the sake of the Army you should not fail to avail yourself of the protection secured by this simple, safe, and well tested measure
>
> Medical officers are always ready and anxious to inoculate any soldier at any time, and the greatest care is taken in doing so With proper care it has never been known to do a man harm

The statement, which seems to be worded in just the right way to impress a soldier audience, is signed by Sir Thomas Barlow, President of the Royal College of Physicians of London, Dr A. H. Freeland Barbour, President of the Royal College of Physicians of Edinburgh, Sir W Watson Cheyne, President of the Royal College of Surgeons of England, Dr E MacDowel Cosgrave, President of the Royal College of Physicians of Ireland, Mr F Conway Dwyer, President of the Royal College of Surgeons in Ireland, Mr J W B Hodsdon, President of the Royal College of Surgeons of Edinburgh, and Sir Frederick Treves, Sergeant Surgeon to H.M the King

THE CASUALTY LIST

The official casualty lists published since our last issue have contained the name of one medical officer, Captain James Alexander Terras Bell, M D, New Zealand Medical Corps, reported as having died in Egypt

MEDICAL PRECAUTIONS AGAINST AIR RAIDS

In an annotation with the above title in THE LANCET of Jan 9th the surgical aspects of an air raid upon London were briefly discussed, and it was stated that a scheme of preparation against such an outrage had been carefully thought out With the sanction of the military and police authorities this scheme has now been elaborated and

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE Fund has during the week received a fair number of subscriptions, conspicuous among them being a cheque from the Ontario Medical Association for £102 13*s* 4*d*

The Liverpool subscriptions, which for the present remain in the hands of the Liverpool Medical Institution, have continued to come in, and a vigorous start is being made in Manchester under the auspices of a strong local committee

CENTRAL EXECUTIVE COMMITTEE

Certain cases of distress have been relieved immediately, on the representation of Dr Clément Philippe, the President of the Société Belge de Médecine et de Pharmacie en Angleterre, and there has been some success in finding work for Belgian practitioners, under the recent privilege of British registration It seems doubtful whether the General Medical Council will be able to reduce or remit the fees of Belgians desiring to register, and it may devolve upon the Fund to advance the money in some cases There was no Belgian doctor found to fill a post where a single man was required, all the available Belgian practitioners being married The receipts of garments, both for men and women, at 3, Hyde Park street, London, W (Dr Philippe s house, kindly lent for the purpose), have been satisfactory, and the hours of distribution have been arranged as follows Wednesday, 10 A.M to 12 noon for men, and Friday between the same hours for women

The case of surgical instruments designed for Belgium, and reported last week as being at the Tunnel Wharf, Rotherhithe, has been forwarded to Brussels, *viâ* Rotterdam, in the S S *Vesuvie*, which sailed on Feb 1st

THE MANCHESTER COMMITTEE

An important committee has been formed at Manchester, and a circular is on the point of being issued to the local members of the medical and pharmaceutical professions setting out the position of their Belgian colleagues The circular is signed by Dr Alfred Brown, President, Manchester Pathological Society, Mr J Gray Clegg, President, Manchester Clinical Society, Dr Archibald Donald, President, Manchester Medical Society, Mr James Grier, President, Manchester Pharmaceutical Association, Dr T Arthur Helme, President Manchester Medico Ethical Society, and the following members of the central committee Sir William Milligan, Professor G Elliot Smith, and Mr William Thorburn Dr E M Brockbank, Northern Assurance Buildings, Albert square, Manchester, and Mr Tom Miller, pharmacist, 5, Yarburgh street, Whalley Range, are acting as honorary secretaries

Subscriptions may be sent to either of the secretaries, who will acknowledge their receipt and pass them on to the Central Fund They will also be acknowledged in the medical and pharmaceutical papers Cheques should be crossed "Lancashire and Yorkshire Bank, Limited"

Contributions of surgical instruments likely to be of use to the Belgian doctors may be sent to the Library of the Medical Society, University of Manchester, where they will be sorted and sent on to London

The Manchester Committee propose also to appeal to the public through the lay papers

THE FUND OF THE LIVERPOOL MEDICAL INSTITUTION

The following is the second list of subscriptions which have been collected by the Liverpool Medical Institution —

	£	s	d.
Dr G A Crace-Calvert	5	5	0
Dr John E Gemmell	5	5	0
Dr R Wyse	5	0	0
Dr A S Parkinson (second subscription)	4	4	0
Dr J E Stott	2	2	0
Dr J O M Given	2	2	0
Dr A A Musson	2	2	0
Dr A C E Harris	2	2	0
Dr A O Wilson	2	2	0
Dr Walter C Oram	2	2	0
Dr J F Gordon	2	2	0
Dr T Glynn Morris	2	2	0
Dr T B Grimsdale	2	2	0
Dr A E Hawkes	2	2	0
Dr W Morland Hocken	2	2	0
Dr G S Stansfield	2	2	0
Dr Harry Holmes	2	2	0
Professor J M Beattie	2	2	0
Mr Arthur Evans	2	2	0
Dr Harriet Jones	2	0	0
Dr Douglas Moffatt	1	1	0
Dr Bennett Jones	1	1	0
Dr C Alston Hughes	1	1	0
Dr W Hardy Fleetwood	1	1	0
Dr R Paterson	1	1	0
Dr A F Seacome	1	1	0
Dr W Macfie Campbell	1	1	0
Dr John Robson	1	1	0
Dr H Wycliffe Fisher	1	1	0
Dr David Morgan	1	1	0
Dr W Sanderson	1	1	0
Dr O F Evans	1	1	0
Dr F F German	1	1	0
Dr Albert E Davis	1	1	0
Dr Isaac Harris	1	1	0
Dr A A Meeson	1	1	0
Dr E I Claxton	1	1	0
Dr R G Sheldon	1	1	0
Dr W Cash Reed	1	1	0
Dr K V Trubshaw	1	1	0
Dr R Lucius Wood	1	1	0
Dr J J Tisdall	1	0	0
Dr F Ingall	1	0	0
Dr A C Lewis	0	10	6
Dr N H Blair	0	10	6

The Liverpool Belgian Doctors' Relief Fund is intended for the relief of Belgian doctors, and we are informed that the Liverpool Chemists' Association is forming a local fund for the relief of their professional colleagues The money in the hands of the Liverpool Medical Institution amounted on Feb 4th to £382 10*s* 3*d* The Fund is still open, and subscriptions should be sent to Dr T R Bradshaw, at the Institution, 65, Rodney street, Liverpool

THE DURHAM AND NEWCASTLE DISTRICT

Dr A S Percival, 17, Claremont place, Newcastle on Tyne, who is acting as one of the joint secretaries of the movement in this district, has written to the constituency in the following terms —

"We are under a lasting obligation to Belgium for her magnificent stand against the German invaders, indeed, it is an obligation that can never be fully repaid, and it should be regarded as a privilege to have this opportunity of showing our sympathy with our fellow practitioners Chiefly with this end in view a meeting will be held at the College of Medicine, Newcastle upon Tyne, on Wednesday next, Feb 17th, at 4 P M An address will be given by Professor Jacobs of Brussels, who will give evidence of certain startling facts that for ruthless and savage barbarity have no equal All doctors and pharmacists are invited to attend the meeting, at which it is proposed to form a committee for dealing with Belgium s appeal Meantime, any subscriptions that are sent to me in aid of the Fund will be gratefully acknowledged and duly reported in the medical journals '

THE WEEK S SUBSCRIPTIONS

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, amounting to £5000, and not including money received by the Scottish or Irish Funds, are as follows —

	£	s	d.
Mr W Thomson Walker	5	5	0
Brussels Medical Graduates Association (per Dr Major Greenwood Treas) third donation	2	2	0
Dr Lauriston Shaw	5	5	0
Miss Lilian T Powland M B	2	2	0
Professor J A Kynoch	2	2	0
British Milk Products Company	73	19	9
Dr J Duncan Kendry	1	1	0
Dr Borra (per Dr Larking)	1	0	0
Oldham Medical Society collected by (per Dr F L Pochin)— Oldham Medical Society	10	10	0
Dr Lawrie	6	0	0
Dr Robertson	5	0	0
Dr J Fort	3	3	0
Dr W White	3	3	0
Dr Olive Claydon	3	0	0
Dr Cammock	2	2	0
Dr Fawsitt	2	2	0
Dr Henderson	2	2	0
Dr Hutton	2	2	0
Dr Kinnear	2	2	0
Dr Yates	2	2	0
Dr H J Gill	2	0	0
Dr Anderson	1	1	0
Dr Corns	1	1	0
Dr Doble	1	1	0
Dr Fulton	1	1	0
Dr Godson	1	1	0
Dr Heap	1	1	6

be afforded, including the provision of such artificial dentures as may be considered necessary for efficient mastication The existing limit of one pound (£1) per man may be exceeded in cases where the work necessitates a higher expenditure, provided that in no case is the expenditure to exceed three pounds (£3) per soldier treated without the special authority of the general officer commanding in chief Where available dentists attached to military hospitals will be employed to the fullest extent. For the supply of artificial dentures the following scale of fees is given as a guide to the maximum cost, having regard to the class of work required (*a*) Complete upper or lower denture from £2 to £3, (*b*) complete upper and lower dentures from £4 to £6, (*c*) partial upper or lower denture, comprising not more than five teeth, about £1 10*s*, or possibly a little higher.

EDINBURGH IN WAR TIME —Our Edinburgh correspondent writes "The Committee of Management of the Triple Qualification of the Royal College of Physicians of Edinburgh, Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow have announced to students who have undertaken approved service with His Majesty's Forces that applications for partial recognition of such work in lieu of curriculum will be individually considered. Steps will be taken in each case to grant such concessions as appear to the committee to be in accordance with the recommendations of the General Medical Council —Twenty-nine convalescent sailors from the hospital at South Queensferry most of whom had been wounded in the recent North Sea fight, were removed on Feb 3rd by ambulance train to the Marchioness of Bute s auxiliary hospital at Mount Stuart in the Island of Bute. At Gourock the men were embarked on the Caledonian Company s steamer the *Duchess of Bute* Two ambulance wagons were supplied by the Red Cross Society in Edinburgh, and taken by train and boat to Rothesay for the comfortable conveyance of the seamen to Mount Stuart House. Meals were provided *en route* cooks being provided on the train by the Red Cross Society After an appreciable interval which presumably reflected in some degree the comparatively quiet spell at the front, another hospital train arrived in Edinburgh on the night of Feb 5th, bearing its burden of 100 wounded soldiers The wounded were received at the Caledonian Station by the Red Cross workers with their usual equipment of motor ambulances and motor-cars and were conveyed to Dalmeny House and the Deaconess Hospital."

A NEW ARMY HUT —Mr H A. Pritchard, A R I B A of Cardiff has designed a hut for the accommodation of soldiers which is now on view at the College of Ambulance, 3 Vere street, London W It is built of wood of standardised lengths and can therefore be turned out from the saw mill ready for erection The outside of the hut is covered with a durable waterproof material which ensures dryness and warmth and in hot weather would prevent the scorching heat attendant upon corrugated iron The whole appearance of the hut is like the roof of a dwelling house, the sides of the roof reaching almost to the ground whilst at the gable ends are the door and windows at one side and a large window at the other The hut measures 22 ft long, 14 ft wide and the highest point of the sloping roof is 15 ft from the ground The whole hut is raised from the ground some 12 in on concrete blocks so that there is ample ventilation beneath the oak flooring The hut can accommodate 14 men or as many as 16 at an emergency The ventilation is free and the light ample The whole hut is collapsible and can thus be easily transferred by road or rail and can therefore be used by an army on the march as part of its equipment for offices sleeping accommodation or for a temporary hospital. The free space in the centre affords room for men to use the hut as a bed sitting room. The cost of the hut completed is about £100 There are many ingenious devices which add to the benefits of the hut Before the door is a door mat' consisting of a wooden grill on which the men can get rid of the mud from their boots which renders huts of this kind like quagmires as a rule. To the upright poles in the hut a movable table is attached, which can be used for a mess table or an operating table if the hut is used as a hospital. Special arrangements for storing utensils, food, &c, are in evidence above the level of the men s heads Outside at either end of the hut where the roof slopes to the eaves a wide gutter trough receives the water from the roof and from which the water can be run off, or the whole trough can be lifted, placed on supports, and used for washing purposes by a number of men at a time. Instead of the water being allowed to run down to the eaves and the trough, it can be diverted by placing a wooden rod obliquely across the sloping roof, whereby the water is made to issue at one side of the roof a few feet above the ground where it can be collected in basins pails, &c., for future use Mr Pritchard s device seems not only ingenious but eminently useful for practical purposes, and the favourable comments passed upon the hut by officials and visitors on Saturday, Feb 6th, when the hut was inspected at the College of Ambulance, promise well for its success.

AMERICAN WOMEN'S WAR HOSPITAL.—The American Women's War Hospital at Paignton is being enlarged by 30 beds bringing the total capacity of the hospital up to 230 This addition has been made possible by utilising the fine Riding School. The new ward will be called "St. George' Ward after a generous donator to the fund and when completed will be staffed by English and American nurses, as are all the other wards in the hospital

A RECORD OF ATROCITY —In the *Field* this week Dr Arthur Tacquin, physician in ordinary to the King of the Belgians, tells the story of German cruelty, insolence, pillage, and arson exactly as it came under his own eye, with photographs taken by himself. The proclamations which the enemy has scattered through Belgium are many of them given in full in a terrible supplement to the great sporting newspaper and the editorial summary which introduces the startling pictures and text is a red hot indictment of German crime written in convincing terms

Medical News.

UNIVERSITY OF DURHAM (COLLEGE OF MEDICINE), NEWCASTLE-ON-TYNE.—At the annual meeting of the Council of this College held on Feb 9th an illuminated address, in Latin, was presented to Professor Sir G H. Philipson M D, the President of the College, congratulating him on the completion of his 50 years service to the College. The address called attention in the following terms to his varied and eminent services "Quis enim nostrum ignorat te pathologiae doctrinam, medendi scientiam atque usum, epistularum academicarum commercium totius denique Collegii regimen, pari deinceps cum diligentia et humanitate curavisse'"

DONATIONS AND BEQUESTS —By the will of the late Mr William Long, of Gloucester, the testator has left £10 000 to the Gloucester District Nursing Society and £3000 to the Gloucester Provident Dispensary —The late Mr William Ransom, of Hitchin, has bequeathed £500 to the North Herts and South Beds Hospital —The late Major W Barrett of Moredon, Somerset has left by will £1000 to the Taunton and Somerset Hospital for the endowment of a bed.

BADGE FOR THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND —At the last meeting of the Royal College of Physicians of Ireland the ex President, Dr C E FitzGerald asked permission to present to the college an official badge to be worn by the President on ceremonial occasions He wished to commemorate the fact that in his person the college had for the first time elected an ophthalmologist to its highest office The college gratefully received the gift

MEDICAL MAGISTRATE —Dr William Dunn has been made a Commissioner of the Peace for the county of Rutland.

Dr Stanley Riseley, until recently ophthalmic surgeon to the Royal Hospital, Sheffield, has died at the early age of 47 extended to include vulnerable places on the coast The committee of the Royal Society of Medicine, which has been occupied with the medical side of the matter, has now organised a service of surgeons, anæsthetists, and dressers, ready to proceed at once in self contained units to any point where their services are required, travelling either by motor car or by special train according to the needs of the occasion.

THE DISLOCATION OF MEDICAL SERVICE

A meeting of medical practitioners and senior students was held in the Royal College of Surgeons, Edinburgh, on Monday last, when Mr Hodsdon, President of the College and chairman of the meeting, spoke forcibly on the situation of civilian practitioners Many civil practitioners, he said, had attached themselves to various units, and were willing to spend their spare time in military duties, but they were not prepared and did not anticipate that they would be called away from their practice at a moment's notice At that moment there were men who had not been back to their practice since they were called up during the mobilisation in August The Scottish Medical Service Emergency Committee had assisted medical men who were with the colours, while at the instance of the General Medical Council the War Office had now made exchanges possible whereby the Scottish practitioner might find himself back in his own town

Dr Norman Walker, convener of the Scottish Medical Service Emergency Committee, said that the work of the committee had extended far beyond that of merely introducing assistants or locum tenents to men who wanted them The dislocation of medical practice in the country had increased, and was still increasing, and if they were to avoid a serious breakdown in the medical service in Scotland they must realise the situation, for more demands would be made upon them, and the supplies would have to be very carefully husbanded if they were to meet that demand They had to supply recruits for two armies—one the King's forces, and the other the standing army for home defence against the constant enemies, disease and death It was because doctors were as necessary in the army and navy as engineers, gunners, and air men that it was incumbent on the medical profession to supply the wants of the King's forces Something over one sixth of the medical profession were already serving—nearly 7000 out of a total of 37,000—and more were required, for the day was not far distant when six figures would not cover the number of our forces abroad Seeking where the additional doctors were to come from, Dr Norman Walker hoped no licensing body, from a sort of morbid patriotism, would admit to the profession insufficiently trained students The student's business was to work hard, and the teacher's to give more care to his teaching than he ever gave before, so that the student should complete his course in the shortest possible time and then offer his services to the country if there were no valid reason against this course But if such reason existed it must be remembered that a man still served his country if, by undertaking the work of one who had gone, he so loyally respected his interests that the other went with an easy mind But the country districts were crying out for doctors and before many weeks passed they would be very near the Trade Unionist Paradise—"two jobs for every man Dr Norman Walker concluded by referring to the new Army Order permitting exchanges, and begged that it should be taken advantage of by medical men.

Principal Sir Donald MacAlister acknowledged how cordially, as soon as it understood the difficulty they were in as regards civil practice, the Army Medical Service responded in the only way they were able to respond. It was quite clear that the civil service must dispense with its ordinary superabundance of practitioners if the army was to be supplied, and the question was whether a proper reorganisation of the civil service could be achieved For the first two or three months it looked as if it could be done without much difficulty, but difficulties that seemed at first not impossible were becoming almost impossible to overcome, and it was quite certain that the civil community would have to do with a good deal less doctoring if they were to keep the army supplied, as it ought to be supplied, with doctors They had better face the situation now, he urged, before in some areas the medical service altogether broke down He believed that by a redistribution of their forces there could be provided a respectable medical service for all the civil population, but the worst of it was that while there was a superabundance in some places there was a very deficient service in others He did not see any other machinery in existence for attempting the difficult problem of organising a redistribution than the Emergency Committee A certain number of Belgians would be available, and the reciprocal privilege of practising in Belgium after the war would be no small one He believed there were also coming to this country about 100 Canadian registered surgeons and a certain number from Australia and India

The gist of an important meeting was to show that the shortage of medical men is expected in the best informed circles to become more serious

UNIVERSITY OF LONDON SPECIAL LECTURES IN MILITARY HYGIENE —With the concurrence and assistance of the Army Council a course of nine lectures on "The Health of the Army in the Field" will be given at the Royal Army Medical College, Millbank S W, by Major P S Lelean R A M C, F R C S, D P H, at 5 P M, on Feb 22nd 24th, and 25th, and March 1st 3rd 5th 8th, 10th, and 12th The course will form an introduction to the problems of hygiene of forces in the field for (i) qualified medical men without military experience, (ii) combatant officers about to proceed to the front, and (iii) others interested in the subject (provided the accommodation is sufficient) In the allocation of tickets preference will be given in this order A detailed syllabus will be available for the lectures, at which the following matters will be dealt with hygiene of active service, sickness in the army organisation and administration in the field, water and water supplies and conservancy on active service Arrangements will be made if desired, for visits of inspection to a typical camp Applications for tickets should be made to the Academic Registrar University of London, South Kensington S W, and be accompanied by remittance of the fee of £1 1s Applicants should indicate whether the tickets are required for (1) medical men, (2) combatant officers proceeding to the front, or (3) other persons Tickets will not be despatched before Feb 15th.

DENTAL AID FOR THE TROOPS —A circular letter was issued by the War Office to the various commands on Jan 22nd with reference to the subject of dental aid for the troops In this it is announced that as a temporary measure for the period of the present war only the existing system whereby a sum of money is allotted to each command for the dental treatment of recruits and serving soldiers will be held in abeyance During the war all dental treatment necessary to render a non-commissioned officer or man fit for service in the field will in the course of his observations, said I should not like to conclude without saying a few words upon certain aspects of the medical treatment of the wounded in France I do not think there is much that I can add to the narrative which I gave to the House in November last of the methods adopted by the Royal Army Medical Corps in bringing the wounded from the front to the clearing stations, thence to the base hospitals, and finally home here Important as those functions are, the prevention of disease is even more important and that is rightly regarded as the primary function of this corps I think that I am right in saying that this is the first war in which we have been engaged in which an organised sanitary service has existed We owe the establishment of this service to my noble friend Lord Haldane Since its establishment we have been gradually perfecting its organisation during the last five or six years When we look back to the fact that during the Napoleonic wars only 3 per cent of deaths among our troops were due to wounds and 97 per cent due to sickness or disease, and when we also remember the fact that during the Crimean War more deaths occurred from disease during the first three months than during the whole of the rest of the campaign, it is impossible to lay too much stress upon this preventive function of the Royal Army Medical Corps How has this function been carried out? I have to thank my honourable friend the Member for the Holmfirth Division of Yorkshire (Mr Arnold) for the very interesting and able report which he made to me after a visit which he paid to Paris, during which he got a great many figures. All the evidence which my honourable friend brought and which comes to me officially, goes to show that by far the greatest amount of sickness amongst our soldiers at the present moment is due to the wet and the cold Frost-bite and rheumatism are I am sorry to say, very prevalent We have issued from the War Office through the Army Medical Department a small leaflet to officers and non-commissioned officers telling them how to prevent frost-bite amongst their men My honourable friend reports to me that, assuming the conditions of exposure of officers and men to be identical, frost-bite is three times as prevalent amongst the men as it is amongst the officers I do not suppose that it is possible to assume that the conditions are quite identical but you may be certain that the exposure of the men is not three times as great as that of the officers My honourable friend presumes that this result is due to the officers having better boots, leggings, and equipment generally If that is so it proves that there is a certain amount of preventability of frost-bite, and I hope by the steps which we are now taking that this disease may be prevented to a larger extent than has been the case in the past

The Question of Compulsory Inoculation

Coming now to the question of enteric fever (continued the right honourable gentleman) I am glad to say that cases of this disease are luckily rare, and they have occurred almost entirely among the uninoculated The evidence is accumulating in favour of making inoculation compulsory This is one of those subjects which ought to be settled without prejudice My honourable friend the Member for Holmfirth who gave me this most interesting report, strongly holds that inoculation against typhoid ought to be made compulsory It is for the House to say what they think upon this matter I gave the House figures to-day on this subject in answer to a question and they have been published in a leaflet to all soldiers with a prefatory note by the Secretary of State for War (Lord Kitchener) impressing upon all soldiers the great importance of inoculation

Lord CHARLES BERESFORD Does every soldier get one?

Mr TENNANT Yes it is sent to every soldier

Lord CHARLES BERESFORD Is it put up in the recruiting offices?

Mr TENNANT Very likely I have not time to go in detail into all the preventive measures taken by the Royal Army Medical Corps but I should like to mention the sanitary squads the water purifying sections, and the travelling hygiene and bacteriological laboratories to which I drew attention in my speech in November This is an entirely new feature and these branches in particular are doing extraordinary and valuable work Lastly, the Sanitary Commission sits at the War Office to advise the Secretary of State upon all matters relating to the health of the troops at home and abroad What I have said relates to the army abroad, and it may be asked what we are doing for the health of our troops at home Owing to the almost entire absence of the regular Army Medical Service engaged upon field operations certain difficulties have arisen, but thanks to the patriotic eagerness of the medical profession we have been able to obtain a high degree of efficiency I cannot claim that complete efficiency has been achieved but day by day the ideal is being approached The new Army Medical Corps for the new armies are now in course of formation and I believe they will be able to do excellent work should the occasion arise

Vaccination of Soldiers

Mr TENNANT informed Mr THOMAS that it was not considered advisable to alter the present rules governing the vaccination of soldiers joining the army

Territorial Medical Officers

In reply to Mr W GUINNESS, Mr BAKER (Financial Secretary to the War Office) said There is no difference in the pay of officers holding temporary and permanent commissions in the Royal Army Medical Corps, Territorial Force The rate for captain is 15*s* 6*d* and for lieutenant 14*s* a day

Antityphoid Inoculation in Canadian Contingent

Mr TENNANT informed Mr PETO that 95 per cent of all ranks of the Canadian Contingent had been inoculated against typhoid

The Anti inoculation Campaign

Sir J D REES asked the Attorney General whether the Government could and would proceed under the Defence of the Realm Act against persons who incite soldiers to decline to submit to antityphoid inoculation —Sir JOHN SIMON replied The matter is under the consideration of the military authorities

Inoculation of Soldiers against Typhoid Fever

In the course of the debate in committee of supply on army estimates Mr CHANCELLOR drew attention to the inoculation of troops He said that assurances had been given in Parliament by representatives of the War Office that no compulsion should be applied to soldiers to compel them to undergo inoculation. Those assurances had not been reflected in certain instances in the action which had been taken by officers They had, by depriving men of privileges and in other ways, sought to coerce them to submit to this operation against their wishes He did not complain about the inoculation of troops, nor did he complain of proper and legitimate methods of persuasion But he did object most strongly to the coercion and compulsion which had been applied to men who had conscientious objections, and he hoped that officers who exerted compulsion and coercion would be reprimanded The man had a right to refuse to be inoculated

Mr G H ROBERTS stated that he had taken part in the recruiting meetings, and he had told men on certain occasions that the Government had given an assurance that inoculation was not compulsory If it was made compulsory these men should have an opportunity to retire

Sir HENRY CRAIK protested against the campaign which had been carried on against the inoculation of troops Inoculation was carried out in the general interest of the health of the troops

Dr C ADDISON (Parliamentary Secretary to the Board of Education) said that he had been asked by the Under Secretary for War to deal with the question of inoculation Was this thing desirable in itself? Would it prevent the occurrence of typhoid fever amongst our troops abroad to a material extent? Would it reduce the strain on our men? That was the big question Where inoculations were carried out with care the number of cases who did badly was infinitesimal Even if a man did die in a particularly vulnerable moment, that would not prove that this was not a preventive against typhoid. We had a great force on the continent of Europe, greater than we ever had before, and after six months, including three months of the most atrocious weather imaginable, there had only been 421 cases of the disease The fact that the figures were so small was a vindication of the policy of inoculation It seemed strange how the disease had picked out the uninoculated men in a very careful way The more the records of this remedy of inoculation were examined the better did it appear It was never contended that there were no men who were inoculated who would not suffer from typhoid In time the remedy might be so perfected that it might become absolutely perfect He was not contending that it had proved perfect now The point was this Was it so much of a protection that it diminished disease in our troops abroad that it was worth doing? There had been 58,000 cases of enteric in the South African War Up to the present in this war there had been 421 Whatever this was due to, it had at least happened and let them continue this happy conjunction of affairs and hope that it would continue to happen It was said that a good many men might have their consciences hurt by compulsion Many people, however had made it their business to go about spreading leaflets "Is it patriotic to oppose the vaccination and inoculation of our soldiers?" That question was asked at the top of one of these leaflets And the answer given was "Certainly it is." That was a campaign against antityphoid inoculation but it was not against personal rights. After all, there might be in different parts of the country excess of enthusiasm on the part of officers who sincerely believed that the troops which they were now commanding would be safer inoculated than not If an officer was taking a battalion out to the

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

The Parliamentary Session

PARLIAMENT is again in session, and it is expected to sit continuously for four or five weeks All its attention is being given to problems arising out of the war Matters of party controversy are not being dealt with

The Inoculation of British Troops

Very considerable attention has been given in the House of Commons within the past few days to the subject of the inoculation of British troops against typhoid There are three distinct sets of opinion on the subject A very large body of members think that all future recruits who join the army should do so on the express condition that they should undergo inoculation, and that all soldiers who are already in the ranks and refuse to submit to the operation should either be allowed to retire or be allocated to home defence work No uninoculated men should go to the front The second set of opinion is that the present system of voluntary inoculation should continue, but that every means of persuasion short of coercion should be exerted to induce men to be inoculated This view admits the value of the operation, but would leave an option with the individual The third set of opinion is that of the anti inoculation party, which is very small numerically Its activities have been directed to drawing attention to cases in which it alleges illegitimate pressure has been exerted on soldiers to coerce them into undergoing inoculation In these circumstances it is most important to watch the attitude of the Government and of the War Office Mr TENNANT, the Under Secretary for War stated in the House of Commons this week that the evidence was accumulating in favour of the inoculation of our troops The matter of making it compulsory was under consideration, and he hoped to be able to give a definite answer shortly Some highly significant statistics showing the beneficial effect of inoculation against typhoid in the present war have been given to Parliament in the course of the last few days

HOUSE OF COMMONS

THURSDAY, FEB 4TH

Treatment of Mental Strain amongst Soldiers

Mr DUNCAN MILLAR asked the Under Secretary for War whether steps had been taken to secure that the treatment of soldiers and sailors suffering from mental strain should be carried out in hospital wards or other institutions not under lunacy administration, so as to avoid sending all such cases, which were not certifiable, to asylums —Mr TENNANT replied Every endeavour is being made to treat patients suffering from traumatic neurasthenia and cases of mental strain in such a manner as to avoid sending those not certifiable into asylums For this purpose arrangements have been made to treat such cases in certain private and civil hospitals in the United Kingdom, and a Red Cross Military Hospital has been opened in Lancashire for their reception This latter hospital is administered by and the patients are under the care of medical officers holding commissions in the Royal Army Medical Corps

Mr DUNCAN MILLAR Is the War Office prepared to make a grant for equipment?—Mr TENNANT I do not think so

Inoculation against Enteric Fever

Mr LAURENCE HARDY asked the Under Secretary for War whether he was aware of the campaign which was in existence for the purpose of discouraging our soldiers in the new armies from being inoculated against enteric and other similar diseases, whether, in view of the statistics in support of inoculation as shown during the present war, measures would be at once taken against any organisation which carried on such an agitation, and whether he would consider whether the time had now come when inoculation should be made compulsory for all soldiers proceeding to the front on active service, both for their own sakes and those with whom they were in contact

Mr PETO also asked the right honourable gentleman whether inoculation against typhoid fever and vaccination against small pox would in future be compulsory for all ranks in the military forces of the Crown before they were sent on service over sea during the currency of the present war —Mr TENNANT (replying to both questions) said The answer to the first point in the question of the honourable Member for Ashford (Mr L Hardy) is in the affirmative and to the second is that it is not proposed to take any action against the organisations referred to As regards compulsion I am advised that legislation would be necessary The introduction of a Bill is not at present contemplated, though this may be further considered should necessity arise

Pay of Medical Officers in the Territorial Force

Mr STEWART asked the Financial Secretary to the War Office whether medical officers in the new army were paid £1 4s a day, whereas medical officers who had served for years in the Territorial Force, and who had now volunteered for service anywhere, received only 15s 6d a day, and whether he could see a way to remedy the grievance of the Territorial service by putting them on the same scale of pay as the surgeons in the new army —Mr H BAKER I would refer the honourable Member to the answer which I gave to the honourable Member for the Bridgwater Division of Somerset on August 27th last[1]

Pay of Indian Medical Service Officers on Active Service

Mr RAWLINSON asked the Under Secretary for India whether his attention had been called to the reduced rate of pay of doctor of medicine officers of the Indian Medical Service who were now on active service with field ambulances, and whether he could see his way to raising their pay to the amount which they would receive if they were working for the Indian Medical Service in India during times of peace —Mr C ROBERTS wrote in reply Subject to certain exceptions which are at present under discussion with the Government of India, officers of the Indian Medical Service withdrawn from their ordinary duty for active service receive not less than the military pay and allowances ordinarily attached to their rank and position, and in some cases special higher rates provided for field service appointments The Secretary of State recognises that the rules may sometimes entail loss of emoluments to Indian Medical Service officers withdrawn from civil appointments but liability to recall to military duty is a well understood condition of civil employment in the case of the Indian Medical Service, and he sees no sufficient reason for modifying the rules

MONDAY, FEB 8TH

Antityphoid Inoculation in the British Army

Mr PETO asked the Under Secretary for War whether he could furnish particulars of any case of death from inoculation against typhoid fever —Mr TENNANT replied So far as the War Office is aware there has been only one death which can be in any way connected with inoculation This case was that of Corporal Nichols, of the 3rd Battalion (Reserve) City of London Regiment I stated in this House on Nov 27th last that the cause of death was pneumonia but when the death certificate was received it was seen that the cause was given as (1) antityphoid vaccination and (2) pneumonia The case has been investigated and submitted to Sir William Osler, who considers that death was due to an eight miles march which the man took within 24 hours after inoculation and not to the inoculation directly Instructions have been given that care must be taken to see that men recently inoculated are not given hard work until their condition justifies their undertaking it without risk

Mr PETO asked the Under Secretary for War whether he could state the number of cases of typhoid and deaths from typhoid, among inoculated men and uninoculated men in the Expeditionary Force from the commencement of the war to a recent date —Mr TENNANT answered Of the 421 cases of typhoid in the present campaign among British troops 305 cases were in men who were not inoculated within two years In the 421 cases there have been 36 deaths Of these deaths 34 were men who had not been inoculated within two years Only one death occurred among patients who were inoculated, and that man had only been inoculated once instead of the proper number of times —namely, twice

Mr CHANCELLOR asked the right honourable gentleman whether the punishment for refusing inoculation of men who had fought at the front by depriving them of the five days' leave to visit home which was granted to inoculated men was a form of influence and persuasion sanctioned by the War Office to induce men to undergo an operation which was not compulsory or legally enforceable and to which they had a conscientious objection and whether men who stood upon the legal right guaranteed by the public announcements of the Minister for War were to be punished indefinitely for doing so by the refusal of the leave granted to others or whether this action on the part of officers would at once be put an end to by a General Order issued from the War Office —Mr TENNANT said in reply I am not aware of any case where a man returning from the front has been punished in the manner described in the question The danger of infection being spread in the army by uninoculated men is considerable and has to be guarded against by precautions being taken as regards granting them special leave Any General Order will be in this sense

The Health of the Army

Speaking on the motion that the Speaker should leave the chair in order that the House might go into committee on army estimates Mr TENNANT (Under Secretary for War),

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[1] THE LANCET Sept 5th 1914 p 677

Colchester, Royal Eastern Counties Institution for Imbeciles and the Feeble Minded.—Medical Officer. Salary at rate of £200 per annum, with board, apartments, attendance, and washing.

Coventry, Coventry and Warwickshire Hospital.—House Physician. Salary £110 per annum, with rooms, board, washing, and attendance.

Dagenham Temporary Sanatorium, Dagenham, Essex.—Resident Medical Officer, unmarried. Salary at rate of £500 per annum and all found.

Derbyshire County Council.—Tuberculosis Dispensary Officers. Salary £[illegible]0 per annum.

Devizes, Wilts County Asylum.—Assistant Medical Officer. Salary £250 per annum, with apartments, board, attendance, and laundry.

Devonport, Royal Albert Hospital.—House Surgeon, unmarried. Salary £150 per annum, with board and laundry.

Dudley, Guest Hospital.—Senior Resident Medical Officer. Also Assistant House Surgeon for six months. Salary £150 and £120 per annum respectively, with board, residence, attendance, and washing.

Dumfries and Galloway Royal Infirmary.—Female Resident House Surgeon. Salary £100 per annum.

Eccles and Patricroft Hospital.—House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

Exeter, Royal Devon and Exeter Hospital.—Senior House Surgeon for 12 months. Also House Physician and Assistant House Surgeon for six months. Salary at rate of £250 per annum for senior post and £150 for junior posts, with board, apartments, and washing.

Glamorgan County Council.—Medical Officer for Inspection of Children in Public Elementary Schools. Salary at rate of £300 per annum.

Glasgow Royal Samaritan Hospital for Women.—Resident Medical Officer. Salary £25 per annum.

Government Lymph Establishment, Colindale-avenue, Hendon, N.W.—Temporary Assistant Bacteriologist. Salary at rate of £500 per annum.

Halifax Royal Infirmary.—Second and Third House Surgeons, unmarried. Salary £120 and £100 per annum respectively, with residence, board, and washing.

Hospital for Sick Children, Great Ormond-street, London, W.C.—Assistant Casualty Medical Officer, unmarried, for six months. Salary £50, with board, residence, &c.

Hull, Victoria Children's Hospital, Park-street.—House Surgeon and Assistant House Surgeon. Salary £60 and £50 per annum respectively, with board and laundry.

Kensington Tuberculosis Dispensary, 110, Ladbroke-grove, W.—Temporary Medical Officer. Salary at rate of £[illegible]00 per annum.

Laboratories of Pathology and Public Health.—Bacteriologist. Salary £170 per annum.

Lindsey (Lincolnshire) County Council.—Combined Temporary Assistant Tuberculosis and Assistant School Medical Officers. Salary at rate of £3[illegible]0 per annum.

Liverpool Infirmary for Children.—Two Resident House Physicians for six months. Salary £50 each, with board and lodging.

London Hospital, E.—Assistant Surgeon.

Manchester, County Asylum, Prestwich.—Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, attendance, and washing.

Manchester, Monsall Fever Hospital.—Second and Third Medical Assistants. Salary £175 and £150 per annum respectively, with board, lodgings, and washing.

Manchester, Victoria Memorial Jewish Hospital, Cheetham.—Female Resident Medical Officer for six months. Salary at rate of £1[illegible]0 per annum, with rooms, board, and laundry.

Metropolitan Borough of Hackney and Stoke Newington.—Tuberculosis Officer. Salary at rate of £500 per annum.

Middlesex County Asylum, Napsbury, near St. Albans.—Temporary Assistant Medical Officer. Salary 6 guineas per week, with board, lodging, washing, and attendance.

Mile End Old Town Infirmary.—Senior Assistant Medical Officer and Junior Assistant Medical Officer. Salary £220 and £150 per annum respectively, with board, lodging, and washing.

Miller General Hospital for South-East London, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary £[illegible]5 per annum, with board, residence, and laundry.

Newport (Mon.), Royal Gwent Hospital.—Resident Medical Officer. Salary for first six months at rate of £100 per annum, second six months £125, and third six months £150, with board, residence, and laundry.

Norfolk Education Committee.—Assistant Medical Officer. Salary £300 per annum.

Northampton County Asylum.—Second Assistant Medical Officer. Salary £250 per annum, with board, &c.

Nottingham General Hospital.—Senior House Physician. Salary £120 per annum, with board, residence, and laundry. Also Assistant House Physician for six months. Salary at rate of £100 per annum, with board, residence, and laundry.

Oldham Royal Infirmary.—Second House Surgeon. Salary at rate of £120 per annum, with board, residence, and laundry.

Paddington Green Children's Hospital, London, W.—House Surgeon. Salary at rate of £[illegible]0 per annum, with board, residence, and washing.

Paddington Infirmary, 225, Harrow-road, Paddington, W.—Two Assistants to Medical Superintendent of Infirmary and Medical Officer of Workhouse for six months. Salary at rate of £250 per annum, with board, lodging, and washing.

Paisley, Royal Alexandra Infirmary.—Resident House Physician.

Preston Royal Infirmary.—Assistant Resident Medical and Surgical Officer. Salary £120 per annum, with board, residence, and laundry.

Portsmouth, Royal Hospital.—House Surgeon for six months. Salary £[illegible] per annum, with board, &c.

Queen's Hospital for Children, Hackney-road, Bethnal Green, E.—Assistant Surgeon.

Rhondda Urban District Council.—Temporary Assistant Medical Officer of Health and School Medical Officer. Salary at rate of £[illegible] per annum.

Royal Army Medical Corps (Territorials), Third Home Counties Field Ambulance (Maidstone).—Seven Medical Men as Officers.

Royal Dental Hospital of London, Leicester-square.—Junior Assistant House Anæsthetist. Salary £[illegible] per annum.

Royal Waterloo Hospital for Children and Women, S.E.—Second Resident Medical Officer. Salary at rate of £100 per annum, with board and washing. Also Temporary Honorary Assistant Physician to Out-patients.

St. Mary's Hospital for Women and Children, Plaistow, E.—Junior Resident Medical Officer. Salary at rate of £90 per annum, with board, residence, and laundry.

St. Mary Islington Infirmary, Highgate Hill, N.—Junior Assistant Medical Officer. Salary £140 per annum, with board, residence, &c.

St. Peter's Hospital for Stone, &c., Henrietta-street, Covent Garden, W.C.—Junior House Surgeon for six months. Salary at rate of £75 per annum, with board, lodging, and washing.

Salford County Borough.—Assistant Tuberculosis Officer. Salary £350 per annum.

Salford Royal Hospital.—Casualty House Surgeon. Salary at rate of £100 per annum, with board and residence.

Salisbury General Infirmary.—House Surgeon and Assistant House Surgeon, unmarried. Salary £100 and £75 per annum respectively, with apartments, board, lodging, and washing.

Sheffield Children's Hospital.—House Surgeon. Salary £150 per annum, with board and residence.

Sheffield City Hospitals for Infectious Diseases and Tuberculosis.—First Assistant Medical Officer, Second Assistant Medical Officer, and Third Assistant Medical Officer. Salary £250, £225, and £200 per annum respectively, with apartments, rations, laundry, and attendance.

Sheffield Royal Hospital.—Female Assistant House Surgeon and Assistant House Physician. Salary £85 and £80 per annum respectively, with board, residence, and washing.

Southampton, Royal South Hants and Southampton Hospital.—Junior House Surgeon for six months. Salary at rate of £120 per annum, with rooms, board, and washing.

South Shields, Ingham Infirmary and South Shields and Westoe Dispensary.—Junior House Surgeon. Salary £115 per annum, with residence, board, and washing.

Stockport Infirmary.—Junior House Surgeon. Salary £100 per annum, with board, washing, and residence.

Swansea Union Institution.—Resident Assistant Medical Officer. Salary £225 per annum.

Taunton and Somerset Hospital, Taunton.—Senior House Surgeon. Salary £120 per annum, with board, lodging, and laundry.

Truro, Royal Cornwall Infirmary.—House Surgeon, unmarried. Salary £150 per annum, with rooms, board, and washing.

Tunbridge Wells General Hospital.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, &c.

Victoria Hospital for Children, Tite-street, Chelsea, S.W.—House Physician for six months. Salary £[illegible]0, with board and lodging.

Wakefield, City of.—Temporary Assistant Medical Officer of Health. Salary £500 per annum.

Walsall and District Hospital.—Assistant House Surgeon and Anæsthetist. Salary £1[illegible]0 per annum, with board, residence, and laundry.

Wandsworth Union Infirmary, St. John's-hill, Clapham Junction, S.W.—Assistant Medical Officer, unmarried. Salary at rate of £5 5s. weekly, with board, lodging, and washing.

Warrington Infirmary and Dispensary.—Senior House Surgeon. Salary at rate of £200 per annum, with board, apartments, and laundry.

West Bromwich and District Hospital.—House Surgeon and Assistant House Surgeon, unmarried. Salary £150 and £120 per annum respectively, with residence, board, and laundry.

West End Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy, 73, Welbeck-street, W.—Resident House Physician for six months. Salary at rate of £100 per annum.

West Ham and Eastern General Hospital, Stratford, E.—Junior House Surgeon. Salary at rate of £100 per annum, with board, residence, and washing.

Whitechapel Union Infirmary, Vallance-road, E.—Second Assistant Resident Medical Officer. Salary £200 per annum, with rations, apartments, and washing.

Wigan, Royal Albert Edward Infirmary and Dispensary.—Female Junior House Surgeon. Salary £130 per annum, with board, apartments, and washing. Also House Surgeon. Salary £170 per annum, with board, apartments, and washing.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Lerwick, in the county of Shetland; at Newent, in the county of Gloucester; and at Stewartstown, in the county of Tyrone.

Births, Marriages, and Deaths.

BIRTHS

Bidwell.—On Feb. 4th, at Worthing-road, Southsea, the wife of Fleet-Surgeon Lawrence Bidwell, R.N., of a son.

Hayden.—On Feb. 4th, at Wymering-mansions, W., the wife of Captain A. F. Hayden, M.B., F.R.C.S., I.M.S. (ret.), of a son.

Jordan.—On Feb. 4th, at 13, Upper Wimpole-street, W., to Dr. and Mrs. Alfred C. Jordan, a son.

MARRIAGES

Cunningham—Neal.—On Feb. 2nd, at St. Augustine's, Highbury New Park, Frederick Hugh Lester Cunningham, M.R.C.S., L.R.C.P., R.N., to Marguerite [illegible], younger daughter of Mr. and Mrs. John Neal.

Hill—Trollope.—On Feb. [illegible], at All Saints, Banstead, Lieutenant F. T. Hill, R.A.M.C., to Ruth [illegible], elder daughter of Howard W. Trollope, of Banstead, Surrey.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

front, and if he believed that the burden of transport would be less and that the fighting units at the front would remain more intact because the men were inoculated, one could understand a little excessive zeal on his part in getting the men inoculated He hoped that honourable Members would not allow this grave question to be clouded over by trivialities Let them look at it as a whole What the Government were doing was designed to protect our men against this disease in France, and he was sure that every honourable Member would coöperate with the War Office in placing no undue obstacles in the way

Mr W LONG thanked the honourable gentleman (Dr Addison) for the stand he had taken on this important matter The Opposition would support the Government in taking the strongest measures in securing the health of our troops in France If the Government had given a pledge to recruits not to make inoculation compulsory, and if they thought a change of policy was required, then the change of policy should be made at once Any men who thought that they were aggrieved by making inoculation compulsory should be given an opportunity of retiring or of being retained for home defence

WEDNESDAY, FEB 10TH

Inoculation in the British Army

In the further course of the debate in Committee of Supply on Army Estimates, Mr TENNANT (Under Secretary for War) said that evidence was accumulating in favour of the inoculation of our troops against typhoid In the South African War out of 21,000 deaths, 8000 were from enteric fever The Indian figures also were significant In India, where the troops ran great risk of disease, over 90 per cent of the army were without compulsion inoculated In pre inoculation days up to 2000 cases of typhoid used to occur annually in India, whereas in 1912 the number was only 118 and in 1913 only 85 As to making inoculation compulsory for future recruits and allowing those who had enlisted under the supposed guarantee of the War Office liberty to remain in the army for home defence only, he could give no answer The matter was under consideration, and he hoped to be able to give a definite answer shortly The question between the honourable Member for Haggerston (Mr Chancellor) and himself seemed to be not so much one of medical authority as one of discipline It was said that whilst it was stated that inoculation was voluntary in fact, a soldier desiring to remain uninoculated was met by the commanding officers of certain units with a form of compulsion which it was almost impossible to resist It would be almost impossible to persuade the honourable Member that these commanding officers had acted with the best possible motives, believing that the course adopted by the individual was likely to be prejudicial to the great bulk of the men under his command That was really the whole point These commanding officers had gone beyond any leave which they had from the War Office He had caused instructions to be issued to all commanding officers to say that action such as the honourable Member (Mr Chancellor) had brought to his notice was undesirable, and would, he hoped, not be repeated He (Mr Tennant) did not disguise that he felt that there was a real danger in men going on leave uninoculated and returning uninoculated, because they might bring infection to a body of troops Lord Kitchener felt this so strongly that he was about to issue instructions that leave must be sparingly granted to men who declined to be inoculated

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o'clock on the Thursday morning of each week such information for gratuitous publication*

BIRD G A M B, B S B Sc. Lond has been appointed Casualty Officer and Resident Anæsthetist at St Thomas's Hospital

BLUNT A L M R C S L R C P Lond has been appointed Resident House Surgeon at St Thomas's Hospital

BOWSER G A G M R C S L R C P Lond has been appointed Casualty Officer and Resident Anæsthetist at St Thomas's Hospital

BURT W M R C S L R C P Lond has been appointed Senior Obstetric House Physician at St Thomas's Hospital

CRANSTON G M R C S L R C P Lond., has been appointed Resident House Physician at St Thomas's Hospital

DAVIES J C M B B Ch Oxon has been appointed Casualty Officer and Resident Anæsthetist at St Thomas's Hospital.

DOYNE P G M B B C Oxon F R C S Eng has been appointed Senior Ophthalmic House Surgeon at St Thomas's Hospital

ELLWOOD V T M B B Ch Oxon has been appointed Junior Obstetric House Physician at St Thomas's Hospital

GIMBLETT C L M B B C Cantab. has been appointed Resident House Surgeon at St Thomas's Hospital

GLADSTONE F C M B B Ch Oxon has been appointed Resident House Physician at St Thomas's Hospital.

HEBERT G T M B., B Ch Oxon has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

HUNTER ANDREW M B Ch.B Edin., has been appointed to the Chair of Pathological Chemistry in the University of Toronto

JONES C O H M R C S L R C P Lond has been appointed Resident House Physician at St. Thomas's Hospital

KENNEDY F J M., L R C P & S Irel has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Mountrath District of Queen's County

MACKENZIE, T C M B Ch B Glasg has been appointed Assistant Medical Superintendent of the Bury and District Joint Hospital

MCMILLAN K H. M R C S L R C P Lond has been appointed Resident House Surgeon at St Thomas's Hospital

MARSHALL, W H M R C S L R C P Lond. has been appointed House Surgeon at St. Thomas's Hospital

MILES S H M R C S L R C P Lond has been appointed Junior Ophthalmic House Surgeon at St. Thomas's Hospital.

MILLIGAN D S E, M R C S L R C P Lond has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital

RAINE, R T, M R C S L R C P Lond. has been appointed Casualty Assistant at St. Thomas's Hospital

ROMANIS W H C M R C S L R C P Lond has been appointed Resident House Surgeon at St Thomas's Hospital.

SAI P M R C S L R C P Lond has been appointed Casualty Officer and Resident Anæsthetist at St Thomas's Hospital

SHARP J E M R C S L R C P Lond has been appointed Resident House Physician at St Thomas's Hospital

SHELLEY L W M R C S L R C P Lond has been appointed Casualty Officer and Resident Anæsthetist at St Thomas's Hospital

SPARROW J A G M B B Ch Oxon., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital

STIELL, W F M R C S L R C P Lond., has been appointed Casualty Assistant at St Thomas's Hospital

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

ASHTON UNDER LYNE DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—Senior House Surgeon Salary £140 per annum with board residence washing &c

BARROW IN FURNESS NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £150 per annum with residence board and laundry

BEDFORD COUNTY HOSPITAL.—Temporary House Surgeon

BENENDEN KENT NATIONAL SANATORIUM.—Medical Superintendent. Salary £350 per annum with house

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch road.—House Surgeon Salary £100 per annum, with board residence and laundry

BIRKENHEAD BOROUGH HOSPITAL.—Senior House Surgeon Salary £120 per annum with board and laundry

BIRMINGHAM CITY MENTAL HOSPITAL, Rubery hill.—Female Junior Assistant Medical Officer Salary £200 per annum with apartments board laundry &c

BIRMINGHAM GENERAL DISPENSARY—Resident Medical Officer unmarried Salary £240 per annum with apartments fire lights and attendance

BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY—House Surgeons Senior and Junior Salaries £150 and £130 per annum with board residence and laundry

BOURNEMOUTH ROYAL NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST—Resident Medical Officer Salary £3[illegible]0 per annum with board residence and laundry

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon Salary £120 per annum with board residence and laundry

BRADFORD CITY—Two positions on Staff of Medical Officer of Health in connexion with scheme of Child Welfare Salary £3[illegible] per annum

BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL.—House Physician Salary £100 per annum with apartments, board and laundry Also Junior House Surgeon and Assistant House Surgeon with charge of beds Salaries £[illegible]0 per annum with apartments board and laundry

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £100 per annum with board residence and laundry

BRISTOL GENERAL HOSPITAL.—Senior House Surgeon Salary at rate of £200 per annum with board residence &c.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN—Female House Physician Salary £100 per annum with board rooms attendance and laundry

BRISTOL ROYAL INFIRMARY—Throat Nose and Ear House Surgeon Salary at rate of £120 per annum with board apartment and laundry

BURNLEY VICTORIA HOSPITAL.—House Surgeon Salary £13[illegible] per annum with residence board and washing

BURY INFIRMARY—Junior House Surgeon Salary £150 per annum with board residence and washing

CANCER HOSPITAL, Fulham road, S W—House Surgeon for six months Salary £100 per annum.

CANTERBURY KENT COUNTY ASYLUM Chartham—Third Junior Assistant Medical Officer Salary £250 per annum with quarters board washing &c

CARMARTHEN JOINT COUNTIES ASYLUM—Temporary Second Assistant Medical Officer Salary at rate of £[illegible] per annum with board lodging washing &c

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd street W C—House Surgeon Salary at rate of £[illegible] per annum with board and residence

CHESTER, CITY AND COUNTY OF THE CITY OF—Assistant Medical Officer of Health Salary £3[illegible]0 per annum

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST Victoria Park E—House Physician for six months Salary at rate of £[illegible] per annum with board residence and washing Also Resident Medical Officer Salary £220 per annum with board &c.

TUESDAY —2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr A. G Auld) Surgical (Mr Howell Evans) Nose Throat, and Ear (Mr H D Gillies) X Rays and Electrical Methods (Dr Metcalfe) 3.30 P.M. Medical In patient (Dr A. J Whiting) 4 30 P.M Clinical Demonstration —Mr E Gillespie Selected Surgical Cases

WEDNESDAY —Clinics —2 P.M., Throat Operations (Mr Gillies) 2.30 P.M. Children s Out-patient (Dr T R. Whipham), Skin (Dr G N Meachen) Eye (Mr Brooks)

THURSDAY —2.30 P.M. Gynæcological Operations (Dr A. E Giles) Clinics:—Medical Out-patient (Dr A. J Whiting) Surgical (Mr Carson) X Rays and Electrical Methods (Dr Metcalfe)

FRIDAY —2.30 P.M. Operations. Clinics:—Medical Out-patient (Dr A. G Auld): Surgical (Mr E. Gillespie) Eye (Mr R. P Brooks)

POST-GRADUATE COLLEGE West London Hospital Hammersmith road W

MONDAY —10 A.M., Dr Simson Diseases of Women. 10.30 A.M., Medical Registrar Demonstration of Cases in Wards 12 noon Dr Bernstein Pathological Demonstration. 2 P.M. Medical and Surgical Clinics X Rays Mr D Armour: Operations. Dr Pritchard: Bacterial Therapy Department. Mr B Harman and Mr Gibb Diseases of the Eye

TUESDAY —10 A.M Dr Owen Demonstration of Cases in Wards 12 noon Mr T Gray: Demonstration of Fractures, &c. 2 P.M. Medical and Surgical Clinics. X Rays Mr Baldwin: Operations. Dr Davis: Diseases of the Throat Nose, and Ear Dr Pernet Diseases of the Skin.

WEDNESDAY —10 A.M. Dr Saunders Diseases of Children Dr Davis Operations of the Throat Nose and Ear 11 A.M Mr Souttar: Demonstration of Minor Operations. 12 noon Lecture:—Mr Souttar: Abdominal Diagnosis 2 P.M Medical and Surgical Clinics. X Rays Mr Pardoe Operations Dr Simson Diseases of Women Mr Gibb: Diseases of the Eye.

THURSDAY —9 A.M. Dr Bernstein Bacterial Therapy Department 12 noon Lecture Dr G Stewart: Neurological Cases 2 P.M. Medical and Surgical Clinics X Rays. Mr D Armour: Operations Mr B Harman: Diseases of the Eye.

FRIDAY —10 A.M Dr Simson Gynæcological Operations. 10.30 A.M. Surgical Registrar Demonstration of Cases in Wards 12.15 P.M. Lecture —Dr Bernstein Applied Pathology 2 P.M Medical and Surgical Clinics X Rays. Mr Baldwin Operations Dr Davis: Diseases of the Throat, Nose, and Ear Dr Pernet Diseases of the Skin

SATURDAY —10 A.M Dr Saunders Diseases of Children Dr Davis Operations of the Throat Nose, and Ear Mr B Harman Eye Operations 12 noon Lecture —Mr Souttar Surgical Anatomy of the Abdomen 2 P.M Medical and Surgical Clinics X Rays. Mr Pardoe Operations

THE THROAT HOSPITAL, Golden-square W

MONDAY —5.15 P.M. Special Demonstration of Selected Cases
THURSDAY —5.15 P.M. Clinical Lecture

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly W

TUESDAY —3 P.M Prof C S Sherrington Muscle in the Service of Nerve (Lecture V)
THURSDAY —3 P.M Dr P C Mitchell Zoological Studies War and Evolution—Struggle of Species. (Lecture II)

MANCHESTER HOSPITALS POST-GRADUATE CLINICS

THURSDAY —ANCOATS HOSPITAL, Mill-street.—4.30 P.M., Medical and Surgical Cases.

For further particulars of the above Lectures &c., see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters whether intended for insertion or for private information must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title-page to Vol. II. of 1914 were given in THE LANCET of Dec. 26th, 1914

VOLUMES AND CASES

VOLUMES for the second half of the year 1914 are now ready Bound in cloth, gilt lettered, price 16*s*, carriage extra.

Cases for binding the half year s numbers are also ready Cloth, gilt lettered, price 2*s*, by post 2*s* 3*d*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows —

FOR THE UNITED KINGDOM.			
One Year	£1	1	0
Six Months	0	12	6
Three Months	0	6	6

TO THE COLONIES AND ABROAD			
One Year	£1	5	0
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Three Months	0	7	0

(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs 50 per month.)

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W C

TO COLONIAL AND FOREIGN SUBSCRIBERS

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO , 51, Fifth Avenue, New York, U S A.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m by Steward's Instruments)

THE LANCET Office Feb 10th, 1915

Date	Barometer reduced to Sea Level and 32°F	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp Shade.	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks.
Feb. 4	29 76	S S W	—	74	53	45	46	43	Overcast
5	29 84	S W	0·43	81	53	40	44	45	Fine
6	30·07	S	—	82	50	45	44	45	Raining
7	29·73	S W	0·22	53	46	43	43	44	Overcast
8	29 73	S	0·45	75	43	33	38	40	Fine
9	29·35	S W	0·04	73	47	40	40	40	Raining
10	29 51	S W	—	73	43	33	38	40	Fine

The following magazines journals, &c., have been received — Therapeutic Gazette American Journal of Orthopedic Surgery, Medical Review Public Health, Edinburgh Medical Journal, Post-Graduate Ophthalmology Archives of Roentgen Ray Birmingham Medical Review Canadian Medical Association Journal Proceedings of the Royal Society of Medicine School Hygiene Journal of Tropical Medicine and Hygiene

Notes, Short Comments, and Answers to Correspondents.

DANGEROUS FADS

To the Editor of THE LANCET

SIR,—I was really taken aback at seeing in one of the *recent numbers of Punch* the advertisement of a baseless campaign that is being waged against vaccines in general and antityphoid in particular

To us who hold England up as an *example, it is hard to* realise that there should still exist in a civilised country like yours people ignorant enough to publish and sustain the senseless principles contained in the aforesaid advertisement And what I think makes that calumnious campaign still worse, under the present circumstances, is the anti patriotic terms in which it is written

I think it is abopt time English people woke up against many such dangerous fads as have been taking root during recent years, such as this one, the antivivisection, and even vegetarianism, and the abuse of other diet fads Let us hope now that there are more serious things to turn one's thoughts to people will give up brooding over such nonsensical stuff

I am, Sir, yours faithfully,

Oviedo, Feb 3rd, 1915 JAMES B VILIESID

ANTIFORMIN

MR Walter J Matthews, of the laboratory department at the Bristol Municipal *Tuberculosis Dispensaries,* points out that a *perfectly efficient substitute for antiformin* hitherto supplied from Germany may be made by passing chlorine into 15 per cent sodium hydrate to nearly saturation The chlorine may be prepared by adding *pure hydrochloric acid to manganese dioxide* To make one litre 1 lb of *pure acid (specific gravity* 1 16) and about 6 oz of manganese dioxide are needed The manganese dioxide is placed in a large flask and the acid gradually added through a thistle funnel, warming very *gently The chlorine is carried by a delivery tube to the bottom of the soda solution,* which is placed in a tall bottle Enough chlorine has been added when the soda solution acquires the colour of lemonade The cost of making one litre works out, on Mr Matthews's estimate, at about 1*s* 1*d* Antiformin is used in the bacteriological diagnosis of tuberculosis, and its value in this direction has been referred to many times in our columns

VERMIN IN THE TRENCHES

To the Editor of THE LANCET

SIR,—In 1902 or 1903 I read in *Blackwood's Magazine* extracts from the diary of a planter who was wandering alone for several days during the Indian Mutiny He became infested with pediculi, and after some days of discomfort hit on the idea of shredding a cheroot and steeping it in water The application of this "tobacco-water" to his body rid him of a nuisance This might be worth a trial and could, I think, be easily done in the trenches An ounce of shag soaked in a quart of water for some hours ought to make a fairly strong *infusion One would not expect* it to kill the ova, however

Norman Walker in his Introduction to Dermatology" writes about pediculi corporis "Jamieson says that a small bag of sulphur worn round the neck next the skin acts as a practical '*charm*'"

I am, Sir, yours faithfully,

Feb 6th, 1915 M R C S & L R C P

ATTACHMENTS TO TELEPHONES

THE following notice in the "London Telephone *Directory*" may serve as a warning to future in*ventors* and so pre*vent* fruitless efforts of ingenuity — Attention is drawn to the fact that subscribers are being induced to purchase appliances for attachment to telephones on the ground that they improve the service *or have some* hygienic advantage *As in* nearly all cases these attachments have the effect of either damaging the apparatus *or* impairing its efficiency—in many cases both —subscribers are reminded that under the conditions of their telephone service the use of such appliances or attachments is in general, prohibited The sale to the public of certain appliances which have no such prejudicial effect has been sanctioned by the Post Office and subscribers should before purchasing any telephone attachments satisfy themselves that their use has received official sanction It is the duty of the Post Office engineers to remove any attachments which have not been officially approved"

FEES UNDER THE MENTAL DEFICIENCY ACT

"DEFICIT" writes "I shall be obliged if any of your readers can give me an idea *as to the fees one should* ask as medical officer under the Mental Deficiency *Act*"

COMMUNICATIONS not noticed in *our present issue* will receive attention in our next

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY, Burlington House *London* W

THURSDAY —Papers:—Prof W A. Bone and others: *Gaseous Combustion at High Pressures.*—Prof W M Hicks: The Orbits of a Charged Particle Round an Electric and Magnetic Nucleus —*Mr S Chapman: The Lunar Diurnal* Magnetic Variation and *its Change with Lunar Distance* (communicated by Sir F W Dyson)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

WEDNESDAY

SECTION OF THE HISTORY OF MEDICINE (*Hon Secretaries*—Raymond Crawfurd Leonard G Guthrie) at 5 P M.

At 4.30 P.M Sir William Osler will show a collection of Astruc's works including his Genesis

Dr J D Rolleston Lucian and Medicine. (Part II)

Sir Alexander Simpson Jean Astruc.

THURSDAY

SECTION OF DERMATOLOGY (Hon. Secretaries—S E Dore *A. M H. Gray*): at 5 P M

Exhibition of Cases (at 4 30 P M):

Dr G Pernet: (1) Extensive Tertiary Syphilis in a Woman (2) Extensive Tertiary Syphilis in a Male (3) Dermatitis Factitia.

Mr J B R McDonagh: Notes of a Skin Disease of Probable Protozoal Origin with slides

Dr S E Dore: Favus of Glabrous Skin, with microscopical specimen and cultures

Dr Knowsley Sibley: Scleroderma.

Dr Graham Little: (1) Multiple Tumours (?) Fibro-sarcomata (private patient) (2) Angioma *Serpiginosum* ( ) (3) Erythema ab igne (?)

FRIDAY

SECTION OF OTOLOGY (Hon Secretaries—W M Mollison, E. D D Davis) at 5 P M

Discussion

On Tuberculosis of the Auditory Apparatus

The following will take part in the discussion:—Sir William Milligan Mr Lake Mr J S Fraser Mr *Hugh E Jones* Mr O E West.

Specimens (at 4 15 P M)

Will be shown by Mr A. H Cheatle Mr J S Fraser Mr G J Jenkins Mr Wyatt Wingrave *Mr E D D Davis* and others

Mr W M *Mollison* (9 *Upper* Brook-street W) will be glad to hear from members wishing to show *specimens or to take* part in the discussion

SECTION OF ELECTRO-THERAPEUTICS (Hon Secretaries—S Gilbert Scott *E P Cumberbatch*): at 8.30 P M

Discussion

On the Electrical Treatment *of* Wounds Sinuses Frost bite and Sprains considered more particularly in *Relation to* the *Present* War

Exhibition *of Skiagrams*

LONDON DERMATOLOGICAL SOCIETY St John's Hospital, 49 Leicester-square W C

TUESDAY —4.30 P M Cases sent *for Consultation.* Demonstration of Pathological Specimens Clinical Cases will be shown by Dr M Dockrell Dr J L Bunch Dr W K Sibley *Dr E G* Reeve, *Dr J L Tibbs and* Dr S Gooding 5 P M Paper —Dr W K Sibley The Treatment of Diseases of the Skin and Mucous Membranes with Carbon Dioxide Snow

ROYAL MICROSCOPICAL SOCIETY 20 *Hanover-square* W

WEDNESDAY —8 P M *Presidential Address:—Prof* G Sims Woodhead: Some of the Micro-biological Problems of the Present War

SOCIETY OF TROPICAL MEDICINE AND HYGIENE 11, Chandos street Cavendish-square W

FRIDAY —8.30 P M. *Paper:—Prof* W *J* Simpson: *The War and Cholera.*

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W C.

MONDAY —4 P M Hunterian Oration:—Sir W Watson Cheyne Bart. (President)

WEDNESDAY —5 P M Hunterian Lecture:—Prof H. Blakeway: The Operative Treatment of Cleft Palate

FRIDAY —5 P M Hunterian Lecture:—Prof F C Pybus: Some Infections of the Tonsil

NORTH EAST LONDON POST GRADUATE COLLEGE Prince of Wales's General Hospital, Tottenham N

MONDAY —Clinics:—10.30 A.M., Surgical Out-patient (Mr E Gillespie) 2.30 P.M Medical Out-patient (Dr T R. Whipham) Gynæcological (Dr J B Banister) 3 P.M., Medical In-patients (Dr R. M Leslie)

ABSTRACT OF

An Address

ON

IMMUNITY AGAINST INFECTIOUS DISEASE,

WITH SPECIAL REFERENCE TO

ANTITYPHOID INOCULATION

Delivered before the Statistical and Social Inquiry Society of Ireland on Jan. 22nd, 1915.

By E. J. McWEENEY, M.A., M.D. (N.U.I.),
D.P.H., F.R.C.P. Irel.,
PROFESSOR OF PATHOLOGY, UNIVERSITY COLLEGE, DUBLIN.

Nature, Causes, and Kinds of Immunity.

It is a well known fact that second attacks of infectious diseases are, with few exceptions, rare. In withstanding the first attack the patient has acquired immunity against further onslaughts of the same disease germ. Examination of the blood of such a person, moreover, affords evidence of the presence in it of substances that exercise a deleterious influence on the germ—may, indeed, kill it. The presence of these substances in the blood of the convalescent patient is only a particular case of a general law which may be thus stated: *The entrance of foreign albuminous matter (protein) into the system evokes the production of specific antibodies.* We now call the foreign or intrusive protein "antigen." Ehrlich explains the action of the antigen by supposing that its molecules combine with the receptors or nutritive side chains of the body cells. Should the antigen be poisonous or occupy too many of the side chains the cell may be killed. But if it survives it reacts by producing fresh combining links or receptors, which, being discharged into the blood, constitute the antibody.

The side chains or receptors with their supposed capacities for combining, &c., have never been seen and may possibly not exist. They have been imagined and enable us to visualise a certain concept of how immunity is brought about. That concept may not be right—may not correspond to facts in all particulars. But it certainly does so to a very large extent, and, what is very important, the theory has proved itself a genuinely heuristic one in the sense that inferences based upon it have been found justified by the test of actual experiment. Under the influence of this theory immunity has become a vast and highly specialised department of research and has yielded practical results of the highest importance, with one of which we are this evening concerned.

With regard to antibodies there are two points deserving special notice. In the first place they are only produced when the antigen is introduced parenterally—that is, otherwise than by way of the alimentary canal. The second point is that antibodies are specific—that is, will only combine or react with the antigen that produced them. Recovery from one disease will not protect against another. We term the poisons produced by microbes "toxins." They behave as antigens. During a non-fatal attack of an infectious disease, such as typhoid, the bacilli, consisting as they do of foreign protein, are powerfully antigenic; they stimulate the cells of the individual attacked, with the result that a crop of antibodies is produced specifically directed against the intrusive micro-organisms. Thus there are found (1) opsonins, which lead to the ingestion and destruction of the germs by the white blood cells; (2) antitoxins, which combine with and neutralise its poisons; (3) agglutinins, which cause the bacilli to adhere together and doubtless assist in their destruction; and (4) bacteriolytic amboceptors, which focus upon the bacillus the powerful ferments contained in the blood and thus bring about its dissolution. The consequence is that the attack is foiled. The disease germ is suppressed and got rid of. The patient recovers, and for a time retains in his blood enough of the specific anti-substances to render any further attack from the same quarter impossible. Such a patient is said to be immunised or protected, but the duration of protection varies within wide limits.

Immunity may be *natural* or *acquired*. In natural immunity the man or animal is congenitally incapable of becoming infected owing to the absence from his body cells of receptors capable of combining with the germs or their toxins. Acquired immunity may be the result of (1) an accidental, involuntary attack of the disease contracted in the ordinary way, or (2) the deliberate introduction of the antigen, or the corresponding antibodies by the parenteral path; this is artificial immunity.

Artificial immunity may be (1) active, or (2) passive. Passive immunity is obtained by the introduction into the subject of antibodies ready made. The antibodies are contained in the serum of an actively immunised animal, and this "anti-serum," as it is called, is injected. This procedure has proved of remarkable service against diphtheria and tetanus. Active immunity, on the other hand, is brought about by the reactive forces of the individual himself, elicited by the entrance of the specific micro-organism. It may be induced by the introduction of the disease germ (1) in its primitive unaltered condition; or (2) modified in various ways.

1. Artificial introduction of the germ in the living state and of full virulence is, of course, a dangerous procedure, as the attack so induced may prove fatal.

2. The following are the chief modes of modifying the virus of a disease so as to render it suitable for protective inoculation. (*a*) It may be passed through the system of a more or less insusceptible animal. This is what happens in the only kind of protective inoculation hitherto universally practised—that directed against small-pox. (*b*) The virulence of the micro-organism may be diminished by heat or antiseptics. This is called attenuating the virus. (*c*) The virus may be slowly dried outside the body. In this way Pasteur succeeded in attenuating the virulence of the unseen micro-organism of rabies and converting it into a harmless vaccine. (*d*) The disease germs may be killed by heat or antiseptics. Their dead bodies constitute the vaccine. This is the method most usually employed as against typhoid, and is consequently that which chiefly interests us practically. It has also been found to work well as against paratyphoid, cholera, plague, and dysentery. (*e*) The germ itself may be got rid of by filtration and only its products or toxins may be introduced. This plan only works when the toxins are excreted into the culture fluid, as happens in the case of diphtheria and tetanus. When the poisons remain locked up in the body of the micro-organism, as they do in the case of typhoid, this plan is not applicable. The bodies of

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* The [illegible] the [illegible] "group reactions" is here passed over.

No. 4771

Communications, Letters, &c, have been received from—

A.—Australian Book Co, Lond Dr David W Aitken Lond Mr F W Alexander Lond Dr A. Ashkenny Basingstoke Ashton under Lyne District Infirmary Secretary of American Women s War Relief Fund Lond Organising Secretary of

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TABLE II —*South African War, British Troops* *

—	Number	Cases	Rate per 1000	Deaths	Rate per 1000
noculated	19 069	226	11 84	39	2·04
ot inoculated	150 231	3 739	24 88	(*)	(*)

TABLE III —*Results at Ladysmith and Modder River*

—	Number	Morbidity	Mortality
Ladysmith—			
Inoculated	1 705	35 = 2·05%	8 = 0·47%
Not inoculated	10 529	1489 = 14 14%	329 = 3 13%
Modder River—			
Inoculated	2 335	26 = 1 11%	(*)
Not inoculated	10 931	257 = 2 34%	(*)

* These tables are taken from Russell *loc. cit.* the original publication not being available

It will be noted that Wright claims to have diminished the case incidence by more than one half and the mortality in still greater proportion I feel certain that the method did not on this occasion obtain a fair trial The unpleasant fact remains that out of a total strength of about 381,000 there were during that campaign nearly 58,000 cases of typhoid with over 8000 deaths Some observers reported favourably of the method, such as Tooth,[8] Marsden,[9] Boyd,[10] Osborn,[11] and Cayley[12] But others were not able to agree as to its value (Elliot and Washbourn,[13] and Melville[14]), whilst yet others[15] went so far as to assert that the number of cases and deaths was increased by the inoculation The *ad interim* verdict at the time was "not proven" The War Office suspended the practice for the time being, and appointed a Commission to report upon it This Commission, which was presided over by Dr C J Martin, F R S., entrusted the experimental part of the work to Sir W B Leishman

By direction of the Commission inoculations were again taken up amongst the personnel of a number of selected units serving abroad, chiefly in India. The procedure was carried through in the most thoroughgoing and systematic manner Careful attention was paid to the incidence of typhoid upon the units under observation, the most modern methods of diagnosis being employed by medical officers specially trained for the purpose I reproduce the main results as reported by Sir William Leishman to the International Medical Congress held in London in August, 1913[16] The observations were made on 24 selected test units The period covered extended from December, 1904, to June, 1909

TABLE IV —*Results of Antityphoid Inoculation among Troops on Foreign Service (Leishman)*

—	Total strength	Cases	Rate per 1000	Deaths	Rate per 1000	Case mortality
Not inoculated	8 936	272	30 4	46	5 14	16·9%
Inoculated	10,378	56	5 4	5	0 47	8·97%

In another table Leishman sets forth the typhoid incidence and mortality in India for the past 23 years, but it will suffice to confine our attention to the last 11 years, beginning in 1902 and ending in 1912

TABLE V —*Typhoid Fever in India from 1902 to 1912 (Leishman)*

Year	Admissions.	Deaths	Admissions per 1000 of strength	Case mortality per cent
1902.	1012	260	16 7	25 69
1903	1366	292	19 6	21 38
1904	1384	265	19 7	19·15
1905 ..	1146	213	16 1	18 59
1906	1095	224	15·6	20 46
1907..	910	192	13 1	21 10
1908	993	191	14 6	19·14
1909	616	112	8·0	18 18
1910	296	45	4 1	15·20
1911	170	22	2 3	12·9
*1912	118	26	1 7	19 0

* Since writing the above a statement has appeared to the effect that in 1913 the deaths from typhoid in our Indian army were reduced to 3

Now, the practice of inoculation was re-introduced in the year 1905, but it was not until 1909 that the number of men inoculated was large enough to influence the general statistics "From that year," says Leishman, "there has been a steady and very remarkable decline, the figures for each successive year constituting a fresh low record, until in 1912 we find that there have been only 118 cases in the whole of the British Army in India—a gratifying contrast to the large figures recorded in the past" (In 1897 there were 2050 and in the following year 2375 cases) Leishman then proceeds to disclaim the view that this great diminution is exclusively attributable to the inoculations "Improvements," he says, "in general sanitation, improved methods of diagnosis, the detection and isolation of 'carriers,' have undoubtedly all played a part, but my strong personal conviction, shared, I am glad to know, by many of my brother officers, is that the reduction is in the main due to the extended employment of anti typhoid vaccine"

History of the Method in America

The remarkable results that have been achieved in the American army by the use of the method are mainly due to the energy and perseverance of Major F F Russell, M.D, Professor of Bacteriology in the United States Army Medical School, Washington, who has recorded his experiences in a valuable paper[1] The fearful havoc wrought by typhoid among the American troops during the war with Spain called imperatively for active measures, and in 1908 Major Russell was directed by his chief, Surgeon General O Reilly, to proceed to Europe and familiarise himself with the technique of the preparation of the vaccine Russell accordingly betook himself to London, where he worked under Leishman and his assistants and brought home the necessary experience and the special strain of typhoid (Rawlings) used in the preparation of the British army vaccine The following year Russell began by inoculating his own laboratory staff The news spread, and practically all the medical officers in and about Washington volunteered and sent their wives, children, friends, and servants Then the corps of hospital attendants came in, and by the end of 1909 there had been vaccinated the bacilli may, however, be allowed to dissolve (undergo autolysis) or they may be pulverised at the temperature of liquid air, or they may be forced by enormous pressure to yield up their toxins, which may then be used for inoculation

INCIDENCE OF TYPHOID ON THE GENERAL POPULATION

Before considering the need for a new method of combating a disease, it is proper to ask ourselves how the disease has been influenced by the ordinary sanitary measures prescribed by the State or adopted by up to date units of sanitary administration When we come to do this in the case of typhoid we find that there has been of late years a remarkable reduction in the incidence of that disease

In Great Britain 20 years ago the death rate per million from this cause was over 300, in 1912 it had fallen to 44—the lowest recorded In Ireland there was also a fall though not so pronounced In 1903 the deaths numbered 480 and in 1913 289, the average for the past 10 years being 371. The rate per million dropped from 109 in 1903 to 53 in 1912, the average for the 10 years being 84 In many of our great cities the same thing has occurred Thus in Liverpool in 1894 there were 1350 cases with 248 deaths, whilst in 1913 there were only 153 cases with 33 deaths In Glasgow the case rate per 100,000 was 138 6 in 1891 and the death rate 21 8 In 1913 the former had sunk to 23 2 and the latter to 0 36 In other cities the fall is not so great In Manchester, for example, there were in 1899 381 cases with 73 deaths, and in 1913 292 cases with 47 deaths, the death rate per 100,000 falling during the 15 years from 13 to 6 In our own City of Dublin the cases 20 years ago numbered 813 and the deaths 104 Last year the cases had fallen to 287 and the deaths to 33 This latter figure corresponds to a death rate of 11 per 100,000, the average for the previous 10 years being 16

These figures afford convincing proof of the fact that under ordinary civil conditions of life, general sanitary measures, such as pure water, good methods of sewage disposal, attention to the food supply (supervision of shell fish, of milk), and certain specialised measures such as the discovery and isolation or cure of carrier cases, have proved effective in diminishing the prevalence of typhoid

INCIDENCE OF TYPHOID ON TROOPS IN THE FIELD

Experience has shown that when men are huddled together in camps or trenches or in beleaguered towns under war conditions, typhoid tends inevitably to break out amongst them and speedily becomes a regular pestilence

Table I. sets forth the figures for typhoid in some recent campaigns

TABLE I[1]—*Losses caused by Typhoid in some Modern Wars*

War	Strength	Typhoid cases	Typhoid deaths	Killed in action died of wounds	Died of disease
Franco-German, 1870-71 German army	—	73 393	6 965	28 209	15,2 0
Spanish American 1898, American army	107 973	20 738	1 580	2 3	2,565
Boer War 1899-02 British army	380 605	57 684	8 022	7 702	13,250
Russo-Japanese, 1904-05 Russian army	—	17 033	—	34 000	9 300

From this we see that during our war with the Boers we suffered greater losses from typhoid bacilli than from the bullets of the enemy The reason for the terrible ravages of this disease during war time is the greater difficulty there is in disposing of the germ laden excretions of the human body under the conditions then prevailing Typhoid in military encampments is not, as a rule, water borne The specific germs are introduced by mild, undiagnosed cases, and by germ carriers The latrines and trenches thus become infected and the bacilli are widely spread through the agency of "the three F s—Food, Flies, and Fingers"—so that all are brought in contact with the germs of the disease, and all that are susceptible take it

HISTORY OF PROTECTIVE INOCULATION—AND ITS RESULTS

For such exceptional conditions as those just referred to exceptional measures are obviously called for It is to the labours of our gifted fellow countryman Sir Almroth Wright that we are indebted for the introduction of a method that has now proved itself to be an effective weapon against the spread of typhoid In his praiseworthy endeavours Wright has been most ably seconded by Colonel Sir W B Leishman, R A M C, whose untiring industry has placed the procedure on a sound basis of experiment and observation, and thus powerfully contributed to its now well nigh universal adoption in the armies of all the leading countries

Wright's first steps in this matter were taken so far back as 1896, and are recorded in a paper[2] which was concerned with a totally different subject. In this paper he speaks of two men and an animal (horse) as having received inoculations of dead typhoid bacilli Early in the following year[3] he describes the changes in the blood of 17 persons similarly inoculated. Meanwhile it is only fair to state the subject was being energetically worked at in Germany by Pfeiffer and Kolle, who published[4] an account of their systematically conducted experiments a few months before Wright's first paper appeared Wright's work was, however, quite independent of theirs, and the development of the method in this country under Wright and Leishman was quite original and not in any way due to German influence

In 1898 Wright inoculated 4000 men of the Indian army[5] Shortly afterwards came the first application of the new method in civil life, at the Barming Asylum, where there was a serious outbreak of typhoid, and 100 of the attendants were inoculated not one of whom contracted the disease[6]

As early as 1900 the method still in its infancy, was tried here in Dublin at the Richmond Asylum, which was at that time suffering from a severe visitation of typhoid. At the instance of the late Dr Conolly Norman, Professor Wright was invited to make a trial of his method, and the work of carrying out the inoculations was intrusted to the assistant medical officer, the late Dr Henry M. Cullinan

Among the uninoculated, 114 in number (all nurses), there were 17 cases with 4 deaths Among the inoculated 500 in number (all patients), there were 7 cases with one death Of the 7 cases, 3 were already infected at the time of inoculation, and must be left out of account The case incidence per cent was therefore 14 9 among the uninoculated, as compared with 0 8 among the inoculated and the death rate 3 5 as compared with 0 2 Only one inoculation was given and the reactions were severe, necessitating the patients staying in bed for three or four days

The Boer War of 1899-02 afforded the first opportunity of testing the new method on a really large scale Its use was sanctioned by the War Office but was left optional with the individual Some 400 000

During the period in question there was no change of importance in the general sanitary administration, and nothing to account for the disappearance of typhoid save the introduction of prophylaxis by inoculation This result must surely claim attention as a remarkable example of the annihilation of disease by the weapons which bacteriological research has placed in our hands

Table IX.—*Monthly Incidence of Typhoid amongst United States Officers and Men* (*Russell*)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total for 9 months
Voluntary—													
1908	5	6	4	2	3	11	14	31	25	26	12	8	101
1909 ..	4	10	6	4	11	15	26	14	16	45	20	6	106
1910 ..	8	11	1	4	2	6	12	27	21	16	20	11	92
1911	3	3	3	7	4	4	4	7	4	4	1	0	39
Compulsory—													
1912 ..	1	2	2	0	0	3	1	3	1	4	0	1	13
*1913 ..	0	0	0	0	0	0	0	0	0	—	—	—	0

* Only one case occurred during the last quarter of 1913

Professor McWeeney then gave brief summaries of the successful results accomplished by means of antityphoid inoculation in other countries, and concluded his address with an account of the reaction caused by inoculation and a statement of the various classes of the population which should be inoculated

[During the discussion on the above paper figures taken from the Report of the Army Sanitary Committee on the Prevalence of Typhoid in the British Expeditionary Force during the present war were given by one of the speakers to the following effect The total cases numbered 212 of whom 22 died Of the 212 cases, *173, or 81 5 per cent, and all the deaths occurred amongst the uninoculated* Of the 39 inoculated cases 28 occurred amongst those who had received only one dose or who had been inoculated more than two years ago, whilst only 11 occurred amongst those regarded as fully protected These results, convincing as they are, would be still more so did we but know the actual numbers of the two classes, inoculated and uninoculated It would then be seen that the vast majority of the cases (81 5 per cent) occurred amongst the comparatively few uninoculated men]

Bibliography—1 Russell American Journal of the Medical Sciences vol. cxlvi 1913 p 817 2. Wright On the Association of Serous Hæmorrhages with Conditions of Defective Blood-coagulability The Lancet 1896 vol ii p 807 3 Brit Med Jour 1897 vol i p 807 4 Deutsche Medicinische Wochenschrift 1895 p. 735 5 The Lancet 1902, vol ii p 604 6 Leishman Harben Lecture, Journal of State Medicine September 1910 7 Dublin Journal of Medical Science July 1901 8. Reference in Deutsche Medicinische Wochenschrift 1901 No 17 9 The Lancet 1900 vol. ii 10 Scottish Medical and Surgical Journal 1901 11 The Lancet 1900 vol. i 12. Cayley Brit. Med Jour No 2079 13 Medical Society of London Oct 28th 1901 14 Brit Med Jour 1901 vol i 15 Crombie The Lancet 1902, vol i. p 1241 and 1902 vol ii p. [illegible] 16 Journal of the R.A.M.C., April 1914

Royal Institution —At a general meeting held on Feb 1st the Duke of Northumberland, K G, President in the chair the special thanks of the members were returned to Dr H D Rolleston for his generous gift in the name of Miss Davy (niece of Sir Humphry Davy) of a bust of Sir Humphry Davy The bust as reported in our last issue was presented to the institution on behalf of Dr Rolleston by Sir James Dewar on Jan 22nd

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EMBALMMENT OF SEPTIC WOUNDS

IN CASES OF GRAVE DISORGANISATION OF LIMBS CAUSED BY RIFLE OR SHRAPNEL BULLETS OR SHELL FRAGMENTS

By Dr. LOUIS MENCIÈRE

OF RHEIMS MÉDECIN-CHEF TO THE HOSPITAL OF THE COMPASSION AT COMPIÈGNE CONSULTING SURGEON FOR THE CENTRE.

(*Translated for* The Lancet)

Five months of war spent as an operating surgeon in our hospitals at the front and at the base and 20 years of surgery, for the most part that of the bones and joints, embolden me to offer my opinion as to the best way of setting about the treatment of extensive damage to the limbs I therefore bring forward this note on a proceeding and a formula which imply a radical change in the course of gunshot wounds, of which it is desirable that our comrades of the British army should be able to avail themselves

If it were possible on the battlefield (which it is not) the preservation of a limb would depend entirely upon the primary cleansing of the wound and on the first dressing I shall not easily forget how a good friend of mine, a *directeur d'ecole* at Rheims, while out shooting received the contents of both barrels of a fowling piece in his foot at point-blank range The bones were smashed, the torn foot was attached to the leg only by a strip of skin, &c, on its inner side, but the chief nerves and vessels escaped The wound was swabbed out immediately with some alcohol, such as is used for spirit lamps, and which I found in a farmhouse That evening the patient was taken to my hospital. A careful wound toilet was performed, all fragments of boot, gun wads, &c, being removed, and the tendons and some of the soft parts were sutured The foot was preserved in good shape and with good movement This result was entirely owing to the immediate treatment of a part which was literally smashed, and to the subsequent complete and thorough attention which could be given in specially favourable conditions

Are such conditions possible on the battlefield? No, absolutely No! Want of space, of skilled help, of facilities of all sorts, and the necessity of rapid evacuation are such that our wounded arrive at the ambulance or the field hospital in conditions very different from those of the case which I have mentioned Let us consider the state of things existing at the front, for there is one surgery of the front and another of the base, and when the time comes for discussion of these matters I would advise those who have been operating near the fighting line to discuss things among themselves, and those who have been operating in the rear only to speak of what they have seen Everyone would be the gainer

We are considering then the surgery of the front First of all, there is the question of seasons Wounds in winter are not quite the same as those in summer, for the germ of sepsis is capricious and needs favourable climatic conditions for its development When the ground is cold its virulence is diminished Thus, in the hospital in which I operate gas gangrene, which was truly appalling in its frequency and the rapidity of its course in the beginning of the campaign, has almost disappeared in this winter season But when gas gangrene appears I say without hesitation, however slight it seems, if only you feel that your antiseptics, 1887 persons The following year 16,073 people were done During 1911 the influx of volunteers still continued, and the authorities, fortified by the experience of 20,000 vaccinations without a mishap, felt justified in making it compulsory upon all that were to participate in the manœuvres on the Mexican frontier The order was issued in March, 1911 The results achieved fully justified the step taken Major Russell refers to the three divisional camps near the border, each camp being in full occupation for four months At the Galveston (Texas) Camp there were 4500 men, at San Diego (California) 3000, and at San Antonio 13,000 At Galveston, though there were 102 cases of typhoid amongst the civil population (with whom the soldiers mixed freely), *there were no cases amongst the troops* From San Diego only two cases were reported, one of which was doubtful Major Russell draws an interesting comparison between the experience at the San Antonio camp in 1911 and that at Jacksonville (Florida) in 1898 These two camps, each of approximately equal size, were maintained for the same length of time They were situated in the same latitude, and each had artesian well water of excellent quality Yet in 1898 there were over 2500 cases of typhoid at Jacksonville, with 248 deaths, on a strength of 10,759 men, while at San Antonio in 1911, on a strength of 12,801 men, there were only two cases with no fatality

Nor was the possibility of infection lacking, for during the duration of the camp there were 47 cases of typhoid with 19 deaths reported among the civil population, with whom the military freely mixed Every allowance being made for improved sanitary measures and the fact that the 1898 camp was in war time, whilst peace prevailed in 1911, the result must be looked upon as the signal evidence of the power of inoculation to save encamped troops from this disease

The next step in the American campaign against typhoid was the extension of the vaccination order to all recruits This was done on June 7th, 1911 Vaccination against small pox is carried out at the same time

"If the vaccinia be severe," says Major Russell, "the second dose of typhoid prophylactic is postponed a few days, but in no other way has it been found necessary to deviate from this routine of simultaneous vaccination against the two diseases The two vaccinations are completed by the time the man has been 20 days in the service Revaccination against both diseases is carried out, according to the present regulations at the beginning of each four year period of enlistment This is not because the immunity has by that time disappeared for its duration is not yet known It, no doubt, diminishes gradually, as is the case with that from small pox, yet in the service it is desirable to maintain the army in a maximum state of protection against infection at all times, and it does not seem advisable to omit vaccination until an outbreak of typhoid shows the disappearance of all immunity Small pox has been almost entirely suppressed, there were only five cases among the American troops in 1911 with no fatalities and typhoid has ceased to be the scourge of former times"

I have thought it well to quote this passage from Major Russell's paper in view of its applicability to the situation created in our armies by the present war I am clearly of opinion that only by making the inoculation compulsory shall we be able to get the best results from it, and I venture to express the hope that our military authorities, uninfluenced by the protests of 'faddists, may before long see their way to follow in the footsteps of the Americans

On Sept 30th, 1911, compulsory prophylaxis was extended to all persons in the American army under 45 The results are set forth in the tables which I reproduce —

TABLE VI —*Typhoid Fever (United States) among Enlisted American Troops (Russell)*

Year	Mean strength	Cases	Deaths	Cases per 1000	Deaths per 1000
1901 ..	26,515	250	17	9·43	0·64
1902	39 736	341	34	8 58	0·85
1903 ..	42,264	246	12	5 82	0·28
1904	43 940	247	12	5 62	0·27
1905	42 834	153	13	3 57	0 30
1906	40 621	230	12	5·66	0·29
1907 ...	35 132	124	7	3 53	0·19
1908	46 316	136	11	2·94	0·23
1909	57 124	173	16	3·03	0·28
1910	55 680	129	9	2 32	0·15
1911	55 240	44	6	0·80	0 11
1912	58 119	15	2	0 26	0·03

TABLE VII —*Showing the Number and Proportion of Typhoid Fever Cases contracted before Enlistment and among the Protected Officers and Enlisted Men (United States proper only) (Russell)*

Year	Total Cases	Total deaths	Infected prior to enlistment	Among the vaccinated	
				Cases	Deaths
1909	173	16	(?)	1	—
1910	129	9	(?)	[illegible]	—
1911 ..	44	6	(?)	7	—
1912	18	3	5	6	—

TABLE VIII —*Typhoid Fever, 1901 to 1912, for the Whole Army, Officers and Men, at Home and Abroad (Russell)*

Year	Mean strength	Cases		Deaths		Occurring among the vaccinated	
		Number	Ratio per 1000	Number	Rate per 1000	Cases	Deaths
1901	81 835	552	6 74	74	0 98	—	—
1902	80 778	565	6 74	69	0 85	—	—
1903	67 643	343	5 14	30	0·44	—	—
1904	67 311	293	4 35	23	0·33	—	—
1905	65 663	206	3 14	20	0·30	—	—
1906	65 159	373	5 72	18	0 27	—	—
1907	62,523	237	3 79	19	0 30	—	—
1908	74 692	239	3·20	2	0 31	—	—
1909	84 077	282	3 35	22	0·26	1	0
1910	81,434	193	2 3	14	0·17	7	0
1911	82,802	70	0 85	8	0·10	11	1
1912	88,478	27	0·31	4	0 04	2	0

From Table VI it will be gathered that the case rate per 1000, which was 3 03 in 1909 and 2 32 in 1910, fell in 1911, coincidently with the widespread adoption of vaccination in that year to 0·80 and in 1912, the first year it was *compulsory* to 0 26 Remarkable as are these results they are surpassed by those of 1913 for the first nine months of which figures were available The following table shows the monthly case incidence for the past six years

Rheims, this is what five months of war have taught me and what it is my duty to impart to others The following is the treatment recommended Successive washings of the wound with the three antiseptics after atypical operations when, as often, necessary Embalmment of the wound (permanent dressing) with gauze wicks soaked in the solution, the formula of which will be found below For three or four days wash again with the three antiseptics, after which, remembering the susceptibility of the cells, only wash with hydrogen peroxide 1 in 3 or 1 in 4, and again embalm Repeat the dressing daily It is a mistake to advise that the dressings should not be removed A wound which is closing up necessitates an intense phagocytosis, an irruption of white cells which clog the wound and which form a liquid which it is always best to evacuate in order to avoid resorption It is for this reason, too, that you must not close the wounds, but drain them freely with glass drains if, more lucky than I, you can get them. Embalmment of wounds thus, following the formula given further on, is a powerful antiseptic deadly to microbes but sparing the cells, calling forth the phagocytes and constituting a stimulant to the wound It is the means which has succeeded best with me after having tried nearly everything—formol, salicylic acid, tincture of iodine, and iodine vapour itself I do not decry tincture of iodine employed for a first dressing, but this method can not be repeated, for if it kills the microbes it also causes necrosis of cells and leaves a surface which is an excellent culture medium, but not a good defence This is my formula (A) —

Iodoform	10 grammes
Guaiacol	10 ,,
Eucalyptol	10 ,,
Balsam of Peru	30 ,,
Ether	100 ,,

—used to soak the wicks of gauze or to be injected into the sinuses with a Roux's syringe If you lack hydrogen peroxide, or if you are simply prodigal, you will do well with solution B for washing the wound before embalmment, which differs from A only in the quantity of ether, which is 1000 instead of the 100 of solution A In case of idiosyncrasy or intolerance after a few days' treatment (which is exceptional) omit the iodoform from the formula This is the "secret formula" with which my fellow workers have good naturedly twitted me, knowing well, however, that I impart it freely to everyone who will do me the honour to employ it This is the embalmment formula, not of the Pharaohs, but simply that of your Rheims colleague

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DONATIONS AND BEQUESTS —By the will of the late Mrs Mary Ann Haines Timmins, of Moseley, near Birmingham the testatrix left £1000 to the Birmingham University and a similar amount to the Birmingham District Nursing Society £100 to her medical attendant and £100 each to the Relief Fund of the Birmingham General Dispensary the Children's Hospital Birmingham the Birmingham and Midland Ear and Throat Hospital, the General Hospital Birmingham the Queen's Hospital Birmingham and the Birmingham and Midland Eye Hospital —By the will of the late Mr William Prenton, of Liverpool the Stanley Hospital, the Royal Infirmary the Cancer and Skin Hospital, the Eye and Ear Hospital the Northern Hospital, and the Southern Hospital of that city will receive £500 each —St Bartholomew's Hospital will benefit by £4500 and a quantity of Metropolitan Consolidated Stock under the will of the late Mr Ernest Baker From the Merchant Taylors Company the same hospital has received £500 being the second half of a grant made in 1913

THE PREVENTION OF FROST-BITES

BY SHERIDAN DELÉPINE, M B, C M EDIN, M.SC,
PROFESSOR OF PUBLIC HEALTH AND BACTERIOLOGY UNIVERSITY OF MANCHESTER, ETC.

FROM the accounts in the papers, both medical and lay, it is clear that our soldiers have suffered much from the effects of wet and cold since the beginning of the winter in Belgium and Northern France It has probably occurred to many people that if these men could have been provided with waterproof coverings for their feet and legs they would have been saved from much suffering and from various sources of incapacity It seemed, however, hopeless to suggest that they should be supplied with fishing boots or stockings, the cost of which is quite prohibitive For some time I have been engaged trying to ascertain whether there was in the market any waterproof material thin enough to be worn between stocking and boot and cheap enough to meet the financial requirements of the case Fabrics rendered waterproof with indiarubber seemed too costly, and I came to the conclusion that oxidised linseed oil was the most promising waterproofing agent for the purpose in view Oiled silk appeared to have the properties needed except elasticity, but experience showed me that a straight bag of silk, rendered waterproof with heated linseed oil mixed with a suitable proportion of a drier, was so thin and pliable that it could be easily drawn over a *thick* stocking, and protected against wear and tear by a second stocking drawn over it after it had been adapted to the shape of the foot and leg by simply twisting it Owing to the thinness, softness, and pliability of the material the foot covered with it can be introduced into the boot without difficulty, and it is possible to walk for several hours with the feet protected in this way without the oil silk bag being felt at all At first I experienced some delays in obtaining a completely waterproof oil silk bag of suitable shape owing to the difficulty of making strong and waterproof seams I had just obtained satisfactory results at a very small cost (less than 2s for two leg bags) when I read in this day's issue of the *Times* (Jan 26th, p 7) an article on "Wader Stockings," which revealed to me the fact that Mr F B Behr had had the same idea, and that a serviceable article, in all probability, more elegant and better made than my bag, was already available and had actually been adopted by the army

As the object which I had in view had thus been fulfilled there would have been no purpose in my writing about this matter had I not carried out some experiments which indicated to what an extent thin waterproof bags can protect the feet and legs against the effects of immersion in ice cold water These experiments were conducted as follows The bulbs of two bomb recording thermometers were fixed to the skin of the foot and ankle immediately behind and below the external malleolus The bulb was firmly placed against the skin and covered externally with a layer of indiarubber plaster to prevent the free access of air or water About one third of the surface of each bulb was in close contact with the skin To maintain contact the ankle was bandaged One foot was then covered with two thin woollen socks, the other foot, after being covered in the same way, was inserted into one of my oil silk bags To permit free and *equal* access of including hydrogen peroxide, are becoming ineffective, amputate—amputate without hesitation, it is the sole remedy that will save the patient's life Select the site of amputation, do not mutilate too much, for even in tissues already indurated (*marbre*), after readjustment of the stump if needed, you will succeed Embalm the stump, as will be described later, not with the view of preventing gangrene, but to prevent ordinary septicæmia, which lies in wait for the stump and would lead to its dissolution In other cases, in which it is not a question of gas gangrene but of an ill defined, subacute septicæmia, if after embalming the general condition remains bad, if the complexion is earthy, the pulse small and rapid, the respiration—above all, the respiration—rapid and difficult, the temperature raised, if, in one word, the patient is threatened with death from septicæmia, amputate again

Note that I give this advice, although by profession I am in the habit of preaching conservatism *à outrance* in the ordinary circumstances of surgery, even when severely crushed limbs are in question With these reservations it does not follow that conservative surgery must be—as it is with our adversaries—considered a Utopia Nor does it follow, as we seem to have thought at first, that it is an easy thing and simple and regular in practice

For 20 years I have seen wounds of the limbs of all kinds and from all causes, but never have I seen wounds take the course that they do in the run down patients living under the present conditions I consider that a few aseptic or antiseptic washings and dressings will not suffice, although they may be enough in other circumstances to preserve the limb At the outset one thing is gained the knowledge that it is absolutely necessary that asepsis shall give place to antisepsis—to antisepsis *à outrance* Let us do homage to the immortal Lister and to our great Championnière! I yet remember what the latter told me at the Congress in London in 1913 "In 1870 I took a great deal of trouble to get a barrel of carbolic acid placed in an ambulance wagon I saw the barrel again after the campaign Its contents were intact!" Fortunately, it is no more thus, and we know that surgeons used to abdominal operations are now abandoning the prejudices born of the necessities of their usual work—for the peritoneum is not tolerant of antiseptics—to return to antiseptics when it is a question of the surgery of the limbs Bone, joint, and muscle, and even tendon surgery is not possible without antiseptics—how many tendon-transfers, arthrotomies, or resections have been done in vain because the surgeon has been satisfied with cleanliness instead of antisepsis I spent a month in a hospital in the rear, where, for reasons not necessary to state, antisepsis was nearly impossible—a hospital in course of formation operators not very enthusiastic, difficulties of supply, asepsis almost exclusively employed in operations and dressings, at most a few washings with permanganate The results were deplorable, heartrending, upsetting all my recollections and all that I knew and had seen of the surgery of the limbs

When I was called to the head of a surgical centre in a unit where I could dispose of powerful antiseptics I found once more the conservative surgery to which I was accustomed Except for the cases of gas gangrene and acute septicæmia I was able as in time of peace to preserve a smashed limb, an elbow, a humerus broken up in the midst of an intricate and septic wound, or a fracture of the thigh complicated by comminution and septic wounds In a word, without trying to be conservative always, I am able to preserve the limb often or almost always That, as it seems to me is in the circumstances something appreciable, which everyone can obtain if he likes, if he will believe it

Antisepsis, then, dominates all this war surgery I do not believe that it can be applied on the battlefield Later, when the subject is discussed I shall demand many motor cars, abundant means of transport, not to move the wounded far into the interior, where necessarily they would arrive in a miserable condition, but to take them 20 or 25 miles from the firing line, where in well established units one could make as good a job of it as we do here

The wounded man arrives, let us say, with a septic, intricate wound, with the bone splintered The treatment must be economical of tissues, atypical operation, removal of loose splinters and of sharp edges likely to wound vessels, cleansing of the wound, above all multiple incisions well placed, drainage of the wound, successive lavage with the three antiseptics—sublimate 1 in 1000, carbolic acid 1 in 40, and peroxide of hydrogen 1 in 3 Why these three antiseptics? Because all germs, spores, and microbes, whether anaerobic or aerobic, are not equally sensitive to the three For the wound holds all sorts of undesirables, and one must give it what it wants for each *Each of the three* antiseptics is particularly adapted to a peculiar microbial variety Successive lavage of the wound with the three antiseptics, such is the first antiseptic dressing, which acts not only antiseptically, but in a mechanical manner in drawing out pus and all sorts of débris

There remains the permanent dressing, in our practice it holds a place apart, because I do not hesitate to state that it changes the aspect and the course of wounds, and that it is the best aid to conservative surgery that I have been able to find after trying everything Iodoform, dear to the old fashioned, associated with guaiacol, eucalyptus and balsam of Peru, forms an application which changes the course of healing of the wounds, often of the most septic, and gives unlooked for results Hospital gangrene, atonic sanious wounds disappear to give place to a wound which is bright carmine red, with fleshy, well nourished granulations, a wound no longer septic, but accompanied by healing which has sometimes seemed to me extremely rapid Such was the case of a rifleman, who had a hideous infected wound of the calf with all the muscles hanging as if detached by a rake I showed this patient at an inspection in the state described and I showed him again three weeks later with a calf of normal form and almost completely cicatrised A Zouave, whose forearm was saved, when amputation had seemed at first the only possible course is an instance in point, another Zouave who was brought in with a deep intricate shrapnel wound of the shoulder, the bone smashed and draining badly, occurs to my mind, his wound changing appearance fast and becoming covered with healthy red granulations a patient whom I could evacuate quickly These wounds, had they been in my other unit, where antisepsis was practised badly or not at all would not have healed and after operation would have remained unhealed

This is what is beyond my personal experience acquired at my clinique of orthopædic surgery a that there would be a deep cavity, one less likely to heal than its predecessor, and with the sphincter ani destroyed, an undesirable condition of things for the patient It was decided, therefore, to try radium Dr E Napier Burnett, who had had experience of the use of radium, saw the patient with me, and although the growth was involving both passages, and presented therefore not an encouraging condition of things, we thought there was just the chance that radium might do good Accordingly, we obtained from the Radium Institute, London, a tube of radium emanations Covering it with gauze, the tube was gently inserted into the vagina and left there for 24 hours On removing the tube the mucous membrane of the vagina was seen to be reddened, and on the following day it was slightly inflamed A mild muco purulent discharge followed, but there was never any hæmorrhage beyond a few drops on the dressing on two or three occasions Within eight days the inflammation had subsided There was never any unpleasant odour attendant upon the discharge nor did sloughing occur By the end of six weeks the growth had become distinctly smaller and more clearly defined A breach in the mucous membrane which had occurred in the active stage of the inflammation, and from which pus had for a period exuded, gradually closed, the hard mass continued to shrink, and four months after the application of the radium it had entirely disappeared, leaving a healthy vaginal mucous membrane, tissues underneath soft and healthy to the feel, and apparently a normal septum between vagina and rectum No trace of the growth now remains The patient has put on several pounds in weight, looks many years younger, and the bladder and rectal functions are normal She is leading an active and vigorous life and is looking the picture of health

The application of radium in this apparently hopeless case of recurrent cancer of the vulva more than exceeded the expectations of Dr Burnett and myself

Newcastle-on Tyne

NOTE ON A SUCCESSFUL METHOD FOR THE EXTERMINATION OF VERMIN INFESTING TROOPS

By S MONCKTON COPEMAN M D CANTAB,
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LIEUTENANT-COLONEL, R.A.M.C. (T) DIVISIONAL SANITARY OFFICER
FIRST LONDON DIVISION (T.F)

WITHIN about a couple of months of the troops of the 1st London Division coming into camp under canvas at Crowborough I learned through the medical officers in charge of some of the battalions that a certain number of the men under their charge were experiencing the unpleasant effects incidental to infestation by lice Steps were at once taken to deal with the matter, but our efforts were at first somewhat handicapped owing to the fact that not only at that time had the men not been supplied with a second service suit, but that a number of those affected were found not to be in possession of a second shirt or change of underclothing Moreover, it was not possible to obtain assistance from the rural sanitary authority of the area in the work of disinfection, owing to their not possessing any apparatus for the purpose of dealing with infected clothing and blankets

As a matter of first instance all the battalion medical officers were called together for the purpose of informing them as to the various aspects of the question, including the life history of the body louse, *Pediculus vestimenti*, an excellent description of which, by Professor A E Shipley, was published in the *British Medical Journal* for Sept 19th, 1914 At the same time commanding officers were communicated with as to the necessity for ensuring that all the men under their command should be provided with at least a second shirt, and if possible a complete change of underclothing Further difficulty was experienced in providing baths for the men, there being no means at hand of obtaining hot water in large quantities This was eventually obviated by the purchase of several large second hand galvanised iron tanks, which were set up near the ablution place in each camp These tanks were supported over a central trench on bricks laid in puddled clay One end of the trench, which extended beyond the tank at either extremity, was fitted with a chimney built up of old bricks, drain pipes, and puddled clay, while the other end was used as a stokehole On lighting a fire in the trench it was found that even where no cover was provided for the tank the contained water, to the amount of 200 gallons or more, could usually be brought to the boiling point in about an hour Bathing was carried out in an adjoining marquee, or in some instances in an empty house Hot water from the tanks was carried in buckets and poured into galvanised iron wash tubs in which the men could stand. Recently, however, the troops have been moved into huts, where ablution rooms and bath rooms supplied with hot and cold water are provided

The further details of treatment are briefly indicated in the following copy of a memorandum which was distributed to all the medical officers of the Division —

To the Medical Officer

TREATMENT FOR DESTRUCTION OF VERMIN

Arrangements should be made for the bathing of affected individuals and other inmates of infected tents After drying themselves, men to lather their bodies with cresol-soap solution,[1] especially over hairy parts, and to *allow the lather to dry on*

Shirts to be washed in cresol soap solution made with boiling water

Tunics and trousers to be turned inside out and rubbed with same lather, especially along the seams *Lather to be allowed to dry on the garment*

The materials can be obtained from the A.S C on indent authorised by A.D M S in the form attached

(*Form attached*)

To the Commanding Officer,
Army Service Corps,
1st London Division, T F

The following articles are required for the purpose of treatment for vermin Please supply

Jeyes Fluid
Soft Soap

Signed
Medical Officer

Address
Date

Infected blankets were at first treated by soaking them in cresol soap solution, after which they were sent to a neighbouring laundry to be washed, a cold water to the stockings covering the two feet, boots were not put on, but, as I have previously explained, they could have been worn comfortably After an interval the temperature of the skin under those conditions was recorded The two feet were then plunged into 9 to 10 inches of cold water without disturbance of the recording apparatus Ice was then gradually added to the water until the temperature was reduced to + 6° C in one experiment and − 1° in another experiment Some salt was also added in this case In a third experiment only the protected foot was placed in the water to which ice and salt had been added until the temperature had been reduced to from − 2° C to − 4° The results obtained may be summarised as follows —

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[1] Water ... 10 gallons
Jeyes fluid ... 1½ ounces
Soft soap ... 1½ pounds

Experiment 1, with Oiled Bag (some water penetrated through a pinhole)

Stages	Intervals of time	Indicated temperature in °C at the end of each interval. Foot protected	Foot unprotected	Water	Air
A. Thermometer fixed to skin	20 min	23°	24°	—	12°
B Oiled bag placed over one foot	20	26°+	26°	—	
C Both feet placed in water	7	26°	26°	20°	,
D Plain ice added to the water	45	24°	12°	6°	,

Total duration of experiment 92 minutes

Experiment 2, with Cloth Bag water proofed with Indiarubber (some water accidentally penetrated into the bag)

Stages	Intervals of time	Foot protected	Foot unprotected	Water	Air
A. Thermometer fixed to the skin exactly as in the previous experiment Feet warm	30 min.	26°	26°	—	11°
B Mackintosh bag placed over one foot	7 ,,	26°+	26°	—	
C Both feet placed in water	15 ,	26°+	22°	20°	,
D Ice and salt added to water	30	20°	7°	° to −1°	,

Total duration of experiment, 82 minutes

Experiment 3, with Foot Placed in Oiled silk Bag

Stages	Intervals of time	Foot protected	Foot unprotected	Water	Air
Foot feeling cold before being placed in bag	15 min	24°	—	—	12°
Foot placed in water	5	24½°	—	10°	
Ice and salt added to water Foot motionless	5	24°	—	4°	11°
Foot moving within bag ..	7	24½°	—	3°	
More ice and salt added	7 ,	24°	—	−2°	
,	30	23° to 24½°	—	−2° to −4°	

Total duration of experiment 69 minutes

Experiment 1 —When the feet were removed from the iced water the protected foot felt a little colder than normal but quite comfortable The unprotected foot felt numb The skin was very pale and felt very cold to the touch movements were difficult

Experiment 2 —On removal from the iced water the protected foot felt cold but quite comfortable The unprotected foot felt very numb movements of toes were very difficult and accompanied by cramps

Experiment [illegible] —When the foot was removed it felt quite comfortable

During the experiments the protected foot felt slightly cold when motionless, but not uncomfortable Movements of toes were generally followed by a slight rise of the skin temperature

From these short, incomplete, and imperfect experiments which I conducted upon myself it is clear that the wader stocking or the waterproof bags, such as I have described, may reasonably be expected to have a protecting influence and that their use will in all probability be attended with a diminution in the frequency of frost bites The same waterproof material may if thought desirable be also used for protecting other parts of the body

Manchester January [illegible]

RADIUM AND ITS EFFICACY IN CANCER OF THE VULVA

By Sir THOMAS OLIVER M D Glasg , F R.C P Lond ,
PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE
UNIVERSITY OF DURHAM COLLEGE OF MEDICINE,
NEWCASTLE UPON TYNE.

Radium is still on its trial For this reason any case in which it has been tried and has been of signal service ought to be published It is in inoperable cases of malignant disease where removal of the growth by the knife is impossible or if attempted is likely to leave the patient worse than before the operation, that the application of radium is worthy of the attention of members of the medical profession

A widow, aged 62, mother of a grown up family, consulted me nearly a year ago on account of a hard nodule in the lower part of the left side of the vulva and extending upwards underneath the mucous membrane of the vagina The growth was hard and circumscribed and was about the size of a walnut It had come without pain, it had been in existence for a few months and had gradually reached the size mentioned The glands in the groin were not affected There was at this time no vaginal discharge, neither was there any bladder or rectal trouble The patient was losing flesh and was becoming anæmic Regarding the growth as of a malignant nature and calling for extirpation, the patient was seen in consultation by a surgeon, who, taking the same view of the character of the tumour as myself, recommended its removal by the knife In due course this was done, the surgeon cutting well wide of the growth and deeply into the tissues The cavity was packed with gauze and the opportunity given for it to heal by granulation Microscopical examination of the growth showed it to be carcinoma

Although the growth was successfully removed, the wound never healed properly It kept discharging pus, notwithstanding frequent surgical dressing The patient left the private hospital five weeks after the operation, but although the cavity had become considerably occluded there remained an open track from which thin pus kept oozing, and as the weeks passed a small ill defined area of hardness could be felt in the depth of the tissues at the site of the operation At first I hoped that this might be cicatricial tissue of a purely reactionary and inflammatory nature As time proceeded the area of ill defined hardness became larger until it reached the size of the original growth, with a line of dense resisting tissue extending up under the mucous membrane of the vagina and also backwards and downwards invading the septum between the vagina and rectum The case was one of recurrent malignant disease and calling for treatment, since the patient was losing control of the bladder and defæcation had become painful and difficult Pain was now a feature of the case The patient's nights were sleepless, she was losing flesh and colour The glands in the groin remained unaffected The other internal organs of the body were healthy

A surgical consultation was again held and an operation recommended but this seemed likely to be severe Since the growth had extended into the external coat of the rectum it meant not only removal of the growth in the vulva and vagina but also of all that lay between the lower part of the vagina and rectum It meant, too, morphine cream containing up to 2 grains to the inch In preparing bases for creams containing crystalloids the viscosity of the cream should be tested after the crystalloid has been added and before the mass is put in the tube, as the addition of even small quantities of a crystalloid considerably alters the viscosity of the cream For instance, a cream which will give in a collapsible tube a perfectly easily measurable semi solid jet will not do so after the addition of hydrochlorate of morphine to it, in the proportion of 1 grain of the salt to 20 grains—i e , 1 linear inch of jet

The application to the patient of these medical creams is so simple as to need no description The inch of jet can be severed from the nozzle of the tube against his teeth, or if he is more or less unconscious it can be dabbed off on the back of his tongue The cap can then be replaced on the tube The bases which I have up to the present used have been kindly prepared by Messrs Roberts, of Bond street, who have shown much ingenuity and perseverance in the matter, and to whom my best thanks are due

Harley-street W

THE TREATMENT OF PERSISTENT DIPHTHERIA INFECTION BY MEANS OF DIPHTHERIA ENDOTOXIN

BY R TANNER HEWLETT, M D LOND F R C P LOND ,
PROFESSOR OF BACTERIOLOGY IN THE UNIVERSITY OF LONDON

IN a former paper[1] Dr A T Nankivell and I detailed results obtained in the "treatment" of persistent diphtheria infections following an attack of diphtheria by means of one or more injections of diphtheria endotoxin prepared by the Macfadyen method Subsequently I recorded another case successfully treated by the method[2] Since then I have treated five more cases One of these was a young medical man a hospital resident, which was not successful, and I have lost sight of him The four remaining cases cleared up after the use of endotoxin Three of these were under the care of Mr A A McAnally, of Eastry, Kent, to whom I am indebted for the notes The following are the details —

Ethel S (11 years), admitted on July 26th, 1914, Edith S (9 years) admitted on July 27th, and Charles S (7 years) admitted on August 6th for mild attacks of diphtheria Between August 10th and Sept. 2nd eight bacteriological examinations showed persistence of diphtheria bacilli A dose of 0 5 c.c of endotoxin was given to Ethel and to Edith on Sept 3rd, but the result was inconclusive six examinations between that date and Sept 18th being sometimes positive, sometimes negative. This endotoxin had been in ampoules for several months and had precipitated somewhat and was probably inert Some more of the same endotoxin which had been kept in bulk was therefore freshly tubed and sent for use A dose of 0 5 c c of this was administered to all three children on Sept 19th, and Charles showed no bacilli on Sept 21st 26th, and Oct 3rd, and was discharged. A second dose of 1 0 c c of endotoxin was given to all three children on Sept. 26th and a third dose of 1 5 c c to Ethel and to Edith on Oct. 4th The bacteriological examinations gave the following results —

	Oct 3rd	6th	8th	12th	15th.	19th.	21st.	24th	26th
Ethel S	+	+	+	+	—	+	—	—	—
Edith S	—	—	+	—	+	—	—	—	—

The last case was that of a young medical man a hospital resident who developed a mild attack of diphtheria on Nov 5th, 1914, was treated with antitoxin and recovered fairly rapidly but in spite of local treatment and change of air bacteriological examinations showed persistence of diphtheria bacilli on Dec 2nd and 23rd, and on Jan 4th, 1915 On this day a dose of 0 5 c c. of endotoxin was given, and bacteriological examinations on Jan 7th 11th, and 17th showed absence of bacilli As a precautionary measure a second dose of 1 0 c.c of endotoxin was given on Jan 11th

Up to date 24 cases of persistent diphtheria infection have been treated with endotoxin Of these cases, in 17 the bacilli disappeared within a reasonable time after the use of the endotoxin, in one (Ethel S) the bacilli did not disappear until 17 days after the last dose of endotoxin, and in 6 the treatment was unsuccessful. As regards the last named, it should be noted that some of them were those first treated, and the doses were smaller than I now employ The treatment I now recommend is to give doses of 0 5 c c , 1 0 c c , and (if required) 1 5 c c at intervals of about seven days In no case has any untoward effect been noticed The endotoxin is injected into the muscle of the upper arm or back, and gives rise to some pain, tenderness, and swelling, lasting a day or two, at the site of injection, and occasionally to some malaise, rash, and rise of temperature Thus in 75 per cent of the cases the use of the endotoxin has been followed by disappearance of diphtheria bacilli, and I think the results are such as to warrant an extended trial of the endotoxin in the treatment of these troublesome cases of persistent diphtheria infection

Chandos-street, W C

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[1] The Treatment of Diphtheria Infection by Means of Diphtheria Endotoxin THE LANCET July 27th 1912, p. 143.

[2] THE LANCET June 21st 1913 p 1522.

AN X RAY DIRECTOR FOR THE REMOVAL OF FOREIGN BODIES IN THE TISSUES[1]

BY W IRONSIDE BRUCE, M D ABERD , D P H.,
PHYSICIAN TO THE X RAY AND ELECTRICAL DEPARTMENTS OF CHARING CROSS HOSPITAL, ETC

IT is possible by means of X ray to supply information as to the exact position of any foreign body imbedded in the tissues—a fact which was first demonstrated by Sir James Mackenzie Davidson, his method being generally admitted to be at the present time most reliable and accurate Since then other methods have been devised which make for ease of application with accuracy sufficient to deal with foreign bodies of some size in the trunk and limbs The real difficulty, however, rests in the application of such measurements by the surgeon at the time of operation, and for this reason I wish to draw attention to a piece of apparatus which, if it is at all practical to employ, I believe will lead to the successful removal of foreign bodies from any of the tissues, provided such are accessible from a surgical point of view The principle involved was made use of some seven years ago, and I produced at that time an apparatus, which (though quite successful) was never developed because it was so complicated and difficult to apply, moreover, the question of foreign bodies at that time was not urgent

The presence of foreign bodies in the tissues is now a matter of the greatest importance, and from what I have seen and heard about their removal there would be no objection to the employment of a more or less elaborate apparatus even if costly, provided that such were a decided advantage to the small contract rate having previously been arranged. In the first week in November, however, a portable Thresh's steam disinfecting apparatus was supplied to the division, through the second army, since when no difficulty has been experienced in the disinfection both of clothing and blankets

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[1] A paper read before the Medical Society of London on Jan 25th 1915

Appended to the article on lice by Professor Shipley, referred to above, was a series of suggestions drawn up jointly by Professor Nuttall and himself, in which the use of paraffin or petrol was advocated for the extermination of lice Doubtless these substances would be perfectly efficacious for the desired purpose, but their use was not attempted owing to the possible danger, not unlikely to be incidental to the use of substances of so inflammable a nature by large numbers of men. As a matter of fact, the simple and inexpensive method which has been employed by us over a period of several months has proved so successful that no necessity has arisen for a trial of other means of treatment It may perhaps be mentioned that a number of copies of our memorandum have been distributed in reply to requests from medical officers of health and medical officers in charge of troops And in view of the fact that trouble due to the prevalence of lice has been experienced in other camps in various parts of the kingdom, the medical officer to the Local Government Board, and other members of the Army Sanitary Committee, suggested that a useful purpose might be served by the publication of a method which has been found so efficacious under service conditions

A SIMPLE METHOD OF ADMINISTERING DRUGS UNDER WAR AND OTHER STRENUOUS CONDITIONS

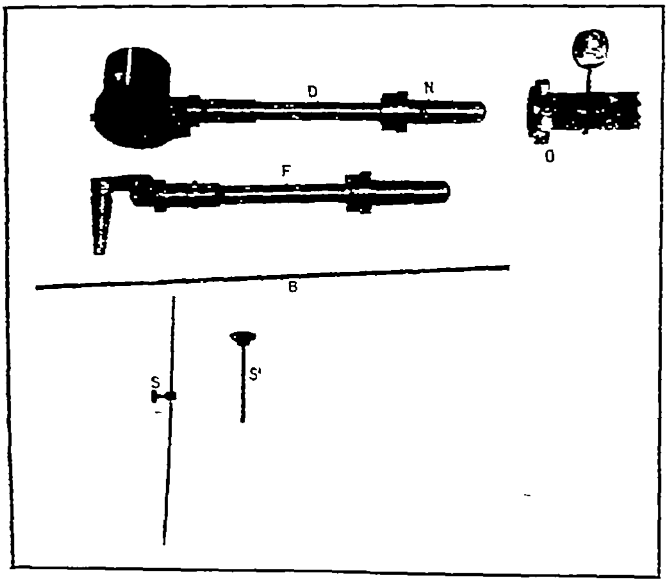
By F W TUNNICLIFFE, M D LOND ,
OUT PATIENT PHYSICIAN KING'S COLLEGE HOSPITAL LECTURER IN THERAPEUTICS AND PRACTICAL MEDICINE IN KING'S COLLEGE HOSPITAL MEDICAL SCHOOL.

A FEW days ago I was asked to design a medicine kit to be used by an officer in the trenches for the treatment of ailments amongst his men It appears that, generally speaking, the services of a medical man are not available, or at any rate may not be available, under the above conditions The ailments occurring amongst the men during their occupation of the trenches, which I understand is now about four days can perhaps, with one exception, be aptly included under the general term minor medicine It was put to me that appropriate medicinal treatment might often prevent a man going on the sick list, or at any rate mitigate the discomfort suffered by him, if, as is invariably the case, he made up his mind to endure much rather than report himself sick. It is not my intention in this note to deal with trench maladies, although a communication upon this subject might be most interesting and helpful The point, however, which is to be insisted upon is that it is most important to have at hand in the trenches a means of relieving urgent pain The seriously wounded have often to remain a considerable time in the trenches before they can be removed to the rear, and with the hours of darkness getting shorter as the season advances this time will certainly be prolonged During this period they suffer most distressing pain, which, both from the restlessness caused by it and its general effect upon them, is likely to make them less capable of enduring the transit and treatment to which they must subsequently be submitted, it is also a source of extreme distress if not of actual demoralisation to their comrades For such cases an active anodyne in massive doses is urgently indicated and the form in which it is available is not a matter of indifference

The conditions obtaining in the trenches render hypodermic injections or rectal injections practically impossible The absence of water makes solution of any solid preparation and subsequent volumetric measurement difficult, in fact, I am told also practically impossible Tabloids require a manipulation on the part of the giver and a capacity for swallowing on the part of the patient which cannot always be relied upon as obtaining The best method of which I know at present is the inclusion of the drug to be given in a gelatine or gum stick or in a thin gelatine sheet In the first case a certain length of the stick is cut off with a penknife and put in the patient's mouth, in the second, an area of sheet is cut off with scissors and also placed in the patient's mouth, length of stick and area of sheet corresponding to a given dose Muddy hands and indiscriminate knives render even such simple manipulations as these neither as easy nor as clean as they sound Almost the same objection applies to perles, capsules, palatinoids, wafers, &c Further, since some of our troops are fighting in snowstorms in Flanders, and others under a practically tropical sun in Egypt and elsewhere, the melting point of the drug base must be considered

The method which I have employed, and which I think, is capable of wide application, is to prescribe the drug to be given in a semi solid aromatic base and to enclose the mass in a collapsible tube such as is generally used to contain remedies for external application. The base must be sufficiently viscid to enable a continuous semi solid jet of substance to be exuded from the nozzle by pressure at the bottom of the tube By varying the composition of the base in glycerine, bismuth base, agar agar, &c , all climatic conditions can be allowed for There are many kinds of collapsible tubes on the market, those are specially to be recommended in which the screw cap is permanently attached to the neck of the tube, in these the cap cannot be lost With a given base the weight of a given length of jet is practically constant, and by this means an accurate dosage can be obtained The medicinal creams which I have had made so far all have the same dose—viz., 1 linear inch of the exuded jet An inch can easily be measured against the last joint of the thumb, and indeed can practically always be accurately guessed I made several experiments with different kinds of tubes and was at first greatly tempted to make use of those tubes of which there are many on the market, with keys at the bottom, I thought that accurate dosage could be obtained by turning the key through definite arcs This method is, however, quite fallacious owing to the inconstant calibre of the tubes throughout their length As a constituent of the base I prescribe some aromatic substance which promotes salivation and thus reflexly stimulates swallowing So far as I am aware any drug, crystalloid or otherwise, or any first dressing of wounds, except hydrogen peroxide, can be administered in this form and in adequate concentration I have prepared, for instance, a chlorodyne cream containing up to 30 minims to the inch and a

FIG 3



Illustrates the fluorescent screen D showing the cross wires to indicate the screen centre a point corresponding exactly to the centre of the guide which is shown marked F The special joint N is constructed so that it is impossible that any change of position occurs both the screen and guide fitting tightly the same socket and locked in position by the pin P There is a brass collar O which is screwed to the arm and is provided for the purpose of easy removal of the screen and guide from the tight fitting joint The blunt graduated director is marked B and the sharp one with its sheath is shown at S S

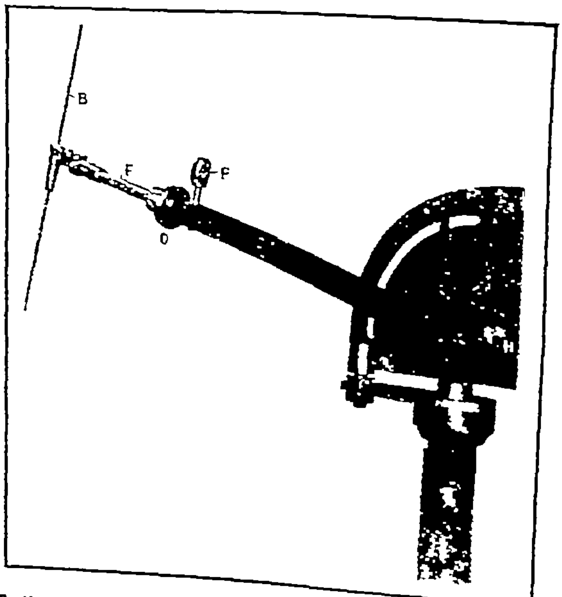
brought in more or less close relationship with the subject lying on the surface of the couch (sliding joint in position shown in Fig 1E) Since the box and X ray tube are freely movable, and the upright and cross arm are firmly attached to it, the screen will maintain the same relationship to the X ray tube in whatever position it is placed An X ray tube can be so arranged that only the actual central radiation is used, and under these circumstances the shadow of a foreign body as seen in the screen indicates the exact point in space below which that body lies In other words, if the X ray tube maintains always the same relationship with the centre of the screen, the central radiation only being used, the shadow of the foreign body seen in the centre of the screen indicates that the body must lie in a line drawn between the tube and the screen centre In this couch these conditions are easily complied with, for the central radiation is adjusted to correspond with the screen centre, and thus if the shadow of the foreign body is brought central in the screen it mus lie below the screen centre in a line between the X ray tube and that point

The tube box is capable of being firmly fixed in any determined position to the couch by simply pressing a lever, and consequently during observation when the shadow of the foreign body has been arranged in the centre of the screen, the whole—box, tube, upright, and cross arm—can be firmly fixed to the couch by making use of this lever When this is accomplished the advantage gained is that we have in the screen centre a fixed point below which the foreign body lies The screen is detachable from the cross arm (at the specially arranged joint seen in Fig 3N) and in its place can be substituted a sterilisable metal guide carrying a director (seen in Fig 3F), the point of which is arranged to correspond exactly with the centre of the screen, which has been removed The guide permits of movement of the director, only in the direction corresponding to the central radiation—that is, in the line between the screen centre and the X ray tube, which is, in fact, in the vertical plane If the director running through the guide is advanced through the tissues its point must impinge against the foreign body, for owing to the whole construction being rigid any deflection from the proper plane is impossible The advantage gained by this procedure is evident, for the surgeon is provided with a director which will unfailingly lead down to the foreign body, permitting him to deal as he pleases with the intervening tissues

The guide and director are sterilisable, so can be safely handled during the operation A joint is provided in the cross arm to allow of the director being lifted out of the way and returned in exactly the same position when wanted (Fig 4, cross arm lifted out of the way Fig 2, returned in identical position—joint at H) The X ray observer from the moment the observation is made hands over the whole apparatus to the surgeon, and takes away all his part of the construction, so that no unsterilised part is brought near the area of operation

Two forms of director are provided, one blunt and graduated (Fig 3B) so that the depth discovered by previous localisation can be made use of, the other sharp in the form of a needle (Fig 3S) to be introduced in suitable cases into the tissues until the point comes in contact with the foreign body When using the sharp director a telephone can be attached to announce the contact of the point of director with foreign bodies The blunt director is provided for use in cases in which it is not advisable to introduce the sharp instrument For example, in

FIG 4

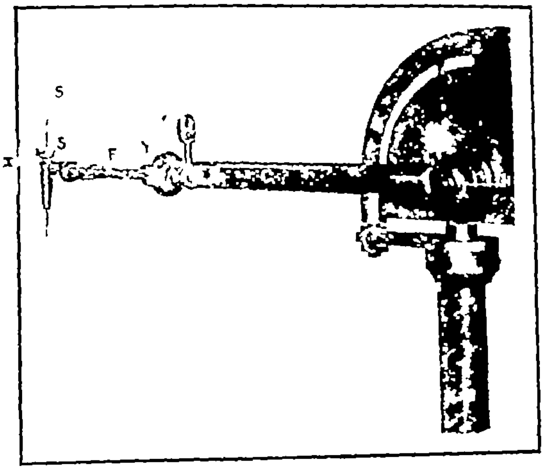


To illustrate the cross arm raised out of the way at the joint H, the guide F and blunt director B being attached The arm can be replaced as shown in Fig 2 without any change in the position of the guide or director surgeon Accordingly the original design has been altered, elaboration remains, but the actual application is simplicity itself

On proceeding to deal with a foreign body in the tissues, which has been localised previously by one or other of the methods devised, the surgeon is confronted by the following difficulties The marks on the skin are useless once the superficial incision is made, the knowledge of the depth at which the foreign body lies give him little help, since the tissues vary much in thickness, and, lastly, the foreign body, which is said to lie directly below a certain point indicated on the skin—a statement correct only so far as one plane is concerned—is missed, for it is often impossible for anatomical and other reasons to maintain the plane indicated during operation, some deviation being made and the direction lost

To deal with these difficulties the apparatus which I am about to describe has been constructed The first principle involved is the necessity that the position of the limb or trunk at the time of operation should be the same as that at the time of observation This can only be accomplished satisfactorily by a combination of X ray couch and operating table, as illustrated in Fig 1, so that when under the anæsthetic the subject is placed in the position previously selected by the operator, and, having been firmly fixed in this position by means of sandbags and straps, the X ray observation is made and the operation immediately proceeded with

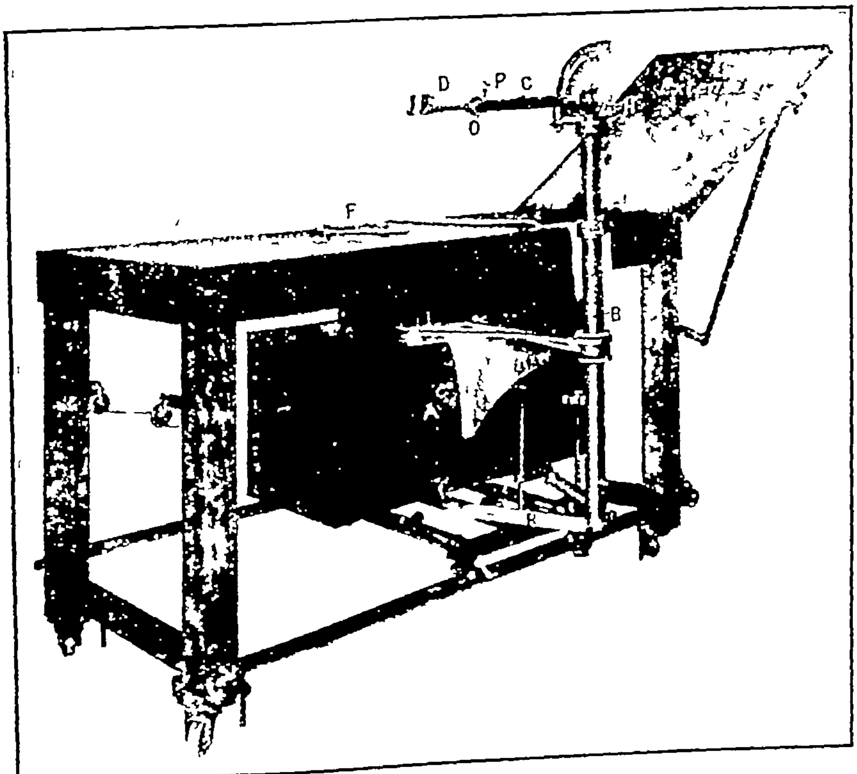
FIG 2



Illustrates the cross arm C attached to the upright B showing the sterilised guide F and sharp director S attached The cross arm C can be raised by movement permissible at the joint H which is constructed so that the arm is returnable into exactly the same position without difficulty From the point X to Y the arm is sterile when in use by the surgeon

Only one observation should be necessary, but it might happen that accidental movement of the subject occurs, in which case there is no reason why further observations should not be made at any stage of the operation, since only a few minutes are necessary for such a proceeding The use of the fluorescent screen is essential, so arrangements have been made to enable this to be done in daylight, or bright artificial light, the X ray observer wearing dark glasses for some time beforehand to accustom the eyes to darkness, and an effective fluoroscope being attached Secondly, the provision of a guide for the operator other than a mark on the skin It is possible to arrange in connexion with the couch a vertical guide which corresponds exactly with the direction of the radiation To accomplish this, below the couch in a box (Fig 1A), which can be moved in any direction freely and easily, we have placed the X ray tube, and springing from this box is a strong and rigid upright (Fig 1B), to which is attached a cross arm (Fig 1C) projecting over the couch, all these parts being firmly fixed one to the other, and moving as one piece At the extremity of the cross arm is attached a small circular fluorescent screen (Fig 1D) there being provision for lowering or raising the cross arm so that this screen may be

FIG 1



Shows the construction of the couch and operating table an extension in the form of a flap (attached to one end) allowing for the accommodation of the patient in dealing with the lower limbs The couch is provided with a wooden top which can be kept clean and will not absorb fluid The box containing the X ray tube is marked A and springing from it supported by the right brackets marked B B is the upright marked B, to which is attached the cross arm marked C All these parts are firmly fixed one to the other and the box with its attachments upright and cross arm can be moved freely and easily along and across the whole length and breadth of the couch The small circular fluorescent screen attached to the cross arm is seen in the position marked D There is a sliding joint marked P provided (in the upright) for lowering and raising the screen so that it can be brought close to the surface of the body On the couch is seen lying a strap for securing the subject and the sterilisable director and guide F

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF PSYCHIATRY

The Application of Physiology to the Study of Mind in Health and Disease

THIS section held its opening meeting of the session on Jan 26th, Dr F W MOTT, the President, being in the chair

The PRESIDENT took for the subject of his address the Application of Physiology to the Study of Mind in Health and Disease, and his theme was the importance of the ductless glands in the human economy, especially their influence upon growth and later in life, upon reproductive activity and integrity He quoted with approval Maudsley's contention as to the necessity of attempting the objective method in the study of mind, for as Maudsley said, that which a just reflection taught incontestably the present state of physiological knowledge illustrated practically, and Maudsley contended 40 years ago that no psychology could endure which was not based upon physiological investigations, though physiology could not expect for many years to furnish the complete data of a positive mental science Physiology, however, had now made great advances, and in no sphere was this more notable than in the biochemistry of the ductless glands and the influence of their internal secretions on the bodily functions, an addition due, in great measure, to English physiologists It was very desirable to apply this knowledge to the study of psychiatry In Maudsley's work on the "Physiology of the Mind" the hormone theory was anticipated, for he said that the overmastering feelings during pregnancy and those arising from puberty could not be explained in consciousness, and that there was reason to believe that each internal organ of the body had its representative control in the supreme cerebral centre The functional development of the reproductive organs occurring at puberty effected a complete revolution in the mentality of the youth, and he now became susceptible to impressions which were previously a matter of indifference to him, he was now the subject of aimless longings and obscure impulses, and altruistic feelings began to germinate and he appreciated what others had done for him in the matter of care and nurture These feelings were not present in cases in which the reproductive organs were removed before puberty The evolution of the sex glands was also important in regard to disease. Nature was not mindful of the individual, only of the species, and the sexual was the strongest of all the impulses The desires had their source in the unconscious life It was a common saying that love was blind, yet it also added a precious seeing power to the eye which was necessary to materialise the biochemical stimulus and effect the continuation of the species The language of love was universal, it could not be concealed when it existed nor feigned where it did not exist Yet in the present condition of civilisation this was the impulse subjected to the greatest amount of repression Insanity was especially common at two periods of life in adolescence and at the involutionary period. He asked whether it should be assumed that the mental disorder of the true insanities or psychoses, even those which terminated in dementia could be explained by any structural changes in the brain, or should it not rather be believed that they were due to disturbance of the physiological equilibrium and of the internal secretions of the ductless glands in many instances acting on a weak inheritance' The interstitial gland structure of the sexual organs functioned independently of the genetic gland structure, and functionally correlated with the sexual glands were the thyroid the parathyroid the hypophysis the pineal gland, the cortical portion of the suprarenal gland the thymus, and probably also the islands of the pancreas For a proper study of this subject there should be a systematic examination of all these glands in health and disease at all age periods and in persons with and without mental disorder He had obtained objective grounds for the association of aberrant mental conditions with disease of ductless glands in three cases of myxœdema In the thyroid gland there was marked increase of lymphoid and fibrous tissue, and a complete absence of colloid material in one, and a great reduction in the others There was an increase of colloid material in the pars intermedia of the pituitary gland, and the central nervous system showed marked chromolytic changes in the nerve cells, affecting in a grave manner the autonomic bulbar system There was an association of the myxœdematous syndrome with acute psychosis During pregnancy the thyroid gland increased in size, and there was a marked colloid increase in the follicles, a similar increase took place during menstruation and at the climacterium In pregnancy, too, there was an increase in the parathyroids There was also a large increase in the lipoid cholesterin content of the adrenal gland, and these cells were, structurally and chemically, closely allied to the cells of the Graafian follicles The thyroid gland might be of ordinary size yet contain very little gland substance, hence it was necessary to examine microscopically An interesting case was that of a married woman, aged 57, whose speech was said to have been slow, and who had indistinct tremors of face, hands and tongue, her memory was impaired, and she had no idea of time or space, she had attempted suicide prior to admission She became so demented that she was considered to be a case of general paralysis Post-mortem examination, however, showed that she had not had general paralysis The sella turcica was very large, the glenoid processes absorbed, the pituitary was twice the normal weight, and the thyroid gland very atrophied and fibrotic There was an infantile uterus, and the left ovary was destroyed by old salpingitis, the right one was atrophied and damaged Probably the patient had had gonorrhœa early in life An increase in the size of the pituitary gland might have an important bearing on the production of mental symptoms, if the cerebro-spinal fluid served as the lymph of the brain, as he believed, excess of the colloid which irrigated the neural spaces might have an important influence on the functions of the organ of mind, but more work was required to remove this from the sphere of imagination. The ovaries of women suffering at an early age from insanity, and dying in early or late adolescence, had been found at the necropsy to be fibrotic Dr Laura Forster had made a series of examinations of ovaries in cases of dementia præcox. Those of subjects who had reached the age of 30 showed signs of early involution and great scarcity of Graafian follicles, also in cases of *manie dépressive* there was a diminution in those follicles But the value of these findings was greatly lessened by the fact that in a woman who died from heart disease without any mental trouble there was a like reduction Still, Dr Forster's work was highly suggestive With regard to the pineal gland, it had been shown that tumours of the pineal gland occurring in very young people had been associated with precocious development of the sexual functions and the secondary sex characters It had been thought that the pineal gland might exert some inhibitory function on the development of secondary sex characters As to the suprarenals, it had been known since the time of Addison that this gland was essential to life It had been found that the emotion of fear exercised such an effect as to liberate adrenalin in excess into the blood Elliott had dealt in an illuminating manner with this subject in the Sydney Ringer lectures The cortical cells of the suprarenal gland were of great importance in the development of the body during its early existence, especially in regard to the brain. And it was of great importance in relation to the development of spermatozoa and was increased in the pregnant woman, probably the material was necessary for the growing embryo Adenoma of the cortex of the suprarenal gland had been found associated with precocious sexual development in both males and females There was also, in the animal series, a correlation between the size of the brain and the amount of adrenal cortex, the cells in its cortex were the source of supply of the lecithin and cholesterin required for the enormous growth of the cerebral hemispheres in early life In conclusion, Dr Mott said that though the subject of biochemistry was still in its infancy, it promised most hopeful results

Dr J G SOUTAR (Gloucester) in proposing a vote of thanks to the President for his address, pointed out how much the clinical alienist was indebted to those who like dealing with the abdomen by using this device it is possible to open the cavity, the guide and cross arm being lifted out of the way to facilitate this part of the operation, retract the parietes, bring the director again into place, and gradually advance its point to the depth previously ascertained, dealing with intervening structures as they present themselves

It is obvious that before using such an apparatus as I have described an ordinary X ray examination should have been conducted to settle roughly the position of the foreign body and enable the surgeon to decide upon the line of operation, which having been done a surface localisation should be made in order that the depth of the foreign body may be gauged and its position roughly indicated on the skin, to assist in its subsequent observation with the small screen provided in the X ray director

In conclusion, I wish to express my indebtedness to Dr W Lindsay Locke for many valuable suggestions and for the interest he has taken in our endeavour to get the apparatus as mechanically perfect as possible

Chandos street W

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

LOSS OF MEMORY DUE TO EXPOSURE

BY H J COOPER, M A, M B CANTAB, M R C S ENG, L.R C P LOND

THE following case seems worthy of record, as apart from the patient being one of the survivors of the ill fated H M S *Formidable*, it seems that a scientific interest must be attached to the mental condition following the exposure and apparently caused by it, as there was no evidence of injury having been sustained Similar cases are known to occur after concussion of the brain, but so far as I know none have been recorded as due to exposure

The patient, a boy aged 18, left the ship in one of the boats about 2 A M on Jan 1st scantily clad, and was exposed to the full force of a very violent southerly gale till 11 P M the same day The boat was constantly swept by the seas and all the occupants were the whole time drenched to the skin, the boat being frequently half full of water and only kept afloat by constant baling When brought ashore the patient was quite unconscious as were several other occupants of the boat His pulse was very small and intermittent, and the respirations were very feeble He could not be made to swallow, so hypodermics of strychnine and brandy were administered, his breathing improved but became rather stertorous At 4 A M on Jan 2nd he was still very cold in spite of hot water bottles and friction, and the pulse was still very feeble By 9 A M he had recovered consciousness to some extent but seemed very dazed and passed everything under him in the bed, and this occurred for three or four days His temperature at 2 A.M on Jan 2nd was 100 4° F, and in the evening it was 101°, subsequently it ran a normal course

By Jan 9th the patient was up and walking about but could remember nothing about the incidents in the boat or how he got into it, and had only a vague recollection of the explosion At this time he seemed to have no sense of locality and lost his way about the small hospital He also appeared lethargic, though his companions stated that he was usually of a very lively disposition On the 12th he was much better and could remember some of the incidents in the boat, such as one of the crew going mad There was nothing abnormal to be found with the exception of the hands and arms being unusually blue The pupils were equal and the knee jerks normal There was no albumin in the urine

Though there were six other men who were quite unconscious when landed, some of them, like this patient, not recovering consciousness till many hours after, none of them showed any loss of memory for events which had taken place prior to their becoming unconscious

Lyme Regis, Dorset

SPEEDY ENUCLEATION OF THE EYE

BY JOHN FURSE MCMILLAN, M.R C S ENG,
CAPTAIN ROYAL ARMY MEDICAL CORPS (RET)

IN these times when celerity is the order of the day it may not be amiss to record a case of enucleation that occurred in practice amongst natives in a clinic at Ferozepoor, the Punjab The note may be of service having regard to circumstances of war

The patient was a girl between the age of 5 and 6, suffering from the effects of contagious purulent ophthalmia of the left eye The patient having been anæsthetised, I affixed the stop spring speculum and with a hook drew forward and depressed the eyeball, when I was struck by the cramped position of the parts, and so, after having cut round with scissors the conjunctiva above the horizontal equator, I punctured the ball and allowed the vitreous to escape Then with ease and speed the muscles of the eye were severed, the membranes of the ball were divided at the longitudinal equator, and next carefully trimmed to the eighth of an inch around the optic nerve There was little or no hæmorrhage A pad of boracic wool was inserted, and bandage applied. The next morning the wound had almost completely healed by first intention, and at the next visit it was found that the child was so far thought to be completely recovered as to be taken back by her father to her village

Celerity here was the main point As regards the danger of sympathetic ophthalmia the risk would appear a minimum, though one would view with caution any tampering with the optic nerve Let us suppose that the wound does not unite by first intention, as is possible under the conditions of warfare, then it would appear obvious that there is less likelihood of inflammation of the stump than if the optic nerve had been severed In puncture of the ball the time taken is three and a half minutes, in non puncture five minutes or over

ROYAL SANITARY INSTITUTE —Dr M S Pembrey lecturer on physiology Guy's Hospital and late member of the Advisory Board Army Medical Service will open a discussion on Tall *versus* Short Men for the Army at the Royal Sanitary Institute, 90 Buckingham Palace road London S W on Tuesday next Feb 9th at 7 30 P M The chair will be taken by Surgeon General Sir W Launcelot Gubbins K C B

We have referred to only those portions of the work which have been revised or which are to be found for the first time in this edition. Dr Brend may be congratulated on the way in which he has modernized this excellent text book, and we can cordially recommend it both to medical practitioners and students. Barristers also would find it of considerable assistance as a work of reference.

The Blood. A Guide to its Examination and to the Diagnosis and Treatment of its Diseases.

By G. LOVELL GULLAND, M.A., B.Sc., M.D. Edin., F.R.C.P. Edin., Senior Lecturer on Clinical Medicine in the University of Edinburgh &c., and ALEXANDER GOODALL, M.D. Edin., F.R.C.P. Edin., Assistant Physician to the Royal Infirmary &c. Second edition. Edinburgh and London: W. Green and Son. 1914. Pp. 384. Price 15s. net.

WE are glad to welcome a second edition of this book within a relatively short time since its first appearance. Its general scope is not much altered, but it has been brought up to date and has received considerable additions in the process. For the benefit of those who are not already acquainted with the volume we may point out that the first 53 pages are devoted to methods of examination—counting, staining, and so forth, then follows a description of the formed elements of the blood, with their sources and their variations in different animals and different conditions, next comes a detailed account of the various disorders of the blood, or so called blood diseases, and the remainder of the volume treats of the condition of the blood in other affections and of the parasitic organisms which are found in it.

Among the novel matter appearing in this edition we may mention the discussion of von Schilling Torgau's views on the structure of the erythrocyte, according to which these cells are supplied with a nucleus, a centriole, and two peculiar intracellular bodies the glassy body and the capsule corpuscle, giving the red cells a much more complicated constitution than is generally recognised. The authors do not discuss or criticise these views, so that we do not gather how far they accept them. We welcome their plea for the retention of Ehrlich's original classification of cases of leukæmia into lymphatic and medullary, as opposed to complicated subdivision based on special forms of leucocytes found to be present, although mixed forms must be admitted. An appendix is devoted to the question of splenectomy in pernicious anæmia—a procedure which the authors do not regard favourably, as the seat of the trouble is probably in the bone marrow and not in the spleen. Here as elsewhere the judgment expressed is prudent and commendable.

The book is well got up and well illustrated.

Elements of Pharmacy, Materia Medica, and Therapeutics.

By Sir WILLIAM WHITLA, M.A., M.D., LL.D. Tenth edition. London: Baillière, Tindall, and Cox. 1915. Pp. xii.-630. Price 9s. net.

THE appearance of the tenth edition of a text book bearing on the title page the statement that it is the forty second thousand would almost warrant a reviewer in considering that no detailed criticism was necessary. In a brief preface however the author states that the advent of the new British Pharmacopœia has necessitated changes on every page, and that the present volume may therefore be regarded as a new book. Those familiar with former editions need feel no alarm at this broad statement. The general arrangement of a wealth of material remains as before, the novelty consists in the assimilation of the changes which must be made if the book is to be brought into harmony with the new standard. The introduction of the metric system is responsible for many of the changes, much space is devoted not only to a reproduction of the tables from the Pharmacopœia, but also to several more detailed tables which will save time and calculation.

As in former editions, the author has shown an admirable discretion in separating from the official monographs just those details which are likely to be of service either to the student or the junior medical practitioner, he omits all reference to standards of purity and to arsenic limits and lead limits. On the other hand, there are many useful hints relating to incompatibility and to convenient methods of securing suitable combinations of new and old remedies. The therapeutic section has been carefully revised, and there is abundant evidence that Sir William Whitla has keenly scanned all recent therapeutic advances. The section on non official remedies, which extends to over 130 pages, contains information relating to very numerous drugs, nearly all protected by trade names, and in many cases to be regarded as still *sub judice*. In referring to this section, students should note the care with which the author has given the names of those responsible for many of the observations, he does not always indicate that he has himself confirmed the experiences of others.

The prescriptions in the section on therapeutics will serve as good examples to young prescribers, but it may puzzle them to ascertain what system of abbreviation has been adopted. On p. 467, in consecutive lines will be found Tinct. and Tr., and Spirit and Spt. are of frequent occurrence, nor is there any apparent reason why Syrupi should generally be written in full and sometimes be contracted to Syr. These little inconsistencies do not materially detract from the general high standard of the work for its special purpose. It may be anticipated that it will receive the cordial acceptance accorded to former editions.

The New Parent's Assistant.

By STEPHEN PAGET. London: Smith, Elder, and Co. 1914. Pp. 119. Price 3s. 6d. net.

THE charm of Mr Stephen Paget's previous essays had led us to regard a new volume of essays by him with the feelings of a schoolboy towards a hamper from home. "The New Parent's Assistant," while consisting like his previous books of a number of individual essays, differs from them in the fact that all the essays have relation to one subject—viz., the bringing up of the child as a sound organism, physically, mentally, morally and religiously. Mr Paget's method of assisting the parent differs fundamentally from that of Miss Edgeworth, from whose "Parent's Assistant," needless to say, he has adapted the title. Miss Edgeworth wrote down stories told to occupy the children's attention and so keep them interested while insidiously training them on the moral lines that were the ideal of an age of sentiment. Mr Paget deems it a more effective method to keep the parents interested while equally insidiously imbuing their the President, were working to establish principles on which progress could be made in the treatment of mind disease

Sir George Savage seconded, *remarking* that the President was such a successful pathologist because he did not think the science was to be learned simply from dead matter

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Ulster Medical Society —A meeting of this society was held in the Pathological Laboratory of the Queen s University of Belfast on Jan 21st Dr J S Morrow, the President, being in the chair —Sir John Byers gave an account of a case of severe Pre eclamptic Toxæmia successfully treated by the Stroganoff method A very careful chemico-physiological analysis of the urine, made by Dr John Gibson, was brought forward —Professor W St C Symmers read a short paper giving an account of the lesions produced in a Soldier s Skull by the Accidental Discharge at Short Range of a Modern Rifle —Dr T S Kirk read a short note on a case of Fat Embolism following Fracture of the Femur —Dr T Houston read a paper on Bacteriological Diagnosis —Dr W W D Thomson read notes on the investigation of a case of Chronic Interstitial Nephritis with an unusual degree of urea retention, and on certain peculiar crystals found in the cerebro-spinal fluid in a *case of septic meningitis —Sir Alexander Dempsey* showed a Tumour of the Suprarenal Gland and a Cancer of the Body of the Uterus —Mr A. B Mitchell showed a Carcinoma of the Penis, an Ulcer of the Stomach Resected, and a Gall bladder containing Gall stones —Mr R J Johnstone showed a specimen of Abdominal Pregnancy, a Tumour of the Transverse Colon which gave considerable difficulty in diagnosis, and a very large Fibroid of the Uterus —Mr A Fullerton showed some Renal Calculi.—Mr Howard Stevenson showed a specimen from a case of Acute Hæmorrhagic Pancreatitis —Dr C G Lowry showed a Fibrocystic Tumour of the Ovary which caused intraperitoneal hæmorrhage, and a Calcified Tuberculous Pyosalpinx from a woman aged 62.—Dr G A Hicks showed specimens of Tuberculous Fallopian Tubes and a case of Tubal Abortion —Dr Thomson showed a Rapid Method of Preparing an Autogenous Acne Bacillus Vaccine, a case of Pseudochylous Ascites in which Lactescence was due to Globulin, and Blood films illustrating (1) blood changes in von Jaksch's disease and (2) marked mitotic changes in the megaloblasts in a case of pernicious anæmia —Mr S T Irwin showed a breast with an Adenoma and Multiple Cysts —Dr T S S Holmes showed a Kidney with Pyonephrosis —Specimens were also shown by Professor Symmers and by Sir John Byers —Full discussions followed the reading of the various papers

Harveian Society of London —A clinical meeting of this society was held at the Paddington Green Children's Hospital on Jan 28th, Dr Edgar G Bulleid, the President being in the chair —The following cases were shown —Dr Leonard G Guthrie Juvenile Tabes with Optic Atrophy in a boy suffering with congenital syphilis —Dr Corry (for Dr Guthrie) Enlargement of Thyroid Gland in a child aged 6 —Dr G A. Sutherland (1) Tuberculous Peritonitis, showing a very well marked von Pirquet's reaction, and (2) Congenital Pyloric Hypertrophy —Dr R H Miller Aortic Regurgitation of recent rheumatic origin in a child —Dr W H Willcox *(1) Renal Calculus in a man who referred* his pain to the side opposite to the kidney in which the stones were shown by X rays to be situated, and (2) Toxic Jaundice due to poisoning by tetrachloride of ethane, in an employee of an aeroplane factory —Dr Frederick Langmead Muscular Fibrosis in a girl aged 5 Had been under observation since 5 weeks of age for scleroderma, upon which the muscular condition had been superimposed.—Mr H W Perkins showed numerous Pathological and Microscopic Specimens

Bradford Medico-Chirurgical Society —A meeting of this society was held on Jan 19th Dr Arthur Manknell being in the chair —Dr William Mitchell gave an X Ray Demonstration a large variety of plates being shown. Of special interest were a series of plates showing multiple fractures from a case of osteomalacia and also a series showing the stomach after a bismuth meal in various gastric diseases —Mr W H. Hooton showed a radiograph of both kidneys in which were huge stones This case was said to be unique as being the largest bilateral renal calculi on record —Dr A. Rabagliati read a paper on the Functions of the Connective Tissue After minutely describing the anatomy of the connective tissue he laid great stress on the continuity *of the areolar tissue throughout the body,* and pointed out that this was of great importance in relation to the spread of infections He then proceeded to elaborate a theory that the connective tissue cells were organs of sensibility inasmuch as they were the organs which received sensations while the nervous cells and tissues carried out their function of interpreting these sensations

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Reviews and Notices of Books.

Forensic Medicine and Toxicology

By J Dixon Mann, M D St And, F R C P Lond Fifth edition Revised and enlarged by William A Brend M A. Cantab M B, B Sc Lond Barrister at Law Lecturer on Forensic Medicine and Toxicology, Charing Cross Hospital London Charles Griffin and Co, *Limited 1914 Pp 737 Price 18s*

This volume is well known, and for advanced students no better text book can be found In the present edition Dr Brend, who is responsible for its production, recognising the thoroughness and accuracy which always characterised the work of the late Professor Dixon Mann, has left the main features of the book as far as possible untouched By numerous additions he has brought it thoroughly up to date

An account of the Mental Deficiency Act has been included The classes of patients who are deemed to be mentally defective within the meaning of the Act are set forth, and the requirements as to the making of orders are explained A short account is given of the Workmen s Compensation Act, 1906, and some instructive *remarks are made on the* difficult question of "malingering" It is pointed out that the real fraudulent malingerer is relatively rare in comparison with the great number of claims which are preferred under the Workmen's Compensation Act and the National Insurance Act Dr Brend recognises four types of cases of fraudulent claim (1) *persons* who have no affection or injury of any kind, (2) those who are suffering from lesions deliberately produced, (3) those who represent old standing disease or injury to be the result of a recent accident, and (4) those who are suffering from the effects of an injury or disease not of a serious character, and who consciously and fraudulently exaggerate their symptoms We consider this a good practical classification, and medical examiners may simplify their ideas by acting upon it *Many cases of suspected* malingering present great difficulties, but the introduction of medical referees has exercised a restraining effect in the prevention of fraudulent claims

In discussing drugs which have been adopted for the purpose of procuring criminal abortion, attention is rightly drawn to the use of lead, most frequently in the form of pills made from diachylon The practice appears to have originated in the Potteries, where women working with lead would be likely to discover its effects in this direction In the part of the book dealing with toxicology an account of the law relating to the sale of poisons has been added, and recent work connected with poisoning by veronal aspirin, carbon monoxide lead ferro silicon, unsound meat, and other substances has been included *the technical side of electricity far in advance of* that of the average medical man. In making the above criticism we are not to be understood as implying that there is no place for such a book as this On the contrary, it fills a real want, and will be of the greatest value to all those who are taking up those branches of medical work where electrical appliances are largely used To many such the technical and physical problems involved are a serious difficulty from the fact that so few medical students take any interest in electro physics beyond the minimum required to pass a preliminary examination, and what little they learn they take no pains to remember in after years They will find, however, in this volume a means by which they can recover many lost opportunities, and for answering the technical and physical questions that are continually suggesting themselves the book will be found most useful. Where explanation offers any difficulty the author has made use of diagrams to make the description more clear, a great improvement on the mere use of an illustration of the finished apparatus from an instrument maker s catalogue, which teaches little or nothing

The second part of the book is devoted to X ray appliances including a very useful chapter on the management of the X ray tube, a subject none too well *understood* by many of the radiographers suddenly called into being by the crisis through which the nation is now passing

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

MEDICATED GELATINE LAMELS

(MESSRS SAVORY AND MOORE LIMITED, 143, NEW BOND-STREET, LONDON, W)

WE referred to this very convenient form of medicament some time ago, but at the present moment its advantages come into special prominence owing to its usefulness in field service The lamel consists of a thin pliable gelatin sheet about 9 *centimetres* (3½ inches) long and 6 centimetres wide, divided into 24 squares Each square contains a definite dose of medicament The squares are marked off in grooves so that it is easy to detach one, two, or more, as the circumstances require The specimens submitted to us included Dover s powder, 5 *grains*, extract of cascara sagrada, 2 grains, chlorodyne, 5 minims, strong tincture of ginger, 5 minims, coca extract, ^{1} grain tincture of opium, 5 minims, morphine hydrochloride, ^{1}th grain, Easton s syrup, 30 minims, phenacetin 3 grains, and quinine sulphate, 2 grains Out of curiosity as to the accuracy of dosage secured per square, we took 10 squares and estimated in them by analysis the actual amount of quinine This yielded 1 5 grains of quinine hydrate per square and as quinine sulphate contains 73 per cent of quinine hydrate the amount of quinine sulphate corresponding with this is exactly that stated—viz., 2 grains The lamels pack quite easily in a small pocket book which in its turn is contained in a waterproof case to keep out damp The complete outfit is very neat and compact and should be of the greatest service in a campaign.

"SEMPROLIN" LIQUID PARAFFIN PREPARATIONS

(MESSRS WILLIAM BROWNING AND CO , 4, LAMBETH PALACE ROAD, LONDON, S.E)

We have already reported in these columns upon a series of semprolin preparations their basis being a highly refined petroleum. We have now received further preparations which have recently been added to the list The simplest preparation amongst these is a laxative cream which is stated to contain approximately 90 per cent by volume of liquid paraffin This figure was confirmed by our analysis, for by extraction of the cream after drying it on the water bath just short of 91 per cent of petroleum was obtained. This form of petroleum will no doubt appeal to many patients to whom a clear oil is objectionable The semprolin emulsion with malt contains an active extract of malt associated with petroleum, and we found present 40 per cent of hydrocarbon Another semprolin emulsion contains 2 grains of phenolphthalein to each tablespoonful. This particular combination has been used in the treatment of mucous colitis with encouraging results Lastly, we examined a semprolin emulsion *containing 5 grains of salol in each tablespoonful* This intestinal antiseptic is soluble in *petroleum*, and altogether the combination seems well adapted for the antiseptic treatment of the intestinal contents

SURGICAL CREOSALGEN

(MESSRS C J HEWLETT AND SON, LIMITED, 35–42, CHARLOTTE STREET, LONDON, E C)

On examination surgical creosalgen proved to contain just 50 per cent of active tar acid in a completely soluble form The clear liquid dissolves in all proportions with water, forming a bright fluid According to the iodine combination figure of the tar acids creosalgen possesses a higher germicidal value than carbolic acid and probably nearly three times as high. The advantage of this antiseptic for surgical purposes is that in addition to its germicidal efficiency it removes grease and mucus, while it has no corrosive action on surgical instruments

DIABETIC BISCUITS

(MESSRS CALLARD AND CO , 74, REGENT STREET, LONDON, W)

These biscuits fulfil a useful purpose in the dietary of the diabetic *patient* The carbohydrates, as our analysis showed, are reduced *to a minimum* In spite of this they are palatable and attractive The specimens we received were described as "ponos" biscuits and "ponos" fingers The analysis of the biscuits was as *follows* moisture, 6 70 per cent , mineral matter, 5 00 *per cent* , *protein*, 61 87 per cent , fat 23 80 per cent , carbohydrates, 2 63 *per cent* These preparations enable the physician, when he considers such a course desirable, to give his patient alternately an allowance of carbohydrate in the shape of a standard carbohydrate—e g , bread—and a diet practically excluding carbohydrate altogether In this way the carbohydrate toleration of the patient can be followed

EAU DE COLOGNE, CAERWISC BRAND

(MESSRS EVANS GADD, AND CO 100 FORE STREET EXETER)

There has long been a formula for eau de Cologne which has been followed in this country It is a quite good one, and the product is in no sense inferior to the classic one Eau de Cologne serves a useful purpose in helping to allay congestion of superficial parts, often relieving headache minds with a conception of the change that has taken, and is still taking, place in the old psychological order as it concerns the physical, mental, and moral relations between parents and offspring While the reader imagines himself as merely being amused, he is, in point of fact, imbibing a wholesome draught of moral values nicely balanced so as imperceptibly to adjust the transition from the placid spirit of the eighteenth and first half of the nineteenth century to that of the adventurous twentieth

The essays, which are nine in number (and a preface), deal with the self, the development of understanding in the child, true and false authority, understanding in relation to faith, the child's interpretation of nature (which includes a most delicate and tactful handling of the problem of sexual enlightenment), true and false discipline, a homily on the love of London—"for it is not all children who love their London as they ought"—and finally on the use of grandparents The baby, according to Mr Paget, is the true fountain of honour, for from the moment of his birth he sets about creating dignities and bestowing titles—"father, mother, uncle, aunt, grandpapa and grandmamma." The concluding essay, entitled "August, 1914," was written after the war began, and in it, with chastened optimism, the author looks forward to the time a few years hence when the darkness of this year shall be transfigured, and the children of his vision shall be "more grave, more patient than we were at their age, quicker to put things eternal before things temporal, more simple in their ways, more moderate in their pleasures, more careful over their words, more willing to look in the face of death, more conscious of God in their daily affairs"

The author's quaint charm of style, his unexpectedness of thought, and his wealth of application of human and scientific lore to the problem of the child, combine to make a fascinating volume

The House Fly (Musca Domestica Linn), Its Structure, Habits, Development, Relation to Disease, and Control

By G GORDON HEWITT, D Sc, F R S C Dominion Entomologist of Canada Cambridge University Press 1914 Pp 382 Price 15*s* net

THIS book is the successor of one with a nearly identical title by the same author which was published by Sherratt and Hughes for the Manchester University Press, and reviewed in THE LANCET of July 2nd, 1910 It can, however, hardly be called a new edition of that book, as although it still contains the whole of the author's original matter from his monographs published in the *Quarterly Journal of Microscopical Science* in 1907, 1908, and 1909, the great amount of subsequent investigation on the subjects has necessitated the preparation of what is practically a new work, this is suggested by the fact that it contains 193 pages more than the previous book, although its price is 5*s* less It is intended not as a popular work but as a text book for entomologists, medical men and health officers After a brief historical statement the book deals, in six parts, with the structure and habits of the house fly, the breeding habits, the life history and structure of the larva, its natural enemies and parasites, other species of flies frequenting houses, the relations of house flies to disease and control measures The diseases discussed in relation to flies are of course typhoid fever and the summer diarrhœa of infants, also anthrax, tuberculosis, cholera, ophthalmia, plague, small pox, diphtheria framboesia, leprosy, dysentery, syphilis, poliomyelitis, trypanosomiasis, and many others This part (V) will be of special interest to medical men and health officers There are some excellent illustrations, coloured and half tone, an exhaustive bibliography occupying 36 pages, and an adequate 9 page index As we commended the previous book, so we commend this

Manuel de Cystoscopie

Par E. PAPIN, Chef de Clinique des Voies Urinaires à l'Hôpital Necker Préface par M le Professeur F. LEGUEU Paris F Gittler 1914 Pp 326 Price 15 francs

CYSTOSCOPY has assumed such an important part in the diagnosis and treatment of diseases of the bladder and ureters that it is essential that this method of examination should be taught regularly and systematically In most works on the subject the student is plunged *in medias res*, so that he is confused by being taught too much, but in this book he is introduced step by step into the subject The instruments employed are described and the mode of using them is carefully explained The book also contains a description of ureteral catheterisation and pyelography

The illustrations are very numerous, and we can confidently recommend this work to any student or surgeon who reads French

A Manual of Diseases of the Eye

By CHARLES H MAY, M D, New York, Chief of the Eye Clinic Columbia University, New York, 1890–1903, &c, and CLAUD A WORTH F R C S Eng, Surgeon to the Royal London Ophthalmic Hospital Fourth edition London Baillière, Tindall, and Cox 1913 Pp 444 Price 10*s* 6*d* net.

THE fourth edition of this well known text book, which differs little, if at all, from the work which is published in America as by Dr May alone, has been revised in detail and brought up to date There is an excellent chapter on the use of vaccines by Mr S H Browning, which shows most alteration and contains many valuable hints Reference is made in the preface to the "increased stringency and complexity of the tests required for some of the public services" for colour vision, but the Board of Trade tests for the British Mercantile Marine are quoted from regulations which have been superseded Mr C Devereux Marshall has written a chapter on this subject from the standpoint of Dr F W Edridge Green's theory, which is accepted now by most ophthalmologists, though it is critically received in some quarters

Practical Medical Electricity

By ALFRED C NORMAN M D Edin London The Scientific Press Limited 1914 Pp 226 Price 5*s* net

WITH regard to the title of this book it is open to question if the author has been quite happy in his choice The student who buys this book with the idea of extending his knowledge of medical electricity proper is likely to be disappointed since this subject is scarcely touched upon, and such references as there are, are of a very superficial character The book is really a treatise on the various instruments used in the application of electricity in medicine and surgery, it explains their principle, construction, and mode of application with such clearness and accuracy as to make it evident that the author possesses a knowledge of

THE LANCET.

LONDON, SATURDAY, FEBRUARY 6, 1915

The Annual Report of the Medical Officer of the Local Government Board[1]

A NEW annual report of the medical officer of the Local Government Board can always be relied upon to furnish a fund of information on scientific and administrative questions bearing upon the public health, and the volume now issued for 1913–14 is no exception to the rule. The variety of the subjects over which the activity of the central public health department extends is well illustrated by the reports of the medical staff and of the special investigators which Dr A. Newsholme has selected for publication. Some of these are reports on epidemics which have already appeared separately and been noticed in these columns. Dr E. P. Manby's report on an outbreak of enteric fever in Kenilworth should be a lesson to those responsible for public water supplies to make frequent surveys of the physical conditions under which the water is obtained, and not to consider that the absence of complaints or a long immunity from water borne disease signifies that the supply is above suspicion. The report by Dr F. R. Seymour on lead poisoning at Guisborough brings out the great extent to which lesser degrees of ill health may be found in a community dependent on a water supply which is capable of acting on lead pipes, while Dr H. A. Macewen gives an interesting account of an outbreak in South London of diphtheria which was due to milk obtained from a farm where diphtheria infection was present both on the teats of the cows and on the hands of certain of the milkers. Dr Macewen also contributes to this volume the history of an outbreak of small pox in a cotton mill at Milnrow, in Lancashire, in which infection seems clearly to have been introduced by imported raw cotton, apparently that coming from Mexico. Summaries are given of the reports of different inspectors in the medical department on the sanitary circumstances of about 50 administrative districts in England and Wales. If these are representative it must be concluded that much has still to be done by many local authorities in the appointment of a sufficient sanitary staff the provision of isolation hospitals, attention to unhealthy conditions of housing, doubtful water supplies absence of sewerage and other matters. The summaries of the sanitary conditions in Llanelly Lleyn, and Aberavron suggest that many Welsh districts in particular need strong central pressure to secure some elementary sanitary improvements which have long been effected in other parts of the country which are not usually regarded as specially progressive.

The Local Government Board has recently shown much activity in inducing local authorities to take those measures for the care and supervision of pregnant women, infants, and children under school age which are now generally grouped under the term "maternity and child welfare work." In this organisation the woman health visitor plays an important part, and the prospects which these posts offer to educated women who desire to do good social service and are not afraid of hard work deserve to be better appreciated than they are at present. The report contains a memorandum on health visiting by Dr J. E. Lane Claypon, which deserves special attention in this connexion. Dr Lane Claypon insists that the value of the health visitor can be enormously increased if she is able to begin her work, not after the notification of a birth, but during the period of pregnancy, acting as part of the staff of a local maternity centre or clinic to which expectant mothers are encouraged to come, at any stage before their confinement, for treatment, advice, or supervision in health matters. The development of local maternity centres, health visiting, and similar undertakings for child welfare is now, we know, being facilitated by a scheme of Government grants, and Dr Newsholme's observations on the scope and value of this work will be welcomed by medical officers of health and others who are endeavouring to secure local progress in these directions. The reports of research work carried out for the department are fewer than usual, but Dr F. W. Andrewes's investigations of the causes and conditions associated with arterial degeneration are continued, and reports are issued by Dr F. R. Blaxall on chemical substances which can be used to supplement or replace glycerine as a means of quickly freeing vaccine lymph from extraneous organisms without prejudicially affecting its potency. Specially good results have been obtained by the use of oil of cloves in the preparation of glycerinated lymph. Foreign intelligence work in regard to exotic diseases has always formed an important part of the duties of the medical department of the Local Government Board, and we miss from the present volume the yearly account of the world prevalence of cholera, plague, and yellow fever which has long been a feature of the series. The account for 1913–14 is, however, to be issued as a separate publication. Other sections of the volume deal with the work of the inspectors of foods, and with the seasonal and local prevalence of cerebro spinal fever and poliomyelitis.

The progress of the national measures for combating tuberculosis naturally receives much prominence in Dr Newsholme's report. In 1912–13 the Local Government Board completed its programme due to vascular dilatation This specimen showed an alcoholic strength of 73 93 per cent by volume It possesses a fragrant and refreshing odour

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[1] Supplement to the Forty [illegible] Annual Report of the Local Government Board [illegible] Wyman and Sons [illegible]

WHATMAN FILTER PAPERS

(MESSRS W AND R BALSTON, LIMITED, SPRINGFIELD MILL, MAIDSTONE AGENTS, MESSRS H REEVE, ANGEL, AND CO, 15, NEW BRIDGE STREET, LONDON, E C)

Many workers in the scientific laboratory will welcome the introduction of an English manufactured filter paper which gives results equal to those formerly imported from Germany We have given the Whatman filter paper careful trial and have chosen for the purpose precipitates which are admittedly difficult to collect Thus precipitations of calcium oxalate, cuprous oxide, and barium sulphate often give difficulty in the filtering process owing to the fineness of the particles, which easily pass through ordinary filtering materials We found that these filter papers not only gave clear filtrates, but also that they were reasonably rapid in action Their ash content is low, so that a correction for mineral matter is not necessary in the majority of cases We found that the total ash obtained on incineration of the paper amounted to 0 121 per 100 parts by weight of the paper These papers facilitate scientific work and they are an excellent filtering medium, their price is modest

New Inventions.

A MAXILLARY SPLINT

THIS is a light wire splint for fractures of the mandible, which maintains the fragments of the fractured bone in immobile apposition, permits movement at the temporo maxillary joint and preserves the normal relation of the superior and inferior maxillary bones to one another (Fig 1) The splint is a modification of that of Professor Schröder, it may be adapted to any fracture of the mandible and also of the superior maxilla, moreover it is of considerable use in cases of partial resection of the former bone and in those of bone transplantation, as it prevents displacement of the healthy part of the jaw towards the side operated on (Fig 2) In simple fractures accompanied by only slight displacement the splint, then consisting only of wire arch and two clamp bands can be fitted straightaway in about half an hour, and is worn until the fracture is united Where one cannot obtain immediate complete reduction such as in old standing fractures with displacement this splint combined with an inclined plane and elastic traction (e g, rubber band) is of much value. The constant elastic pull gradually reduces the displacement

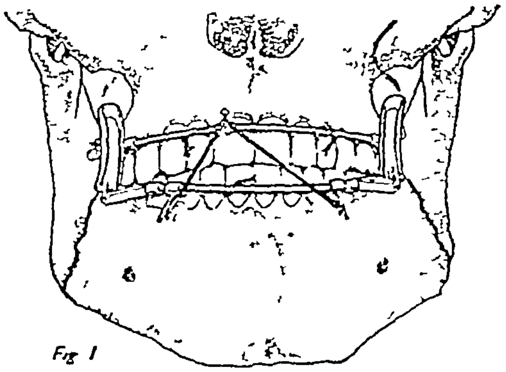
Fig 1

The splint consists (1) of two wire arches, (2) four anchor clamp bands, (3) two guiding pins two shoes (slots) and four tubes or instead of these an inclined plane, (4) hooks for rubber bands, (5) rubber bands, and (6) ligature wire The use of the guiding pins and shoes or the inclined plane is not restricted to the wire arches alone, they can also be attached vulcanite or metal splints in case of deficiency of teeth

The advantages of the splint are the following—1 It actually maintains the fractured fragments firmly in apposition and permits movement at the temporo-maxillary joint 2 It can be kept ready in various sizes thus enabling the surgeon to immobilise any fracture of the jaw straight away, instead of delaying the treatment 3 There is no need for a workshop with swaging or casting appliances necessary for the making of interdental splints 4 The patient is able to open and close his mouth 12 to 24 hours after insertion of the splint 5 The patient does not run the risk of stiffness of the jaw through its being fixed for a long period by an interdental splint 6 There is no possibility of a bad articulation of teeth through malunion of the fracture, as sometimes occurs with interdental splints which keep the mouth open 7 The condition of the mouth can be kept constantly under observation, and cleanliness is easily maintained 8 There is no unsightliness, and discomfort to the patient is the least possible with an intraoral splint

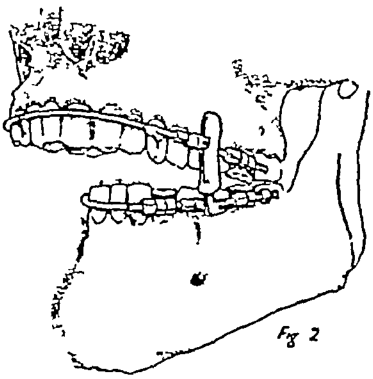
Fig 2

The splint has been carefully made for me, according to my suggestions, by the Dental Manufacturing Co, Limited, Alston House, Newman street, London W

C A ACHNER, L D S Eng

LITERARY INTELLIGENCE—We announced last year a forthcoming book by Sir Clifford Allbutt on 'Disease of the Arteries and Angina Pectoris' to be published by Messrs Macmillan and Co, the work being designed to appear last autumn The two volumes were practically ready when the war naturally stopped publication No date has yet been fixed for publication, we understand, but we hope there will be no long delay in a book that will be of great service to clinicians, we feel sure—Messrs J and A Churchill announce for publication a new (fifth) edition of Sir Henry Morris's "Human Anatomy" Different sizes of type are now employed, to facilitate the work of the student The letterpress is accompanied by nearly 1200 illustrations 350 of them being in colours The same publishers are just issuing a second edition of "Squire's Pocket Companion to the British Pharmacopœia'—Messrs Smith Elder and Co announce for immediate publication a fifth and enlarged edition of Dr Ralph W Leftwich's 'Index of Symptoms" The new edition contains a large number of new symptoms and many new tests while the interlineary notes have been much amplified—Mr H K Lewis announces for immediate publication the sixteenth edition of the 'Extra Pharmacopœia" by W H Martindale F C S and Dr Wynn Westcott, this edition has been revised with the accustomed thoroughness and amongst other additions contains a syllabus of the additions, deletions, and alterations in the new British Pharmacopœia. An eleventh edition of Swanzy's Handbook of Diseases of the Eye' is appearing immediately through the same firm Owing to the death of Sir Henry Swanzy since the publication of the last edition it has been revised and edited by Dr Louis Werner who was associated with the author in the issue of the two previous editions Mr Lewis has also in the press a new work on "Occupational Diseases of the Skin by Dr R Prosser White of Wigan, a translation by Dr Henry de Meric of Delorme's "Surgery in War and a new edition of 'Diseases of the Nose and Throat by Dr Herbert Tilley This last work has been largely rewritten and the number of plates and text illustrations increased usual, demands to be met In these circumstances the question is constantly arising whether in an individual instance the duty of a citizen is to continue to discharge his civilian service or to respond to the trumpet's call In the profession of medicine and in that of education many difficult cases have presented themselves and on looking into them it becomes clear that the decision, though regulated by the general conditions of the country, cannot be made in any general manner There will be no universal rule that those discharging certain civilian duties are right to leave them, and that those discharging other civilian duties will be right to continue them Every case must be thought out carefully and the decision come to with a due regard for the welfare of the people The defence of the country by sea and land will always come first, but it must *be that the cause of defence is aptly served by much civilian work* The question can never arise *whether it is patriotic of*, say, the official of *a large railway*, who has successfully been responsible for the safe conduct of hundreds of troops, and is wanted to carry on his experienced work, to take a commission as a lieutenant for the good of his country in circumstances where his special knowledge cannot be brought to bear Here the question does not arise, because we can all see that it is for the good of his country that he should help in our defence by expediting our military movements But there is no such clear cut opinion to be given in the case of many other civilian occupations not so closely allied to military service, and the position of the medical officer of health or the educational medical officer is one where real difficulty arises, and where both tact and forbearance should be exercised *in coming* to a judgment

The following case has struck us as admirably illustrative The medical officer of health of the borough of Battersea has been gazetted a lieutenant in the 2nd London Sanitary Company (R A M.C, Territorial Force) and it may be added that in these columns we have regularly announced in an inviting manner to our readers similar opportunities The Finance Committee of the Battersea Borough Council having recommended to the Council that their officer should be allowed the difference between his salary and his service pay and allowances during absence, the chairman of the committee though he formally moved the adoption of this course as a councillor spoke against it Various councillors maintained that the work of safeguarding the health of a populous district at home was as patriotic an action as performing sanitary duties with the army, while in consequence of the growing shortage of medical men it was apprehended that there would be considerable difficulty in obtaining someone to take the vacant place On the other side speakers maintained that when the country called local matters must be disregarded and all interests sacrificed to those of the empire These councillors considered that their medical officer had shown true patriotism in exchanging for a subordinate military appointment with its arduous work and probable risks the safety and comfort of home, and they held that if the Council sought to restrain him from taking the commission they would expose themselves to ridicule, and if they treated him ungenerously they would incur public odium It appeared also that the Council had passed a resolution encouraging their officers and employees to undertake military service and guaranteeing to bring their pay up to their customary salary, but it must be admitted that this resolution, though drawn up in inclusive terms, was not intended to apply to chief officers That the Battersea councillors perceived the difficulty was shown by the fact that the voting was very close At first the recommendation of the Finance Committee was declined by one vote, but on a division being taken the odd vote was given on the other side A proposal to refer the matter back to the Finance Committee was lost, and the Council, by a very narrow majority, decided that the military pay of the medical officer of health should be made up to his official salary during his absence The difficulty of deciding where the right lies in these cases is thus proved by the course of the voting at Battersea A somewhat similar position arose at the same time at Wolverhampton, where the civilian authority took a different view with respect to their educational medical officer At the last monthly meeting of the Wolverhampton Education Committee consideration was given to an application made by the school medical officer of Wolverhampton for leave of absence during the duration of the war that he might accept a commission in the medical department of His Majesty's forces The committee decided that in the event of the officer accepting a commission it would be impossible satisfactorily to proceed with the school medical service under the advice of a temporary substitute, and that if the commission were accepted by the medical officer steps would have to be taken to appoint a permanent successor The Education Committee added that if urgent need for their medical officer's services should later arise they would, of course, be willing to let him go

The different decisions come to by equally responsible and patriotic bodies with regard to the acceptance by their senior administrative officers of commissions, together with the extreme difficulty shown by one of these bodies in coming to a conclusion sufficiently show that there can be no general rule The public health of the country and the maintenance of a State scheme of education upon sound sanitary lines are matters of the first importance to all That our civilian population should not become a burden upon the public purse through sickness and that our rising generation should be free from disease, comprise the very welfare of the nation, and it must not be lightly jeopardised our army and navy are fighting for our existence, it is due to them for notification of tuberculosis by an Order making all forms of the disease notifiable The provisions of the National Insurance Act, 1911, as to sanatorium benefit came into operation, the capital grant under the Finance Act, 1911, of one and a half millions for the provision of institutions for the treatment of tuberculosis in the United Kingdom became available, and the Treasury decided to defray one half of the cost of approved schemes of local authorities for the treatment of tuberculosis in so far as this was not already covered by contributions from insurance funds During the year which followed all these measures have had to be put into working order by active organisation on the part of the central department, and very effective progress has now been made By July, 1914, 37 out of 50 county councils and 53 out of 76 county boroughs had received official approval to what are termed "fairly complete" schemes, while others had their proposals under consideration Only a small minority proposed schemes which were "partial" or limited to the provision of dispensaries By the same date nearly 200 clinical tuberculosis officers had been appointed, while in nearly all cases the medical officer of health of the county borough or administrative county was appointed administrative tuberculosis officer Dispensaries have multiplied, and much attention has been given to the provision of sanatorium and hospital accommodation for tuberculous cases Reckoning sites for new sanatoriums and hospitals already approved, institutional provision will shortly be available for all classes of tuberculous cases at the rate of one bed for every 2557 persons in England The provision of beds is likely to increase further, and if county boroughs generally follow the lead of Bradford and Sheffield, something like one bed per 1200 of population is likely to be needed to meet the current requirements of pulmonary tuberculosis alone Provision of dispensaries and beds is, however, only a part of the problem if tuberculosis is to be dealt with systematically on the lines advocated by the Government departments Success on these lines must depend on the solution of the large number of practical questions which arise in the actual working of a somewhat complicated machinery, and the medical officers and inspectors of the Local Government Board have been indefatigable in giving attention to these working details and in facilitating local arrangements Dr NEWSHOLME embodies some of the results in the present report, which contains observations on the classification of cases, the relation of tuberculosis officers to district medical officers of health, the duration of institutional treatment and many other matters which will be carefully studied by those concerned with this branch of public hygiene Reference should also be made to a useful memorandum prepared by Mr T E CHAPMAN on "observation beds" based on experience at Sheffield, which sets out the advantages of attaching such beds to tuberculosis dispensaries and placing them under the control of the dispensary medical officer for clinical observation It seems clear that this arrangement may often prevent unprofitable demands on residential institutions

For statistics of tuberculosis Dr NEWSHOLME necessarily depends mainly on death rates Notification of new cases cannot yet be said to make a reliable basis for comparison of the prevalence of the disease either in one year with another or in one district with another district The figures frequently show that counties and boroughs which are high on the list as regards tuberculosis notifications are low in respect of tuberculosis deaths, and *vice versa* On the massed figures for all counties, all county boroughs, and all metropolitan boroughs there are at present for pulmonary tuberculosis from 2·0 to 2·5 notifications for every male death, and from 2·1 to 3·4 for every female death, for other tuberculosis the proportion lies between 2·8 and 4·4 notifications to each death, and Dr NEWSHOLME considers that special inquiry into the completeness of notification is desirable in any district where the notifications of phthisis do not number more than twice the deaths from the disease In statistical as well as in clinical matters much depends on the extent to which bacteriological aids are used in diagnosis The report, to which we shall return in more detail in an early issue, records a considerable increase in the arrangements of local authorities for the examination of sputa, while on many other grounds Dr NEWSHOLME lays stress on the importance of pathological laboratories being established or further developed under the auspices of county councils or municipalities

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Civilian Service and Military Claims

THE most ardent advocate of conscription recognises that the training of the male population for complete readiness to serve their country as soldiers does not imply that they will all be serving at the same time if war should break out In actual time of war only a certain proportion of the population can be with the colours It is all to the good that military training should be widespread, and that material for the regiments should be recruited in a more or less trained condition but civilian business of the country must be carried on, even with increased activity in many directions, and for this a large body of men is required A great deal of military work, strictly military work, must be done by people who remain at home, and while some businesses will inevitably decline during war the ordinary wants of the population at such a time are modified, not abolished This country for example cannot raise, equip, and feed an army of a million without employing many thousands of people in more or less special capacities while the bulk of the population still remain with their usual or more than their after touching the animals, so as to prevent the transference of the virus to the eyes or other parts of the body where B tularense might find a point at which to effect an entrance into the human system.

THE TREATMENT OF WOUNDS IN WAR

IT is very important that we should not fail to recognise that in new conditions new forms of treatment may be needed In the present war the conditions are in many respects very different from those met with in civil life, and even from those encountered in previous wars, therefore it is necessary that surgeons should have an open mind to consider without prejudice any new method of treatment which may be brought forward In the present number of THE LANCET we publish a method of treatment of contused and lacerated wounds which Dr Louis Mencière has employed widely during the present war and with which he has achieved no small measure of success It consists essentially in a very free use of antiseptics in the wound, preference being given to the successive application of perchloride of mercury, carbolic acid and peroxide of hydrogen This treatment is followed by the daily use of an antiseptic lotion, which he claims destroys septic organisms while not interfering in any way with the life of the cells of the tissues Dr Mencière gives a full account of the mode of application of his method in his paper, and to that we refer the reader for fuller particulars

PITUITRIN IN ACUTE HEART FAILURE

THE marked action of pituitrin on unstriated and striated muscular fibre, and especially its action on the uterus, has led Professor Zueblin, of the University of Maryland to use the drug in a condition for which it does not appear to have previously been recommended—failing heart when there is demanded an immediate effect which cannot be obtained from the usual cardiac remedies (digitalis, strophanthus &c) In the *Boston Medical and Surgical Journal* of Dec 24th 1914, he has reported a series of seven cases thus treated, of which the following are examples A poorly nourished man, aged 33 years, was suffering from syphilis nephritis and acute dilatation of the heart The præcordial region was bulging and the apex beat was in the seventh interspace in the anterior axillary line Cardiac dulness extended 5¾ inches to the left and 3 inches to the right of the midsternal line A double blowing murmur was heard in the mitral and tricuspid areas The second pulmonic sound was accentuated The pulse was 115 One cubic centimetre of pituitrin was injected subcutaneously On the following day the apex beat was inside the anterior axillary line and cardiac dulness extended to the right sternal border The pulse was 95 and the patient felt more comfortable and showed marked improvement A course of digitalis was then given and he gradually improved The reduction of the cardiac dulness under the pituitrin was remarkable, the transverse diameter diminished 2½ to 3 inches in the 24 hours In another case a carpenter, aged 65 years was suffering from aortic stenosis The præcordium bulged the apex beat was in the sixth intercostal space outside the nipple line Cardiac dulness extended 5½ inches to the left of the midsternal line and 2¾ inches to the right One cubic centimetre of pituitrin was given. On the following day cardiac dulness extended 4½ inches to the left and ¾ inch to the right of the midsternal line The pulse, which previously was 78, had fallen to 70 The transverse diameter of the cardiac dulness was reduced by 3 inches In a third case a man, aged 60 years, was suffering from chronic myocarditis, general arteriosclerosis, chronic nephritis, and anasarca. The heart was so dilated that dulness extended 5¼ inches to the left and 3½ inches to the right of the midsternal line There was a double murmur over the mitral and tricuspid areas, with an accentuated second pulmonic sound Under digitalis and strophanthus he did not improve. There was fluid in the left pleural cavity reaching as high as the fourth interspace The patient was dyspnœic, restless, and cyanotic The pulse was 110, irregular, and compressible There were albumin and granular casts in the urine Pituitrin was given, and 24 hours later cardiac dulness extended 4¾ inches to the left and 1¾ inches to the right of the midsternal line, and the pulse was 80 However, death took place two days later Notwithstanding advanced disease the diameter of the cardiac dulness was reduced 2¼ inches in the 24 hours Professor Zueblin's cases are suggestive, but not numerous enough for generalisation It must also be borne in mind that several writers consider heart disease, arteriosclerosis, and kidney disease contra indications to the use of pituitrin. It may be remembered that obstetricians have also issued warnings against indiscriminate use of the drug In the case of arterial disease in the aged a sudden increase of blood pressure produced by pituitrin might cause apoplexy Under such conditions the drug should therefore be given with caution.

CEREBELLAR SYMPTOMS AND LOCALISATION

AS has not infrequently been the case in the history of medicine, the functions of an organ may appear to be established so satisfactorily by experimental and clinical evidence that under the influence of teaching and text book description they become "classical" Then in turn the "classical" view is questioned, and after a longer or a shorter period the older terminology disappears as fresh data result in the adoption of an entirely new method of envisaging the clinical facts, which evidently have not themselves changed Our knowledge of the functions of the cerebellum has been passing through such a transformation The student has been taught that the "classical" symptoms of cerebellar disease are a swaying, staggering gait, forced movements—"lurching" in one direction or another—ataxia of the limbs, nystagmus, and vertigo But gradually research has commenced to dismember this cerebellar complex. It is tolerably clear that nystagmus and vertigo are due to concomitant disturbance of the vestibular apparatus at least as much as to implication of the cerebellum itself, if not indeed really independent of cerebellar activity The familiar ataxia is now known to be a symptom complex rather than a pure symptom and its place is being taken by a newer conception, asynergy In an interesting review of the present situation as regards cerebellar disease in the *Journal of the American Medical Association*, Dr C K. Mills and Dr T H Weisenburg, of Philadelphia, define synergy as the power or faculty by which movements more or less complex, but functionally definite, are associated in a special act or acts In a broad sense it is motor association, this to see that we maintain an existence worth fighting for The fighting services have the first claim on all who can serve, but the authorities who are responsible for the health and education of the public deserve to be treated with every consideration by their principal administrators The longest possible notice should be given to them by such administrators before leave of absence is sought, and it is getting clear that the difficulty of providing substitutes must be taken into consideration There may soon be a real shortage of medical men. We place the military exigencies first, but all care should be taken that this shortage does not occur in important administrative posts

Annotations.

"Ne quid nimis"

THE CARE OF THOSE BLINDED IN WAR

It is probable that of all the accidental disabilities that can befall a person in the vigour of life none is more distressing or more wholly arouses the pity of all kindly disposed persons than that of complete traumatic blindness Plunged suddenly into a world of unaccustomed darkness without warning or time gradually to accustom himself to his changed conditions, and gradually to develop compensating methods of intelligence, his lot is terrible indeed We understand that 22 such sufferers, including two officers and one noncommissioned officer, have up to now been returned from the front The chances of such an accident happening are, in view of the greater dispersiveness of modern missiles, probably considerably greater than in former wars, and it behoves the country not only to make adequate provision for the skilled care of such patients in the early stages of their injury, so that whatever amelioration of the evil effects is possible may be secured before it is too late, but also to recognise the peculiarly disabling effect of such injuries and to plan for an adequate scheme of compensation The first object has already been taken up, as was indicated in our "War" column last week, and all soldiers blinded at the front are to be sent straight to the 2nd London General Hospital at Chelsea, where provision is being made for them to receive the best of skilled attendance, so that all that can be done shall be done to mitigate the result With regard to the second point, Mr C Arthur Pearson, President of the National Institute for the Blind, enters a most earnest plea in a letter to the *Morning Post* He calls attention to the pressing need for special consideration as regards the question of adequate pensions and allowances, for, as he rightly points out there are many directions in which a blind person has to bear expenses not imposed on those who can see—e g., the necessity for a guide, which doubles the expenses of travelling We trust that systematic efforts will be made to deal in a generous spirit with this large subject

A NEW DISEASE OF RODENTS TRANSMISSIBLE TO MAN

About three years ago, when Dr G W McCoy, of the United States Public Health Service, was investigating the distribution of plague among the hordes of ground squirrels which infest many parts of the State of California, he discovered among them what appeared to be a new disease In conjunction with Dr Charles W Chapin he subsequently made a series of experiments on these rodents as well as on guinea pigs, white rats, and grey mice, and found that while the lesions caused by the new malady resembled those of plague, further examination demonstrated that the disease was due to a specific organism to which the name of Bacterium tularense was given Later it was shown that monkeys were also susceptible to this infection, and it was in consequence expected that the disease would be found in man In a recent communication published in our American contemporary, *Public Health Reports* for Dec 18th last, Professor W B Wherry, of the University of Cincinnati, describes two human instances of this new malady, in which the chief symptoms were acute ulcerative conjunctivitis with enlargement of the preauricular and cervical glands, fever, and marked prostration The first patient was a man employed as a meat cutter in a cheap restaurant, the second being a farmer's wife In searching for the source of infection in these human cases Professor Wherry's suspicion fell on ground game, and shortly afterwards it came to his knowledge that wild rabbits were dying in large numbers in Kentucky and Indiana He procured two of these dead rabbits for examination, and both of them showed the gross lesions caused by B tularense Inoculation experiments on laboratory animals conclusively confirmed the diagnosis One of the above mentioned patients lived about six miles from the spot where the two dead rabbits were picked up Professor Wherry believes that this new disease of rodents may be widely distributed and that extensive epizootics may occur with comparative frequency Both of the persons who were attacked admitted that they had lately been cutting up wild rabbits in preparation for cooking it is thought probable that they conveyed the virus by unwashed hands On the basis of animal experiments it is regarded as possible that ulcerative rhinitis, ulcerative or membranous sore throat, gastro intestinal infection or lymphadenitis, secondary to the skin affection, may also occur as results of the infective process Susceptible rodents can be infected by feeding or by the introduction of infective material into the eye or nose, or through an abrasion of the skin McCoy and Chapin, while searching for a mode of transmission of the disease among ground squirrels, succeeded on two occasions in conveying the malady by means of squirrel fleas Assistant Surgeon N L Wayson, of the United States Public Health Service, has published a paper in which he describes the possibility of experimentally transferring B tularense from infected material to healthy rodents through the agency of stable flies and also common house flies Whether this mode of transmission occurs in nature is not yet proved, but Dr Wayson is continuing his investigations As regards prophylaxis Professor Wherry thinks it advisable to warn all persons who in the course of their duties have to cut up or handle wild rabbits to wash and scrub their hands very carefully sufficient quantity accumulates which is capable of bringing the acidity to the level of about 0.15 per cent. HCl. It is thus easy to reconcile the results obtained by physiologists and clinicians. The initial acidity is 0.5, the final acidity is about a third of this, a degree at which protein digestion in the stomach is most favoured. These facts suggest an explanation of the rapid emptying of the stomach, which radiologists note as indications of duodenal irritation. Many other clinical findings may be illuminated by these useful observations.

PARLIAMENT reopened on Tuesday last, the proceedings being mainly Government business.

The Hunterian Oration will be delivered at the Royal College of Surgeons of England, Lincoln's Inn Fields, on Monday, Feb. 15th, at 4 o'clock, by the President, Sir W. Watson Cheyne, who has chosen as his subject The Treatment of Wounds in War.

THE CHADWICK LECTURES ON WAR AND DISEASE[1]

THE last of the three lectures organised by the Chadwick trustees was delivered at the Royal Society of Arts on Jan. 29th by Colonel F. M. SANDWITH, M.D., the subject being "The Great European War." The chair was occupied by Sir H. TRUEMAN WOOD, secretary of the Royal Society of Arts, and the attendance was again a large one.

Colonel SANDWITH said that every campaign had its peculiar medical dangers, and in such a gigantic war as the present one the dangers were manifold, depending on the climate, the people, and even the soil in the fighting areas. Whilst cholera and other diseases were menacing the German and Russian troops, we could recognise the fact that the attention given to hygiene, besides the value of antityphoid inoculation, saved our troops from great loss due to disease. The sick rate of our troops now at the front was only 3 per cent., and among the Indian troops it was said to be even lower. The following figures relating to typhoid fever were now issued. In the first 421 cases of typhoid fever among the British troops in this campaign 305 were in men who had not been inoculated. In the 421 cases there were 35 deaths, 34 of them in men who had not been inoculated within two years, the other was in a man who had been inoculated once.

One source of trouble in the past had been wound poisoning caused by dirt and resulting in gangrene and tetanus. The latter had attacked the wounded of our own and the enemy in about equal degree. Generally its spasms were more exhausting than painful, but there was great suffering when the patient had an extensive wound and the spasms might produce agonising pain. In the worst cases a fatal end was generally reached on the third day, and the symptoms of the disease usually commenced about ten days after the injury. When this interval was abbreviated the case seldom recovered. In the Aisne district tetanus was common among the ordinary population. Brilliant results had followed the use of antitetanic serum prophylactically. The earlier the prophylactic dose was given the more certain was its good effect, but by the time the symptoms were well established the disease had made great progress. The practice now was the following. On the reception of a wound the first field-dressing consisting of a pad of gauze was applied by a surgeon, a comrade, or by the patient himself. On arriving at the field ambulance this dressing was changed and the patient removed to the clearing hospital where the wound was cleared if possible and painted freely with a solution of iodine in spirit. Where needed the dressing was repeated during the journey to the column or base. Since November a prophylactic injection of antitetanic serum was given to all wounded either at the clearing hospital or the field ambulance. Thanks to the generosity of two anonymous donors, a much-needed improvement in the medical service had lately been added. Hitherto each man had not, like the French soldier, carried his own iodine, but now he did so, in a little glass ampoule, put up by English manufacturers. The importance of this provision it was difficult to overrate.

Gangrene had also claimed its victims in this war owing to the soiling of the wounds, the causal bacillus being that responsible for malignant œdema. The work of Pasteur and Lister finally disposed of the idea that "wound fever" and "hospital gangrene" were spontaneously generated. In 1868 the mortality after amputations in France was 60 per cent., and a well known surgeon at the Charité Hospital said, "When an amputation seems necessary think ten times about it, for too often when we decide upon an operation we sign the patient's death warrant." The bacillus of gas gangrene, being an anaerobe, did not infect superficial wounds, but multiplied in deep wounds and lacerated tissue. He described the usual course of a case of gas gangrene and narrated a typical instance. The subjects of it must be strictly isolated from other wounded men. In the Turkish War of 1877 the Turkish and Greek doctors in charge had no disinfectants except a few basins of quicklime. Repeated attempts had been made to supply a vaccine to counteract the bacillus of gangrene but nothing had yet been achieved to warrant its use on man.

Frost-bite was always liable to occur among troops in cold weather, especially when a high wind prevailed, and if frost-bite did not receive prompt attention it might end in gangrene, and the patient might not be aware of the transition because the freezing process was not a painful one, though that of inducing the blood to return to the part was attended with pain. Sudden warmth killed the tissue and thus precipitated gangrene. In January, 1878 the cold was so intense that 18 of Baker Pasha's sentries were frozen to death in one night, and it became necessary to change the sentries every 15 minutes. Some of the cases of frost-bite in the campaign were grotesque in their ghastliness. Our well fed and well clothed soldiers were not likely to suffer so severely from frost-bite, especially as the women of England had shown a veritable passion for knitting warm articles for the soldiers. The problem as to the best clothing for the men in the cold wet trenches would not be solved by supplying waders, for occasions arose when the soldiers had to move quickly, either in attack or retreat. Perhaps the rubbing of some kind of grease (which would not mix with water) all over the body would be found of some avail. This war differed from other campaigns in its uninterrupted violence. In other struggles there had been lulls during which the combatants could rest and recuperate after periods of excessive strain, for those who had not been at the firing line could not realise the effect on the nerves produced, and the men could only be ensured some respite by organising relays of relief troops. When the first batch of 230 wounded arrived at one of the London hospitals they were in such an exhausted condition that very little could be done for them beyond getting them to bed quickly. They slept the sleep of utter exhaustion, and next day had to be aroused to be washed. But after the first 30 hours they suffered from sleeplessness, they slept lightly, and frequently awoke with a start and shouted, believing they were still being attacked in the trenches. They were not lacking in courage but the nerve strain had been excessive, though a complaint was practically never heard. Sometimes the shell fire had caused transient paralysis of the lower limbs, loss of sensation to heat and cold, and defective vision.

Dr. Sandwith spoke of the plague of vermin which attended campaigns. Bugs were bearers of certain tropical diseases and lice were believed to convey dread diseases which had played havoc in camps in the past. The psychic feeling of disgust at harbouring these pests in men who had been accustomed to clean living was a factor to be reckoned with. It was difficult to cope with the trouble, but instructions had been issued to the troops which it was hoped would minimise it.

Relapsing fever was a febrile illness due to spirochætæ in the blood. The mortality from it was not high, but the attendant weakness incapacitated the patient for a long time. Lice had long been suspected as the carriers of relapsing and typhus fevers but an important factor in the process seemed to be the scratching of the irritating lesion. Lice must be regarded as a menace to ultimate victory, and

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[1] [illegible] appeared in THE LANCET of Jan. [illegible] respectively.

association being carried out in movements of different parts of the same limb or in synchronous movements of the trunk and limbs, or of the head, trunk, and limbs When it is defective from cerebellar disease, motor adjustments are mismeasured, and the result is termed dysmetria. This is the expression which is now replacing ataxia Analysis of the defective movements of the cerebellar patient has been rendered more exact by recourse to the kinematograph In this way the components of the defective movements are readily traceable, and the contention of the more recent investigators of cerebellar function has been corroborated that the underlying basis of cerebellar symptomatology is asynergy revealing itself in dysmetria The physician should note, further, that defect in motor adjustments is discoverable not merely in the cerebellar patient's gait, but also in the use of his limbs, unilaterally or otherwise, or in segments of the limbs, as well as in speaking, eating, and in much else that is done by him This leads in its turn to a further modern conception of great importance—viz , the possibility of localisation in the cerebellum By means of the kinematograph Dr Mills and Dr Weisenburg have shown that asynergy may be confined to the pelvic girdle or to the shoulder girdle, the gait being different in the two cases, though equally cerebellar They have analysed cases, familiar enough to the neurologist, in which the dysmetria was confined to one limb They have recorded a case of hæmorrhage into the antero superior portion of the cerebellum in which the patient showed exquisite asynergy in his tongue, facial and laryngeal movements only Mastication and deglutition were almost impossible because of the asynergy of the involved musculature It is true that more research, clinical and pathological, is requisite ere a map of localised cerebellar function can be made out, but the evidence at present available indicates that on the superior surface of the cerebellum the head and eyes, face, jaws, tongue, larynx, pharynx, neck, and trunk are represented more or less in the middle line, and posteriorly round to the inferior surface in the middle line (vermis) On the superior surface, laterally, is the focus for the upper extremity, right and left respectively, with abduction, adduction, extension, and flexion separable On the under surface is the centre for the lower extremity, in an analogous fashion It is desirable to recognise that this cerebellar "localisation" is not so precise as cerebral localisation There is not likely to be an exclusive localisation for a limb or segment of a limb in the cerebellar cortex Synergic activity of the musculature of the body is so complex that cerebellar localisation must be compound, as it were But the authors insist with reason that a composite has always within it factors or elements which can to a greater or less extent be separated from the entire mass The practical significance of recent work on the cerebellum and its activities is that diagnosis becomes distinctly more exact

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VAGOTROPISM IN INFLUENZAL INFECTION

E Paganelli has recently drawn attention in *Il Morgagni* to the fact that the Stokes Adams syndrome is occasionally met with in an acute form during an attack of influenza, and has shown in four patients that bradycardia and neurocentral phenomena peculiar to the Stokes Adams syndrome, such as syncopal and vertiginous attacks with vomiting, may occur as a special characteristic in some epidemics of this disease The author s cases afford evidence that bradycardia and the rest of the syndrome may be considered due to an affinity of the toxin towards the vagus without the occurrence of myocardiac lesions or lesions of the nervous centres The characteristics of the condition were sudden onset, marked instability of the bradycardia and its modification by the action of belladonna and atropine, a cardio systolic arterial pressure raised in comparison with a co existing arterial hypotonia, and a more or less rapid recovery The attacks were of variable duration from a few to several hours, and repeated in some of the patients at intervals of some hours or even of days The clinical picture was one of gravity, yet in the epidemic of influenza referred to by the author the condition was met with only in four instances out of 40 cases during two months, nor was the course of the disease appreciably aggravated by the occurrence of such acute symptoms

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SELF-REGULATION OF THE GASTRIC ACIDITY

For a considerable time in medical science it has been the established conviction that the acidity of the gastric juice—i e , the quantity of free hydrochloric acid in man and animals—usually varies from 0 1 to 0 2 per cent This figure was arrived at by examining the stomach contents but not the pure juice It was, however, astonishing to find that in the dog's stomach, an isolated portion, the acidity was as high as 0 5 to 0 6 HCl , the same applied to rabbits and cats Later the pure juice of the stomach was obtained in human beings, and in them also the acidity was from 0 32 to 0 47 per cent The acidity is also constant Clinicians, however, still accepted this as definite hyperacidity And this because no one could explain why the gastric juice from the whole normal stomach as distinguished from isolated portions should almost always contain a lower concentration of acid The answer now is that the acidity of different acid fluids introduced into the stomach is reduced during their stay in that organ , the reduction of acidity applies also to its own acid juice How is such reduction effected ? Professor Boldyreff, in the *Quarterly Journal of Experimental Physiology* (1914, vol viii , p 11, quotes some conclusive experiments to show that such reduction is effected by the alkaline pancreatic juice which regurgitates into the stomach such action being itself initiated by the acidity The experiments were performed on dogs Ligature of the pancreatic ducts results in a definite delay of reduction of acidity, and not only so, with such delay there is also a lessening in the rate of emptying from the stomach Ligature of other sources of alkali such as the saliva or the bile, was followed by much less evident diminution of acidity The fact, too, that the concentration of chlorides in the stomach remains constant shows that reduction of acidity is not due to absorption of the acid by the gastric mucous membrane In absence however, of pancreatic juice the acidity can be to some extent lowered by the abundant influx of bile and intestinal juice Apparently there is a general law which extends to all cases A portion of the strong acid fluid passing from the stomach into the intestine provokes an abundant secretion especially of the pancreatic juice , it moreover, provokes antiperistalsis in the intestine, which drives the alkaline secretion into the stomach until a

TERRITORIAL FORCE

Royal Army Medical Corps

Scottish Horse Mounted Brigade Field Ambulance John Eaton Lascelles to be Lieutenant

3rd West Riding Field Ambulance Lieutenant Ernest White, from Attached to Units other than Medical Units, to be Lieutenant

3rd Southern General Hospital Major Arthur P Dodds Parker to be Lieutenant-Colonel (temporary) Captain Robert Ritson to be Major (temporary)

1st London (City of London) Sanitary Company William Dyer Frazer (late Surgeon Captain, Rand Rifles) to be Lieutenant

2nd South Western Mounted Brigade Field Ambulance Major John R Benson to be Lieutenant-Colonel (temporary)

South Eastern Mounted Brigade Field Ambulance Charles Edward Silvester (late Surgeon Captain, Surma Valley Light Horse) to be Lieutenant

1st Northern General Hospital James Leslie Wilson (late Second Lieutenant, Unattached List for the Territorial Force) to be Captain, whose services will be available on mobilisation

2nd Southern General Hospital Robert James Irving to be Lieutenant

4th Scottish General Hospital Lieutenant James H Martin, from Attached to Units other than Medical Units to be Captain, whose services will be available on mobilisation

Sanitary Service Major Charles M Fegen, from 2nd London Sanitary Company, to be Sanitary Officer of the 2nd London (Reserve) Division

Supernumerary for Service with the Officers Training Corps The undermentioned to be Lieutenants for service with the Medical Unit, University of London Contingent, Senior Division, Officers Training Corps William Gilliatt, Richard Drummond Maxwell, and John Henry Ryffel

North Midland Mounted Brigade Field Ambulance Arthur Wellesley McClelland to be Lieutenant

3rd Home Counties Field Ambulance Captain William D Sturrock, from the Unattached List for the Territorial Force, to be Captain (temporary)

3rd South Midland Field Ambulance Lieutenant James G McLannahan, from Attached to Units other than Medical Units, to be Lieutenant

Attached to Units other than Medical Units—Captain Lawrence C V Hardwicke is seconded. Lieutenant Gerald R Rickett to be Captain (temporary) Lieutenant George F R Smith is seconded To be Lieutenants Joseph Patrick Fagan and Evan David Richard Lieutenant Patrick Black and Lieutenant Kenneth Mackinnon resign their commissions

Unattached List for the Territorial Force—Second Lieutenant James L Wilson resigns his commission

Officers Training Corps

University of London Contingent, Senior Division Lieutenant Philip Henry Mitchiner to be Captain (temporary)

TERRITORIAL DECORATION

The King has conferred the Territorial Decoration upon the undermentioned officers of the Territorial Force —Army Medical Staff Colonel James Harper Royal Army Medical Corps 1st West Lancashire Field Ambulance Lieutenant-Colonel John J O'Hagan and Major Henry D'A. Blumberg (attached to the 7th Battalion, The King s (Liverpool Regiment))

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS

The November 1914, issue of this journal, publication of which has been delayed owing to the war contains among articles of topical interest a communication from Lieutenant Colonel C B Lawson and Lieutenant Beckwith Whitehouse detailing the method of treating acute emphysematous gangrene by injection of hydrogen peroxide which was referred to in a leading article in our columns last week Colonel Sir Anthony A Bowlby and Lieutenant S Rowlands s joint report on gas gangrene which was published in THE LANCET of Nov 28th 1914 p 1265 also finds a place in this issue Captain R G Archibald contributes a preliminary report on Some Further Investigations on Kala Azar in the Sudan and Colonel T W Gibbard discusses the apparatus required and the technique employed in the intravenous injection of neosalvarsan in concentrated solution

DEATHS IN THE SERVICES

Lieutenant Colonel Robert Burnet 1st Wessex Field Ambulance Territorials on Jan 25th the result of an accident while riding between Newton St Cyres and Exeter Lieutenant Colonel Burnet was medical officer of health for Cornwall

Colonel Richard Exham C M G late R A M C recently in his sixty seventh year He entered the army in 1871 and served in the South African War 1899 1901 when he was principal medical officer to the Natal Field Force and was present at the defence of Ladysmith (twice mentioned in despatches and Queen s medal with four clasps) He retired in 1905

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last census, 8938 births and 6693 deaths were registered during the week ended Saturday, Jan 30th The annual rate of mortality in these towns, which had declined from 21 3 to 18·0 per 1000 in the four preceding weeks, rose in the week under notice to 19 2 per 1000 of their aggregate population, estimated at 18,134,239 persons at the middle of 1914 During the first four weeks of the current quarter the mean annual death rate in these towns averaged 18 9, against 19 6 per 1000 in London The annual death rate last week ranged from 9·9 in Swindon, 10 3 in Edmonton, 11 3 in Grimsby, 11 7 in Hornsey, and 13 1 in Wimbledon to 28 8 in Merthyr Tydfil, 29 1 in Wigan, 30·0 in Ipswich, 30 3 in Rotherham, and 23 6 in Carlisle

The 6693 deaths from all causes were 434 in excess of the number in the previous week, and included 483 which were referred to the principal epidemic diseases, against 454 and 479 in the two preceding weeks Of these 483 deaths, 191 resulted from measles, 99 from whooping-cough, 77 from diphtheria, 73 from infantile diarrhœal diseases, 31 from scarlet fever, and 12 from enteric fever, but not one from small pox The mean annual death rate from these diseases was equal to 1 4 per 1000 and coincided with that recorded in the previous week The deaths attributed to measles, which had been 183, 195, and 206 in the three preceding weeks, fell to 191 last week, and caused the highest annual death rates of 1 8 in Preston, 2 1 in St Helens, 2 3 in Newport (Mon) 2 6 each in Stockton-on Tees and Gateshead, 2 7 in Plymouth, 3 1 in Newcastle-on Tyne, 4·0 in Rotherham, 5 1 in Wigan, and 7·0 in Darlington The deaths referred to whooping-cough, which had been 93, 76, and 93 in the three preceding weeks, further rose to 99 last week, the highest recorded rates from this cause were 1 4 in Bristol, 1 6 in Brighton, 1 7 in Tynemouth, 1 9 each in Dewsbury and Barnsley, 2·0 in Sunderland, 2 4 in Rotherham, 2 8 in Bootle, and 4 3 in Merthyr Tydfil The fatal cases of diphtheria, which had been 77, 63, and 83 in the three preceding weeks, fell to 77 last week, and included 16 in London, 5 in Sheffield, 4 in Birmingham, and 3 each in Manchester, Bradford, and Newcastle-on Tyne The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had declined from 86 to 62 in the four preceding weeks, rose to 73 last week, of which 21 were recorded in London, 5 each in Liverpool and Leeds and 4 in Manchester The deaths referred to scarlet fever, which had been 35, 34, and 23 in the three preceding weeks rose to 31 last week, and included 6 each in London and Manchester, 4 in Birmingham, and 2 in Plymouth The fatal cases of enteric fever, which had been 15, 11, and 12 in the three preceding weeks, were again 12 last week of which 2 each occurred in Stoke-on Trent, Bolton, and Newcastle-on Tyne

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily declined from 5035 to 3836 in the nine preceding weeks, had further fallen to 3647 on Saturday last, 326 new cases were admitted during the week, against 321, 338, and 308 in the three preceding weeks These hospitals also contained on Saturday last 1632 cases of diphtheria, 126 of measles, 51 of enteric fever and 28 of whooping-cough, but not one of small pox. The 1757 deaths from all causes in London were 160 in excess of the number in the previous week, and corresponded to an annual death rate of 20 3 per 1000 The deaths referred to diseases of the respiratory system, which had declined from 562 to 417 in the four preceding weeks, rose to 450 in the week under notice, and were 25 above the number recorded in the corresponding week of last year

Of the 6693 deaths from all causes, 245 resulted from different forms of violence and 519 were the subject of coroners' inquests, while 1900 occurred in public institutions The causes of 63, or 0 9 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Sheffield Leeds, Bristol, West Ham Bradford and in 65 other smaller towns Of the 63 uncertified causes 15 were registered in Birmingham, 7 in Liverpool 6 in Gateshead 3 each in Nottingham, St Helens, and Darlington, and 2 each in London, Southend-on Sea, Rochdale, Halifax, Sunderland, and Tynemouth

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HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2,345 500 persons at the middle of this year, 1196 births and 1003 deaths were registered during the week ended Saturday Jan 30th The annual rate of mortality in these towns, which had been 21·5, 22 8, and 21 7 per 1000 we could not contemplate defeat by disease any more than by armies , hence every soldier should be impressed with the necessity of ridding himself of these pests

This lecture was also illustrated by some very interesting slides, and the thanks of the audience, voiced by the chairman, were very warmly accorded to Dr Sandwith

ROYAL COLLEGE OF PHYSICIANS OF LONDON

MEETING OF COMITIA.

A COMITIA was held on Jan 28th, SIR THOMAS BARLOW, Bart , K C V O , the President, being in the chair

The following gentlemen having passed the required examination were admitted Members of the College Jivraj Narayan Mehta, M D Lond , L R C P John Tattersall, M D Lond , L R C P and William Wilkinson Uttley, M B , Ch B Vict , L R C P (Lymm, Cheshire)

Licences to practise physic were granted to 114 gentlemen who had passed the necessary examinations

Diplomas in Public Health were granted jointly with the Royal College of Surgeons of England Kishori Lál Chandry, M B , B S Punjab, Punjab and University College , Noormahomed Kasembhai Chohan, L M & S *Bombay*, Bombay and Cambridge , Herbert William Fankhauser, M B , Ch B Melb , Melbourne and R I Pub Health , Thomas Marlin, M D , Ch B Glasg , Glasgow and University College , Lucy MacBean Ross, M B , Ch.B Glasg , Glasgow and University College , and Andrew James Shinnie, M D , Ch B Aberd , Aberdeen and University College

The PRESIDENT announced that he had appointed Dr Sidney Coupland to be the Harveian orator for 1915 and Dr J Michell Clarke to be the Bradshaw lecturer for 1915 Also that the Council had appointed Dr Samson G Moore (medical officer of health of Huddersfield) to be the Milroy lecturer for 1916

The following communications were received From the Secretary of the Royal College of Surgeons of England, dated Dec 12th, 1914, and Jan 15th, 1915, reporting proceedings of the Council of that College on Dec. 10th, 1914, and on Jan 14th, 1915, respectively

Dr A G Barrs, Dr H G Turney, Dr H Morley Fletcher, and Dr L Humphry were elected councillors

Sir Francis Champneys, Bart , was elected a Representative of the College on the Central Midwives Board for one year from April 1st next

Mr Mark Lemon Romer, K C , was elected a senior standing counsel to the College in the place of Lord Parmoor

Sir Dyce Duckworth, Bart , was re elected as Representative Member of the Court of the University of Liverpool Dr S H West was re elected a Representative Member of the Court of Governors of the University of Birmingham

A report was received and adopted from the representative of the College on the General Medical Council

After some further formal business the PRESIDENT dissolved the Comitia

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TYPHUS FEVER IN DERRY —An outbreak of typhus fever has occurred in Derry to the extent of nine cases in the lower lying badly drained parts of that city where there are many dry closets It is hoped that the epidemic is now over

THE WOMEN'S IMPERIAL HEALTH ASSOCIATION — The annual meeting of this association was held at the offices at 7 Hanover square W on Jan 20th when Dr R Murray Leslie took the chair He reviewed the year s work of the association the last five months of which had been largely influenced by the war Among many other activities the association had undertaken the organisation of the Health and Social Section of the Women s Emergency Corps and had registered over 1900 voluntary workers and placed 1364 of these in useful work. The association had also started a Women s Club The chairman referred also to the many other branches of work, all of which had been proceeding satisfactorily The annual report can be had on application to the secretary

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

Fleet-Surgeon William Ernest Marshall has been placed on the Retired List (dated Jan 20th)

The following appointments are notified —Fleet Surgeon W H O Garde to the *Revenge* Surgeon M F Caldwell to the *Vivid*, additional, for disposal Temporary Surgeons W H W Cheyne to the *Soudan* Hospital Ship J S Johnson to the *China* Hospital Ship W L Anderson to the *Pembroke III* for R N Air Service , and F A Williamson to the *Pembroke*, additional, for disposal

The undermentioned have been granted temporary commissions as Surgeons in His Majesty's Fleet —David Revell Bedell Sivright and George Stivala Aspinall

ROYAL NAVAL RESERVE

The undermentioned Acting Sub-Lieutenant has been promoted to the rank of Sub-Lieutenant —Dated Dec 2nd 1914 Nigel Adrian Macqueen

The undermentioned have been granted temporary commissions as Surgeons in His Majesty s Fleet —Dated Jan 26th Weir Burns Cunningham and William Little Glegg Dated Jan 27th Alfred George Stewart and Dundas Simpson MacKnight

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon T Turner to the *Pembroke*, additional, for Chatham Hospital

ARMY MEDICAL SERVICE

Colonel Robert Porter is retained on the Active List under Article 120 Royal Warrant for Pay and Promotion and to be Supernumerary (dated Jan 31st)

ROYAL ARMY MEDICAL CORPS

The undermentioned Captains to be Majors —Dated Jan 31st Albert E B Wood, James B Meldon, Charles Bramhall, and Henry T Stack

The undermentioned Lieutenants to be Captains —Dated Jan 28th Basil H H Spence, William B Laird, Robert Davidson, Herbert S Blackmore, James M Elliott Francis R B Skrimshire, Douglas W Bruce Thomas E Osmond Richard T Vivian, Edward G H Cowen, Leonard Buckley, William L Webster, Edward B Allnutt Stanley P Sykes Harry C Todd, Henry J G Wells, Ernest C Deane, Frank S Tamplin, Ivor R Hudleston, William Stewart, Alexander G J MacIlwaine, and Arthur S Heale

The undermentioned officers, Home Hospitals Reserve are granted the temporary rank of Captain —Dated August 6th, 1914 J E Moorhouse Dated August 14th, 1914 D M Barry Dated Jan 4th A B Leakey

The undermentioned to be temporary Captains —Dated Dec 28th, 1914 Temporary Lieutenant Robert Higham Cooper Dated Jan 6th Charles Ravenscroft Stewart Dated Jan 15th Henry Wynyard Kaye

The undermentioned to be temporary Lieutenants whilst serving with the Red Cross Hospital, Netley —Dated Jan 19th Donovan Blaise Pascall and Walter Gibson Marsden

The undermentioned to be temporary Lieutenants —Dated Oct 12th, 1914 Alfred Squire Taylor Dated Dec 15th, 1914 Edward Forbes Dated Jan 1st Robert Hilton Hutchinson, William Herbert Clements, and James Douglas Driberg Dated Jan 2nd Ernest Leon Maunsell Hackett Conway Llewellyn Morgan and Anthony Hagarty Corley Dated Jan 4th Ralph Anderson Hughes Dated Jan 7th Harold Benjamin Day, Harold Kempsey Thomas Burns Marshall, Daniel Brough Edward Verdon Russell Fooks Thomas Langton Butler George Fitzjames Barker Herbert Eustace Clarke Robert Wilkinson Greatorex and Howard George Pesel Dated Jan 9th Robert Cecil Leonard Jerome O Flynn and Bernard Charles Tennent Dated Jan 10th Arthur Riley, Frederick Harris William Ilesworth David, Walter Timothy James Robert [illegible] and Thomas Marron Dated Jan 11th Henry Spellewinde de Boer George Alexander Connell Gordon and David Heron Dated Jan 12th Humphrey Rivers Pollock Cyril Aubrey Smallhorn Bernard Ernest Wall Peter James D Arcy Irvine Finbar John Hunt Albert Jones Robert Francis Jones Robert Yelverton Stones and George Oliver May Dated Jan 14th Arthur Hines Dated Jan 15th Walter Winslow Douglas Green Arthur Charles Douglas Firth Cecil Bunting Claude Hollingworth Philip Thomas Joseph Kelly Clive Justin Hicks Sharp Charles Francis Orr White Robert Campbell Begg Ernest Stewart Dixon, and Maurice Mackenzie

The undermentioned relinquish their temporary commissions with the Allied Forces Base Hospital —Dated Feb 1st Captain Norman Duggan Captain Sidney B Radley, Lieutenant Douglas E Derry and Lieutenant Robert Henry Liscombe

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

Lieutenant William O Lodge resigns his commission prevent tetanus Ragged wounds especially must be trimmed and cleaned M Dalimier reported that he had successfully treated with autovaccines prepared at the Institut Pasteur certain cases of pus infected wounds that had proved refractory to every other treatment M F Debat said that he had used Jacquet's biokinetic method in the treatment of frost bites, and that by this means soldiers carried to his service who were incapable of walking, whose feet were œdematous and ulcerated, were completely cured in eight days M Jousseaume proposed the use of tobacco smoke against body lice Another method is to place the clothing infested with these parasites on an ant-hill The ants will make short work of the parasites M Quenu showed that gaseous gangrene does not appear to be a clinical morbid entity, but constituted the last stage of all gangrene of wounds It is therefore important to deal with such wounds energetically from the very onset of the gangrene, even when the general aspect is benign Trimming the wound is the first measure Injections of oxygenated water or of oxygen have not established their value and can be recommended only as adjuvants to trimming This process should be practised without general anæsthesia, and should be followed by disinfection of the wound In 12 new cases in which M Quenu has used this method he has had no occasion to resort to amputation M Belbèze showed that colloidal gold finds a therapeutic indication in the surgery of war whenever serious infections are found, whether operative or not, generalised or localised, and in extended suppurating wounds M Lannos and M Chavanne have shown that gun deafness may be related to lesions of cerebral origin or to psychic troubles, or that it may attack the labyrinth itself and be accompanied by fracture of the cranium or of the petrous bone, by ruptures of the tympanum, or again may present no other manifestation than a concussion of the labyrinth M Darier pointed out that, speaking generally, serums are indicated in acute infections with fulminant and febrile manifestations, while vaccines are more suitable in atonic, chronic and well localised conditions, in the treatment of ocular tuberculoses Before the Société de Chirurgie M Michaux related his method of treating penetrating wounds of the chest in the surgery of war From the author's observations it is clear that hæmothorax following on penetrating wounds of the chest from gunshot and other wounds of warfare presents itself under two different aspects the one serious, in which death ensues in a few days the other of less grave prognosis and susceptible of cure by good drainage and postero inferior thoracotomy M Sencert dealt with the treatment of penetrating wounds of the abdomen in ambulances at the front In view of the impossibility of interfering under satisfactory circumstances and with adequately sterilised material, the author says that one should content oneself in such cases with immediate and absolute immobilisation, with holding all food Cure will result in those cases in which a clot obliterates the bleeding vessel or in which adhesion closes a perforated coil of intestine It is physically impossible for the surgical personnel of the ambulance when in less than a day the necessary surgical attention has to be given to from 250 to 300 wounded to devote the greater part of the time to doing a few laparotomies Out of 66 wounded abdomens that M Sencert has seen treated in this way, of which it was possible to follow up 58 completely, 45 died and 13 were cured. M. Auvray has done since the end of August 25 trepannings for gunshot wounds of the cranium Nine cases were of wounds relating exclusively to the cranial vault, and 16 cases in which the cranial walls, the meninges, and the brain were involved

Jan 30th

Correspondence.

"Audi alteram partem."

FLOUR PRICES AND BREAD MANUFACTURE

To the Editor of THE LANCET

SIR,—With reference to the article in THE LANCET of Jan 30th on the Dearer Loaf I should like to point out that, assuming a continued increase in the price of wheat, our consideration ought to be given not only to the material from which the loaf is made, but also to the actual method of its manufacture In this connexion aeration of the dough, as distinct from raising it by yeast is worthy of our serious attention It is a well known fact that in the raising of dough by fermentation a considerable loss of nutritive material takes place This loss has been estimated by different observers at from 2 1 to 4 2 per cent., and is mostly represented by the production of alcohol which, since the finished loaf rarely contains more than 0 3 per cent of this substance, is practically entirely wasted Graham estimated that 300,000 gallons of alcohol were lost yearly in London in this way With regard to the loss of bread, Liebig calculated that by using fermentation for the raising of the dough in Germany sufficient bread was lost daily to provide the then German army with their daily bread ration If we consider a population of 40,000,000 and assume that it requires half a pound of bread per head per diem, and that the loss of material by the fermentation process of dough raising is 1 per cent, we shall find that if we use aeration for the dough raising we shall be able to make in the latter case enough bread from the same quantity of flour to feed an extra 400,000 individuals at the same rate of consumption per diem There are many methods of aeration, all of them technically quite simple There are no facts tending to show that aerated bread is less digestible or less nutritious than ordinary bread, and the process of aeration is applicable to all kinds of flour To many palates aerated bread has a less appetising taste than ordinary bread, but, *inter arma silet gustus*

I am, Sir, yours faithfully,

F W TUNNICLIFFE.

Harley street W Feb 2nd 1915.

TUBERCULIN TREATMENT OF PULMONARY TUBERCULOSIS

To the Editor of THE LANCET

SIR —It is gratifying to find from Dr N D Bardswell's article on the Value of Tuberculin, published in THE LANCET of Jan 9th that he has joined the small band of protagonists of the method

The outstanding, and indeed the only unchallengeable figures of his article are, of course, those referring to the bacillary findings, which are in the three preceding weeks, rose to 22 4 per 1000 in the week under notice During the first four weeks of the current quarter the mean annual death rate in these towns averaged 22 9, against 18 9 per 1000 in the large English towns Among the several towns the death rate last week ranged from 8 8 in Motherwell, 15 2 in Clydebank, and 16 2 in Perth, to 28 4 in Coatbridge, 33 5 in Dundee, and 39 5 in Falkirk

The 1009 deaths from all causes were 32 in excess of the number in the previous week, and included 128 which were referred to the principal epidemic diseases, against 92 and 98 in the two preceding weeks Of these 128 deaths, 82 resulted from whooping cough, 15 from infantile diarrhœal diseases, 12 from scarlet fever, 10 from diphtheria, 6 from measles, and 3 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 2 8, against 1 4 per 1000 in the large English towns The deaths attributed to whooping cough, which had increased from 28 to 58 in the five preceding weeks, further rose to 82 last week, of which 45 occurred in Glasgow, 25 in Dundee, 4 in Edinburgh, and 2 each in Aberdeen, Leith, and Motherwell The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 17, 7, and 8 in the three preceding weeks, rose to 15 last week, and included 8 in Glasgow and 2 in Dundee The fatal cases of scarlet fever, which had been 13, 9, and 16 in the three preceding weeks, fell to 12 last week, of which 6 occurred in Glasgow and 2 in Paisley The deaths attributed to diphtheria which had been 21, 10, and 8 in the three preceding weeks rose to 10 last week, and included 3 in Glasgow and 2 each in Edinburgh and Aberdeen The deaths referred to measles, which had been 7 in each of the three preceding weeks, were 6 last week, and comprised 3 in Dundee, 2 in Greenock, and 1 in Paisley The 3 fatal cases of enteric fever were registered in Glasgow

The deaths referred to diseases of the respiratory system, which had been 265, 275, and 238 in the three preceding weeks, rose to 272 in the week under notice, 30 deaths resulted from different forms of violence, against 35 and 30 in the two preceding weeks

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HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland with an aggregate population estimated at 1,212,380 persons at the middle of this year, 680 births and 575 deaths were registered during the week ended Saturday, Jan 30th The annual rate of mortality in these towns, which had declined from 27 8 to 24 0 per 1000 in the four preceding weeks, rose to 24 7 per 1000 in the week under notice During the first four weeks of the current quarter the mean annual death rate in these towns averaged 24 9, against 18 9 and 22 9 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 29 8 in Dublin (against 20 3 in London and 21·6 in Glasgow) 20 4 in Belfast 26 5 in Cork, 21 5 in Londonderry, 20 3 in Limerick, and 32 3 in Waterford, while in the 21 smaller towns the mean death rate was 22 9 per 1000

The 575 deaths from all causes were 18 in excess of the number in the previous week and included 32 which were referred to the principal epidemic diseases, against 48 and 35 in the two preceding weeks Of these 32 deaths, 11 resulted from whooping-cough, 8 from infantile diarrhœal diseases, 4 each from measles and scarlet fever, 3 from diphtheria, and 2 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 1 4, against 1 4 and 2 8 per 1000 in the English and Scotch towns respectively The deaths attributed to whooping-cough, which had been 11 10, and 9 in the three preceding weeks rose to 11 last week and included 4 in Dublin, 3 in Belfast and 2 in Dundalk The deaths of infants (under 2 years) referred to diarrhœa and enteritis which had been 11, 14 and 4 in the three preceding weeks rose to 8 last week and comprised 5 in Dublin and 3 in Belfast The fatal cases of measles which had been 6 12 and 15 in the three preceding weeks fell to 4 last week and comprised 2 each in Dublin and Belfast The 4 deaths attributed to scarlet fever of which 3 were registered in Belfast and 1 in Dublin were equal to the average in the three preceding weeks Of the 3 deaths referred to diphtheria 2 were recorded in Cork and 1 in Kilkenny The fatal cases of enteric fever occurred in Dublin and Clonmel

The deaths referred to diseases of the respiratory system which had been 139 164 and 137 in the three preceding weeks, rose to 160 in the week under notice Of the 575 deaths from all causes 194 or 34 per cent, occurred in public institutions and 12 resulted from different forms of violence The causes of 19, or 3 3 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest in the English towns the proportion of uncertified causes did not exceed 0 9 per cent

PARIS

(From our own Correspondent)

French Medical Men in the Army

Professor Tuffier, at the annual meeting of the Societe de Chirurgie, recalled the era of 1871, when the same enemy defiled the soil of France, and paid a well merited tribute to the devotion of the French Military Medical Service He expressed a cordial greeting to those doctors who had the perilous honour of serving at the front, and made a rapid survey of the work done and the courage displayed by the medical service since the beginning of the war At the end of December, of the 14,000 French surgeons on military duty 6500 were still serving with the armies, while 1300 had been placed *hors de combat* (93 killed, 260 wounded, 440 missing, and 507 invalided) M Dercle medecin major of the first class, who is now under treatment, sustained near Mezières 97 shrapnel wounds Medical officers have been mentioned in orders 155 times, and there have been awarded to them 15 ribbons and 63 crosses of the Legion of Honour, also 11 military medals Professor Tuffier related what he had seen and heard at the front concerning medical officers who, having fallen into the hands of the German medical officers, were robbed, not only of their canteens and surgical instruments, but of their cloaks and their crosses, everything, even their spurs, being taken from them. He also described how a German officer at Mercy le Haut robbed and tried to murder an auxiliary medical officer, an interne of the hospitals, and told how a German patrol of Pomeranian infantry murdered 40 wounded

The Health of Paris

The mobilisation of a large number of medical men for the armies gave rise to a dread of what might happen from a paucity of medical practitioners This fear, however, has proved unfounded It is true that medical men of all ages are liable to mobilisation, but there still remain at their civil posts those on the Retired List, the auxiliaries not called up, and those yet mobilisable whose class has not yet been called on and who have not applied to be attached for service, as well as a considerable number of foreign medical men The hospitals go on as usual in all their departments, the absent medical staff being replaced by an increasing number of *confrères* The general condition of Paris is, moreover, excellent, and this is due to several causes there are fewer vehicles in the streets, and hence fewer floating microbes the consumption of alcohol has markedly diminished, consequently there is less drunkenness Notwithstanding the mass of refugees naturally in a state of great depression and frequently accommodated most uncomfortably, the number of appeals for free assistance is not in excess of what was the case before the commencement of hostilities Evidently the medical men of Paris cannot spare themselves but they are not worrying over it The drugs that have become exhausted are easily replaceable, for the German products which before the war were used in large quantities all have their French equivalents

Medical Life in Paris

Before the Academie de Medecine M Sieur has urged the necessity for no delay in the disinfection of wounds, particularly shell wounds, to were prescribed for constant wear, with the result the patient's headaches and fits of depression ceased

The fact is, these cases require a great deal more care to be taken in estimating the amount of refractive error and its correction than some surgeons are able or willing to give, it is not sufficient to do a retinoscopy, place the correcting lenses thus found in the trial frame, record the effect, and then write the prescription The objective examination is only a means to an end, the end is the result obtained subjectively, and to get this perfect entails investigation not only with the ordinary Snellen's type but with Prey's letters, and the astigmatic fan, checking the upshot with crossed cylinders, and finally, each eye having been tested separately, a trial should be made with both eyes together I am, Sir, yours faithfully,

Harley street W Jan 30th 1915. REGINALD EVERSHED

FROST-BITE

To the Editor of THE LANCET

SIR,—In the various articles on frost bite no really specific treatment has been suggested, and I venture to call attention to a remedy which I and my colleagues, Dr P G Lewis, Dr J H F Wilgress, and Dr T Streatfeild, have found effective at the Army Nursing Homes at Folkestone Peroxide 5 per cent solution with tincture of iodine 1 drachm to the pint, applied as a compress for 12 hours, followed by dry boracic wool bandages These applications relieve the pain, and the capillary circulation is improved, the sores are healed, and the sensation in the toes soon returns Tried side by side with other remedies, this procedure has given far and away the best results

Many of the cases appear to be caused by constriction of the vessels, due to wet and contracted garments This bears out the theories of Sir Alfred Keogh and Mr A W Mayo Robson The œdema and condition generally is more like that produced by long bandaging, and those who suffer most have generally been standing a long time in wet trenches, a factor predisposing to constriction and œdema, thus rendering the tissues vulnerable to cold This treatment is excellent for chilblains also I am, Sir, yours faithfully,

Folkestone Jan. 2[illegible]th 1915. LENNOX WAINWRIGHT

THE LATE MR BRYANT IN THE OUT-PATIENT ROOM

To the Editor of THE LANCET

SIR,—The obituary notice of Mr Bryant in THE LANCET of Jan 9th did not mention the excellent method adopted by this remarkable surgeon in his out patient clinique As one whose privilege it was to attend Thomas Bryant's out patient room over a lengthened period and to receive considerable benefit therefrom I would like to place on record the plan he adopted in order to educate the student's powers of observation and tactile sense by having a succession of cases representing various phases and modifications of each particular class of disease, in the hope it may commend itself to other teachers

The patients were classified in the waiting room, and those of each class were given thick hexagonal cards of a special colour Thus breast cases had red cards venereal ones blue, deformities white &c Each set was seen in succession and the points in diagnosis, prognosis, and treatment insisted upon Breast cases may be taken as an example Mr Bryant would dilate on the importance of adhesion of the skin as an early sign of cancer, and we were shown how this was to be recognised and we were encouraged to bring out the significant puckering ourselves A second case would show early implication of the glands, while a third would be an example of benign tumour This thoroughness in clinical teaching quickened and sustained the student's interest in a remarkable degree, as was shown by the large and regular attendance of those who were desirous of acquiring real and lasting knowledge of surgery

I am, Sir, yours faithfully,

Harley-street, W Feb. 1st, 1915 CHARLES W CHAPMAN

THE PHARMACOPŒIAL DOSE

To the Editor of THE LANCET

SIR,—I am afraid your correspondent, Mr George Foy, in your issue of Jan 30th, has rather missed the point of my letter on the above subject My main object was to secure clear and definite guidance from the medical profession in cases where it was found necessary to order more than the pharmacopœial dose of any active official drug The method by which such guidance might be given was a subordinate consideration, which I felt was entirely a matter for the discretion of practitioners themselves. The practice indicated by Mr Foy would be quite consistent with the suggestion I ventured to make

I am, Sir, yours faithfully,

W J UGLOW WOOLCOCK,
Secretary Pharmaceutical Society of Great Britain.
Bloomsbury square W C Jan 30th 1915

LEECHES AND THE WAR

To the Editor of THE LANCET

SIR,—With regard to Professor A. E Shipley's letter in THE LANCET of to day's date, may I say that owing to a conversation I had in the autumn of last year with Professor Shipley, he very kindly interested himself to obtain for us a small supply (about 200) of Limnatis granulosa Some of them are of an enormous size, but I am informed they are perfectly good to use, and that they will absorb from 4 to 6 drachms of blood

We shall be pleased to supply any urgent order to brother pharmacists The price is 18s per dozen, and the proceeds are to be given to the Belgian Doctors' and Pharmacists' Relief Fund, so that it will be doing a good turn to our friends in distress

I am, Sir, yours faithfully,

JOHN D MARSHALL,
Managing Director John Bell and Croyden, Limited.
50 Wigmore-street W Jan 30th 1915.

BLUE PUS AS AN OMEN OF RECOVERY

To the Editor of THE LANCET

SIR,—The occurrence in a suppurating wound of blue pus, the product of the bacillus pyocyaneus, is a comparatively rare phenomenon, which can hardly be overlooked on account of the distinctive colouration of the dressings During the past six months I have seen a dozen of these cases occurring chiefly, but not invariably, among the wounded sent home from the front The cases are usually compound septic fractures caused by shrapnel, and these when first seen discharge the "liquid mud" so commonly found in wounds infected in France and Belgium After several tantamount to a statement that, no matter how rigidly controlled such figures may be, it is impossible to evade the fact that tuberculin, judged even from the immediate results of a few months' treatment, is of considerable therapeutic value—a fact which, by the way, suggests that, in the majority of cases at least, a trial of this treatment is not only justifiable but definitely indicated. The tables of general results, which admittedly do not point the same moral, are unfortunately inadmissible as scientific evidence In the first place it is generally recognised that clinical examination alone is insufficient evidence on which to found definite statements as to arrest, and that the gross, unstandardised changes on which are based such elastic terms as "much improved," "improved," &c, are to be found in the majority of cases (tuberculin treated or not) suddenly translated from normal to sanatorium existence, this, apart from the fact that within a few weeks of dismissal these judgments might have to be entirely altered Moreover, Dr Bardswell, whilst attempting to mix incompatibles—to wit, "arrests" and "much improveds"—has omitted to state (1) whether in all cases the diagnosis of T B + was made on identical methods of examination of sputum, (2) what the average stay in the sanatorium was in each group, and (3) the average duration of specific treatment in the tuberculin groups More important still, he does not indicate what was the method of selection of tuberculin cases, and whether the selection and treatment were carried out invariably by the same person If, as one part of the article seems to suggest, selection was made by actual trial injections, then a percentage of early and favourable cases must have been omitted from the tables, because the sensitive reaction of many such cases is notorious, if, on the other hand, selection depended on clinical signs or temperature or general condition on admission (and this so generally poor), then a percentage of advanced or slightly febrile cases must have been omitted, cases which are recognised to improve most astonishingly during a course of tuberculin The question of administration, either by the same individual or at least by a series of unbiassed observers using identical methods, is the more crying that many of the recent reports "on the value of tuberculin" have really merited the title of reports "on the value of tuberculin when given tentatively" or "experimentally," or "grudgingly," or "in an amateur fashion" There is one other point which deserves notice, although perhaps it is a minor one, and it is that the dangers noted after reactions—i e, extension of disease, increased activity, pleurisy and pneumothorax—are, unfortunately, as the Registrar General will testify, the dangers of the disease itself At the same time, one can cordially agree with Dr Bardswell in his appeal for a more scientific and critical spirit in the investigation of the value of tuberculin, always keeping in remembrance that critical investigation ought, in point of time, to follow scientific observation, because even in the kingdom of therapeutics the critic does not of necessity constitute the artist

I am, Sir, yours faithfully,
EDWARD G GLOVER

Salterley Grange Sanatorium Jan 1[illegible]th 1915

*** We had Dr Bardswell's communication some time before its appearance, and take the responsibility for its tardy publication —ED L

AORTIC AND MITRAL REGURGITATION.

To the Editor of THE LANCET

SIR,—In an annotation in your issue of Jan 30th (p 244) you mention the proceedings of the Societe Médicale des Hôpitaux of Paris, at a recent meeting of which society cases of aortic incompetency, occurring in soldiers returned from active service, were recorded There can be no doubt as to the diagnosis in these cases, as the French physicians are such expert auscultators But it would be of much interest to learn whether in those cases with aortic regurgitation who had successfully borne the exertions of severe fighting there was any evidence of mitral incompetence also

I have before this pointed out the advantages which accrue to a patient who, having aortic regurgitant disease, has in addition mitral regurgitation. Dyspnœa is less urgent, and they perform muscular feats which are quite beyond those who only have aortic incompetence And when one considers the close proximity of one segment of the aortic valve with the lower or right flap of the mitral valve, it is difficult to know why a rheumatic poison which attacks an aortic valve does not extend its ravages to the mitral I believe in a great number of cases this extension of endocarditis does take place, for the fibrous tissue of the two adjoining flaps is confluent But in many cases this injury is limited to one valve only, the aortic, and in these I should have expected that dyspnœa would have been a disabling condition. I hope shortly to record some cases tending to confirm this point

I am, Sir, yours faithfully,
SEYMOUR TAYLOR

Seymour street, W Feb 1st, 1915

FAITH AND ASTIGMATISM

To the Editor of THE LANCET

SIR,—Dr S Johnson Taylor's letter under the above heading in your issue of Jan. 30th is typical of the position taken up by those who, having no faith themselves, cannot realise there may be something in the claims of those who have faith, and he is therefore prepared to put down the results obtained by the latter to the effect of "black magic" acting on those whom he classes under the heading of that blessed word "neurotic,' and considers that as a sufficient explanation I am quite sure those of us who do believe in prescribing very low cylinders for constant wear do not consider only the refraction as being the sole cause of insomnia, at any rate, it is my habit as a result of some years experience in general practice to make inquiries on such details as constipation, digestion, &c

As Dr Taylor says, "the proof of the pudding &c, may I quote the following case? Several years ago a patient, not a "neurotic," consulted an ophthalmic surgeon of repute, he was given a prescription 0 50 D cyl axis vertical each eye, and told that he had very slight astigmatism and it was doubtful if it caused his symptoms (depression, headaches), so the glasses might be worn for three months and then if no relief was obtained they could be left off (judging from your correspondent's letter one would imagine he was speaking) Naturally, the surgeon having doub the symptoms did not disappear After the lapse of some years another surgeon was consulted He found that the astigmatism was 0 50 D in one and 0 75 D in the other eye Glasses of this strength and help them during this temporary crisis We have exhausted all the regular methods of obtaining resident doctors, and unless we can procure such help we shall be compelled to close a large part of the establishment, which at the present time would be a great calamity for the sick children of this neighbourhood

I am, Sir, yours faithfully,
W M WILCOX,
Shadwell E., Feb 1st, 1915 Secretary

THE BELGIAN STUDENT AND THE UNIVERSITY OF CAMBRIDGE

To the Editor of THE LANCET

SIR,—The medical profession, generous as ever, has supplied me with enough copies of "Gray's Anatomy" to satisfy the present needs of the Belgian students at Cambridge The publisher and editor have increased my sense of gratitude by presenting some copies of the new edition.

I am, Sir, yours faithfully,
A. E SHIPLEY
Christ s College Lodge Cambridge Feb 3rd, 1915

FUEL SUPPLIES IN WAR TIME

To the Editor of THE LANCET

SIR,—The following two paragraphs from the current press deserve to be noted by all interested in the use of fuel, whether in the domestic grate, the steam boiler, or the factory furnace —

> *Threatened Coal Famine in the Midlands*—Birmingham and the Midlands generally are threatened with a coal famine Not only are householders menaced but manufacturers cannot obtain regular supplies, and if the present scarcity continues some of them will have to close down
>
> A variety of causes have contributed to this, the most important of which probably is the deficiency of miners owing to enlistment
>
> Amsterdam Jan 28th.—An order to economise coal has been issued by the German railway administration at Essen It has further been officially pointed out to housewives that coke is a much cheaper form of fuel than coal and gives a better heat

Here is a point certainly where we may well learn from the enemy It cannot be too widely known—not only by housewives but by factory managers and other large users of fuel—that there are in many districts full stocks of coke, that it is, at the same price per ton as coal, a much cheaper form of fuel, as a much larger percentage of its weight is readily combustible material, that in kitchen ranges 'broken coke is particularly useful, and that recent experiments have demonstrated that coke can be advantageously employed for steam raising with but slight variations in the furnace arrangements It is therefore to the advantage both of the community and of the individual at the same time that the fullest possible use should be made of our coke supplies

I am, Sir, yours faithfully,
Feb 2nd 1915 A STUDENT OF FUEL ECONOMICS

THE National Association for the Prevention of Infant Mortality and the Welfare of Infancy has arranged for an advanced course of lectures on infant care to be delivered at the Royal Society of Medicine 1 Wimpole street at 5 30 P M on Mondays in February March and April The lectures are for voluntary health workers [illegible] and nurses arrangements will be made for consultations at selected centres and those successful at an examination to be held at the close of the course will receive a certificate All particulars can be obtained from M[illegible] Halford 4 Tavistock square, London, W C

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

A MEETING of the Central Executive Committee was held on Jan 28th at the offices of the British Medical Association, when Sir Rickman Godlee and Mr Meredith Townsend announced the despatch of the first box of instruments to Brussels The box was delivered to the International Commission for Relief in Belgium at the Tunnel Wharf, Rotherhithe, and a Courier of the International Fund has taken charge of a letter to the Belgium Medical Committee in Brussels advising that Committee of the contents of the box and asking for reply as to whether similar consignments will be useful

The question of providing clothes for the Belgian refugee doctors and pharmacists and their dependents was discussed at some length, and it was decided that attempts should be made to organise assistance in this direction. Certain steps have been taken and those having wearing apparel in good condition are asked to communicate with Dr Clement Philippe, 3, Hyde Park street, London, W, where prepaid parcels may be sent A voluntary group of sympathisers will assist in the distribution

The payment of the fees for registration of the Belgian refugee doctors now to be admitted to the British roll of practice in this country was considered, but the Committee, speaking generally, did not consider that the Fund should pay these fees, because there seemed to be a discretionary power with the General Medical Council to reduce or remit them. A communication to this effect was made through the chairman of the Committee to the President of the General Medical Council

PROVINCIAL ACTIVITY

In the provinces great activity is being shown A large meeting is being organised at Newcastle-on-Tyne by the local leaders of the medical profession, this meeting will be addressed by Professor Jacobs on Feb 17th

The University of Sheffield, the Sheffield Medico Chirurgical Society, and the Sheffield Division of the British Medical Association having called a general meeting of the medical profession in Sheffield and the district to discuss the objects of the Fund, a committee was formed consisting of the following Professor R J Pye Smith, Professor R Favell, Professor Sinclair White, Professor D Burgess, Professor H R Dean, Dr Sophia Witts, Dr A J Hall, Mr G Wilkinson, Mr Graham Simpson, Dr A G Yates Dr H. Leader, Dr A W Forrest, Dr A Forbes, Dr R. Gordon, Mr W Longbottom, Dr E Hargreaves, Dr C Wiseman, Dr J Stokes, and Dr R W Innes Smith. Dr A E Naish, Westholme, 5, Clarkehouse road, Sheffield, is acting as honorary secretary and treasurer to the Fund. A resolution was passed to instruct the committee to find out what offers of hospitality to refugees there might be from doctors in the district Donations to the amount of £141 15s were promised at the meeting

From Birmingham a further list of subscriptions from both doctors and pharmacists has been received, and the Exeter Division of the British Medical Association (honorary secretary and treasurer, Mr A. C Roper, The Shrubbery Exeter) makes a good first appearance Both these local funds are still open

In Manchester the movement will soon take force, as a strong local committee is being formed.

weeks of desperate illness a tinge of green is noticed on the previously mud coloured dressings In a couple of days the colour intensifies to a vivid bluish green, which lasts a few days and then gradually fades, the total period of blue colouration averaging seven to ten days Coincidently with, or immediately following the appearance of the blue pus, the patient's condition improves, and by the time that the blue colouration has disappeared the wounds are covered with healthy granulations and convalescence is established.

This sequence has been almost invariable, so much so, indeed, that, given a patient desperately ill from acute sepsis, in whose wounds blue pus appears, I now venture to predict that the patient is on the road to recovery, and this prediction is nearly always verified Clinically, the above phenomena suggest that the bacillus pyocyaneus has been present from the onset of the infection, but has been held in abeyance by the other pyogenic bacteria, and that as soon as the tissues begin to get the better of these bacteria the bacillus pyocyaneus is able to multiply rapidly In none of the cases seen was there any suspicion of infection from a previous case showing blue pus, in fact, the blue pus was nearly always limited to a single patient in a ward filled with septic cases

The above note has been written in the hope of eliciting (1) the opinion of bacteriologists explaining why the appearance of blue pus, in intensely septic cases, is so often the harbinger of recovery, and (2) the experience of those surgeons who are treating the wounded from the front, as to whether they have found the appearance of blue pus in septic wounds to be a favourable omen

I am, Sir, yours faithfully,

Plymouth Jan 27th 1915 C HAMILTON WHITEFORD

LICE AND RHEUMATISM AMONGST SOLDIERS

To the Editor of THE LANCET

SIR,—The discomfort and pain caused by vermin and rheumatism to our soldiers are so great that every effort should be made to destroy these pests and relieve rheumatism In the first edition of my "Pharmacology," published in 1885, I mentioned (p 1105) five remedies for pediculi—viz, baking clothes to destroy the ova, mercury, anise, pyrethrum, and stavesacre In the third edition, published in 1893, I added to this list chloroform, cocculus indicus, dalmatian flowers, essential oils, laurel leaves, petroleum, and quassia. The conditions of life on active service make it almost impossible to employ any parasiticide excepting in the form of an ointment In the *Morning Post* of Jan 14th there is a recommendation to employ mercurial ointment smeared upon one thick woollen string worn round the neck and another round the waist This is a very simple method and seems worthy of a trial In hospital practice the white precipitate ointment of the strength of 1 in 10 for the body and 1 in 5 for the pubis or else stavesacre ointment are more usually employed. Cantani, in his "Farmacologia Clinica," second edition, vol ii, p 212, recommends pyrethrum ointment as most efficacious against both forms of lice It is made by mixing one part of pyrethrum with two of lard Many essential oils such as eucalyptus, seem to have a similar beneficial action to anise or pyrethrum Anise is particularly useful in keeping away fleas, and an easy way of employing it is to carry about on one's person a small muslin bag filled with anise seeds

In some cases, at least, of rheumatism sulphur is an exceedingly useful anti rheumatic Many years ago, with the conceit born of ignorance I considered the statement that powdered sulphur worn inside the stocking is a cure for rheumatism to be only an old wives' fable I learnt my mistake from a case which occurred in my own practice I was seeing at fairly regular intervals for albuminuria a thoroughly skilled scientific chemist One day he asked me to prescribe for his wife who was suffering from rheumatic pains in her hands which prevented her from sewing This was to her a very serious matter as she added much to their joint income by embroidering altar cloths and the like I gave him a prescription as requested, and at our next interview I asked him how his wife was "Oh," he said, "she is quite well" I was much pleased at this, and was taking the credit for the cure to myself, when he told me that the medicine I had given her had done her no good at all, but a friend had told her to powder the inside of her stockings with sulphur and wear them all night In a short time this completely cured her, and her husband said the sulphur must have been absorbed through the skin of her legs, passed through her body, and been excreted by the skin of her arms because her silver bangles became black This remedy is simple, cheap, and easily applied, and might be useful in the case of our soldiers I hardly think it could do any harm whatever, though I have no experience of the effect of sulphur continuously applied to the skin for some weeks together, but at any rate I think it is worth a trial —I am, Sir, yours faithfully,

LAUDER BRUNTON

New Cavendish-street W, Feb 3rd, 1915

A MISUNDERSTANDING

To the Editor of THE LANCET

SIR,—I see a paper in THE LANCET of Jan 30th by Dr E T Jensen, and under the heading he is described as "Physician to the Special Hospital for Officers, Kensington Palace Green" This is a mistake Dr Jensen was one of the signatories to a letter to the press urging the need for such a hospital But the staff of the hospital has been chosen from those who signed and from the rest of the profession Dr Jensen is not to blame in any way for the mistake He was justified in thinking that the staff included all the signatories to the letter—in fact, I had in another letter alluded to the signatories as the staff So the mistake is mine, and I regret to have placed Dr Jensen in a false position.—I am, Sir, yours faithfully,

Eaton-square S W Feb 1st 1915 KNUTSFORD

To the Editor of THE LANCET

SIR,—Lord Knutsford has shown me his letter to you, and I quite appreciate his explanation

I am, Sir, yours faithfully,

Harley street W Feb. 1st 1915 E T JENSEN

THE SHORTAGE OF RESIDENT MEDICAL OFFICERS

To the Editor of THE LANCET

SIR—May I appeal through your columns for help in carrying on the work of the East London Hospital for Sick Children Shadwell, E It is possible there may be doctors who if they knew of the difficulties under which hospitals are now labouring would be willing to come into voluntary residence

	£	s	d.
Dr J S S Perkins	1	1	0
Mr Russell Combe	1	1	0
Dr R. Hedden ..	1	1	0
Northants Division B M A. (per Dr Hichens Hon. Sec)—			
Dr H Staines Baker	1	1	0
Dr F S D Hogg..	1	1	0
Dr William Skelly ...	1	1	0
Mr Percy Flemming ...	3	3	0
Mr Waren Tay ..	1	1	0
Mr R. C Bailey	5	5	0
Dr F S Macintosh ...	1	1	0
Dr T T Whipham ...	3	3	0
Mr C A. Ballance	3	3	0
Mr George Morgan ..	1	1	0
Birmingham Local Committee (per Dr R. Saundby Hon. Sec.)—			
Dr and Mrs John Frew proceeds of Whist Party	8	0	0
Dr Robert B Coleman..	2	2	0
Dr J G Emanuel	2	2	0
Dr W A. Loxton ..	2	2	0
Dr W J McCardie	2	2	0
Dr W Fraser Annand	1	1	0
Dr G F Blake ..	1	1	0
Dr Fred. H Haynes	1	1	0
Dr B Seymour Jones ..	1	1	0
Dr Ina S McNeill	1	1	0
Dr G Hyde Melson	1	1	0
Dr R. Arthur Newton ..	1	1	0
Dr B Lewis Paton	1	1	0
Dr H C Quirke	1	1	0
Dr N O Roberts ...	1	1	0
Dr G Jackson Smith	1	1	0
Pharmaceutical Society Members of Board of Examiners for England and Wales—			
Mr Charles T Allen	2	2	0
Professor A. W Crossley ..	2	2	0
Mr F W Gamble	2	2	0
Mr W F Gulliver	2	2	0
Mr F F Harrison	2	2	0
Mr H J Kluge ..	2	2	0
Mr P H Marsden..	2	2	0
Mr A. R Melhuish	2	2	0
Professor H W Phillips ..	2	2	0
Mr W F J Shepheard	2	2	0
Mr T Tickle ..	2	2	0
Mr Edmund White President ..	2	2	0
Mr E T Nethercoat Vice-President ..	2	2	0
Messrs Woolley Sons and Co Limited	20	0	0
Eastbourne Pharmacists Association (per Mr D Marchant)	2	2	0
Mr Edmund White President Pharmaceutical Society ..	5	0	0
Mr D Gilmour ...	1	1	0
Messrs C J Hewlett and Son Limited	2	2	0
Mr W L. Howie	1	1	0
Mr M T Evans ..	0	10	0
Mr N S Smith	0	5	0
Mr C Fielding	0	10	0
Mr M T Foster ..	0	10	6
Mr J R. Ball (second contribution)	0	2	0
Dr D Charteris	0	10	0
Peterborough Pharmacists Committee collected by second list (per Mr J W Bodger)—			
Messrs. Best and Goggs	0	10	6
Mr W H. Turner ..	0	10	6
Mr C H. M. Baxter	0	5	0
Mr J Palmer	0	5	0
Rochdale Pharmacists Association, collected by (per Mr J Kershaw)—			
Mr W Bamford	2	0	0
Mr E Thomas ...	1	1	0
Mr G S Dean ...	1	1	0
Mr J Kershaw ..	1	1	0
Mr L. Etherington	0	10	6
Mr R. Whitaker ...	0	10	6
Mr H. Holt ..	0	10	6
Messrs Mercers Ltd.	0	10	6
Mr S Hall	0	10	0
Mr J R. Smalley ..	0	5	0
Mr A. F Corfe ..	5	0	0
Mr J P Cave	1	1	0
Mr H Barrett ...	0	10	6
Birmingham Pharmaceutical Association collected by third list (per Mr F Smith)—			
Mr F H. Prosser ..	2	2	0
Mr C Thompson ..	2	2	0
Mr J H Cullwick	1	1	0
Mr A. Yeates ..	1	1	0
Mr A. F Goode ..	1	0	0
Mr W E Boyle ...	0	10	6
Mr T. H Butler	0	10	6
Mr W H. Richardson	0	10	6
Mr T Batty ..	0	10	0
Mr O T Edwards..	0	5	0
Miss M. E White ..	0	5	0
Mr D R. Whitley...	0	5	0
Mr Sidney S Brown ...	1	1	0
Dr J W Browne	1	1	0
Dr Langdon Brown ..	2	2	0
Dr C Hubert Bond ..	2	0	0
Bolton Division B M.A. (per Dr O'Neill, Hon. Sec.)—			
Dr J Young ..	2	2	0
Dr R H. Robbins ..	1	1	0
Canterbury and Faversham Division B M.A. (per Mr Neil Robson Hon. Sec)—			
Dr J S Clark	1	1	0
Sir William H Bennett K.C V O	5	0	0
Victoria (Australia) Medical Benevolent Association (per Dr Edward L. Gault Hon. Sec.)	100	0	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A Des Vœux, at 14, Buckingham gate, London S W, and should be made payable to the Belgian Doctors' and Pharmacists Relief Fund and crossed Lloyds Bank, Limited These will be acknowledged by post direct, and a list will appear in THE LANCET weekly

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries acknowledges with thanks the receipt of surgical instruments kindly contributed by the following donors since the publication of the last list —

Dr Robert Sinclair, Dundee D R. H Rowell Newcastle on Tyne Dr H Beckett Overy Lowndes-street S W, Dr H M Morgan Lichfield and Dr Ethel Lamport per Mrs H F Gethen Long Sutton Winchfield

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HUNTERIAN SOCIETY —The annual oration will be delivered by Dr H Russell Andrews on William Harvey's Work on Midwifery at 9 P M on Wednesday Feb 10th at the Barbers' Hall, Monkwell street E C

Obituary.

BASIL GORDON MORISON, M.D EDIN

Dr Basil Gordon Morison, whose death occurred on Jan. 28th at the age of 60, was the younger son of Surgeon A. C Morison, of the Bengal Native Infantry in the Honourable East India Company's Service His grandfather, Sir Alexander Morison, of Bankhead, Midlothian, was also a physician of London and Edinburgh. At the University of the latter city Dr Morison received his medical education, graduating in 1878 with first-class honours and being *proxime accessit* to both the Ettles and Beaney prizes After graduation he became a demonstrator of anatomy to Professor (now Principal) Sir William Turner While in this position he did his work acceptably and wrote a paper on the Arrangement of the Azygos and Superior Intercostal Veins in the Thorax,[1] in which he described a new and almost constant venous junction He then joined his elder brother in practice in the north of London, and it was, perhaps, unfortunate that he did so, for the quality of his work, his finished literary style, and his excellent draughtsmanship fitted him for scientific work and record But the future of the young scientist is always uncertain and—one must live He therefore settled in London in 1879

Thirty six years ago the centres of medical activity in the metropolis were less accessible from the suburbs than they are now Islington at that time had but one medical society—the Islington Medical Society—which contained some members of the highest type of private practitioner The meetings were, however, held in the private houses of members and were thus unsuitable for the exhibition of morbid specimens Basil Morison, imbued with scientific ardour and cherishing a high ideal of his profession as a liberal calling, together with some others founded the Æsculapian Society in 1880, which practised the whole scientific method, observed all ethical proprieties, and Morison himself hoped it might also lead to the abolition of the practice of pharmacy by the family physician But for his anxious care of the new society it would have foundered soon after it had been launched thanks to it, it floated into deep water and still exists with a considerable membership, meeting at the Metropolitan Hospital and doing useful work in North London Many of its members gathered in Abney Park Cemetery on Feb 1st to pay their last respects to their friend and laid a corporate wreath upon his grave

All Morison s scientific work, done amid the distractions of a practice carried on with punctilious conscientiousness and involving overwork, was of a high order, as is evidenced by his paper on Infantile Diarrhœa read at the annual meeting of the British Medical Association in Liverpool in 1883, by that on Symmetrical Cysts in the Cerebrum, communicated by him and the late Dr Charlewood Turner to the Pathological Society of London, which was beautifully illustrated by Morison himself, and by numerous communications in the transactions of the Æsculapian Society, of which he was for a long time secretary, of which he had been President, and of which he was, at the time of his death, treasurer His ideals of professional life caused him to offer a resolute opposition to the National Insurance Act "For the vacillation of those who

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[1] Journal of Anatomy and Physiology vol. xiii. p 3-6.

Dr Archibald Donald, 2, St Peter's square, Manchester, is acting as honorary secretary, and a meeting of the local medical profession is projected immediately

The Bradford Medico Chirurgical Society has sent £25 to the Fund

Meeting at Liverpool

The meeting of the medical profession of Liverpool and district, held on the invitation of the President and Council of the Medical Institution to hear an address by Professor C Jacobs, of Brussels, took place on Jan 28th It was most successful both in point of numbers and the enthusiasm displayed on behalf of the object for which it was convened The title of Professor Jacobs's address printed on the circular sent to every medical practitioner in the neighbourhood was "Belgium and the Germans the Belgian Medical Corps and the German Occupation"

The President of the Institution, Dr E W Hope, occupied the chair He introduced the subject in fitting terms, and admirably expressed the sentiments of those present who were eager to show their sympathy for Dr Jacobs and his Belgian *confrères* Dr Hope alluded to the parlous condition in which the Belgian medical profession was, and pleaded that their condition could be materially alleviated by liberal subscriptions to the Belgian Doctors' and Pharmacists' Relief Fund through the Liverpool Medical Institution

Professor Jacobs was received with sympathetic enthusiasm, the audience rising and acclaiming him The first part of his address, "Belgium and the Germans," was delivered in French, slowly and deliberately, so that his hearers could readily follow him In forceful language he repudiated the statements of the German professors written to deny the national position of Belgium, declaring that on no occasion, and at no time, did the Belgians ever evince the slightest inclination to be taken under the protection of the Germans He referred in scathing terms to their militarism, which had consummated the destruction of so many priceless monuments of human progress and civilisation, and in considering the present position of the Belgian medical profession and the German occupation declared that many medical men personally known to him had been shot or taken as hostages, while those who had been left alive had suffered plunder, rapine, and destruction of hearth and home Surgical instruments, drugs, motors, horses, and even ornaments in their houses and their clothes had been stolen The patients formerly able to pay their medical advisers were no longer in a position to do so and the source of professional income was strangled "But I appreciate with all my heart," he said, "the noble efforts of the British medical profession and that of neutral countries to stem the rising tide of misery among their professional brethren" At the close of his address Professor Jacobs showed on the screen photographs he had taken himself of the various towns, once so *riantes*, now a heap of ruins

A vote of thanks proposed by Sir James Barr and seconded by Dr Frank H Barendt, was passed amid acclamation

The Liverpool Fund now amounts to over £375, and it is expected that at least £500 will be raised

The British Medical Association and the Fund

At the meeting of the Council of the British Medical Association on Jan 27th the action of the treasurer and chairman of Council in authorising a contribution by the British Medical Association of 100 guineas to the Belgian Doctors' and Pharmacists' Relief Fund was very heartily approved, as was also the action of the chairman of Council in causing an invitation to be addressed to the divisions and branches of the Association to open subscription lists Already, as will have been seen from the lists published from time to time, many divisions have opened subscription lists and made important contributions to the central fund, and the list of subscriptions published below contains record of further contributions received through the divisions

The Week's Subscriptions

Conspicuous among the donations to the Fund announced this week is one of £100 from the Victoria (Australia) Medical Benevolent Association The subscriptions from the pharmaceutical profession are coming in steadily A subscription from the United Hospitals' Club reminds us of the time when St Thomas's Hospital and Guy's Hospital lived face to face in the Borough

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, amounting to £4480, and not including money received by the Scottish or Irish Funds, are as follows —

	£	s	d
Shropshire and Mid-Wales Branch B M.A. fourth donation (per Dr A. G Mackenzie Hon. Sec)—			
Dr Lytle	1	1	0
Dr George G Whitwell	0	10	6
British Milk Products Co	61	5	11
Mr Pridgin Teale	5	0	0
Bradford Medico-Chirurgical Society (per Dr H Johnstone Campbell)	25	0	0
Colonel W T Martin M D	1	1	0
Mr L. A. Dunn	10	0	0
Dr Walter K. Hunter	5	0	0
Mr Walter Thompson	5	5	0
Dr Wm Mearns	1	1	0
United Hospitals Club (per Dr J R Bosworth Hon Sec)	25	0	0
Colonel Harold Hendley M D., I M S	2	2	0
Mr Hugh M. Rigby	2	2	0
Dr I K. Hermon	0	10	6
Mr A. W F Le Dain	1	1	0
Mr C P Crouch	2	2	0
Bury Division B M A. Members and Friends (per Dr P F Braithwaite Hon Sec)—			
Dr R Crompton	1	1	0
Dr F B G Holmes	1	1	0
Dr H. G Deans	1	1	0
Dr S Sugden	1	1	0
Drs J W and A. M Johnson	1	11	6
Dr J M Johnson	0	10	0
Dr H Lawrie	1	1	0
Dr G A. Jelly	1	1	0
Dr H L Strathy	1	1	0
Dr A. Lucas	1	1	0
Dr P F Braithwaite	1	1	0
Girls and Staff of Kensington House Birkenhead (per the Principal Miss Braithwaite)	5	0	0
Dr Eardley Holland	2	2	0
Dr E. Hyla Greves	1	1	0
Dr Lambert Lack	4	4	0
Dr P C W Laws	1	1	0
Mr Harold Chapple	2	2	0
Mr J A Thornton	1	1	0
Exeter Division B M A. (per Mr A. C Roper)—			
Mr A. C Roper	5	0	0
Mr R A. Worthington	2	2	0
Mr B Dyball	3	3	0
Fleet Surgeon H W D Walsh	2	2	0
Mr R J Andrews	0	10	0
Dr R D Stokes	0	10	0
Dr Massy Alleyne	0	10	6
Dr J W Hodgson	1	1	0
Dr E O Kingdon	1	1	0
Dr R Martyn	1	0	0
Dr J A. Pereira	1	1	0
Dr J Mortimer	1	1	0
Mr R V Solly	1	1	0
Dr H Davy	2	2	0
Dr H Andrew	2	2	0
Dr J D Harris	1	1	0
Dr A Ash	1	1	0
Dr Mabel E. Gates	1	1	0
Dr J W Miller	0	10	0
Dr M Cutcliffe	1	1	0
Dr C H Berry	1	1	0
Dr A W Hunt	0	10	0
Dr L. H Toswill	1	1	0
Dr J R R. Pollock	1	1	0
Dr E Archer	3	3	0
Dr W Ashford	1	1	0
Dr C E Liesching	1	1	0
Dr R S Thomas	1	1	0
Dr G H Hanna	1	0	0
Dr J R. Thomas	1	1	0
Dr W F Thompson	2	2	0
Deputy Inspector General S W Vasey R.N	1	1	0
Dr C Beesly	1	0	0
Dr G F Welsford	1	1	0
Dr C J Vlieland	1	1	0
Dr H E Goulden	1	1	0
Dr G W Curtis	1	1	0
Dr G Adkins	1	1	0
Captain L J G Brash R.A.M C.	1	1	0
Dr H W Furnivall	1	0	0
Mr G A. Wright	1	1	0
Dr R. Walker	1	0	0
Dr P M. Deas	5	5	0
Dr J F Wolfe	2	2	0
Dr W Scott Campbell	1	1	0
Dr J H. Rea	1	1	0
Dr E J Pollock	2	2	0
Dr J A Bell	1	1	0
Dr C G E Bennett	1	1	0
Dr R. Lager	2	2	0
Dr F Ellis	1	1	0
Dr C H Maskew	1	1	0
Dr F A. Roper	1	1	0
Dr J A. Goard	1	1	0
Dr D K. Muir	0	10	6
Dr Bertha Mules	1	1	0
Dr C H Wise	0	10	6
Dr R L. Patterson	0	10	0
Dr C Fenwick	1	1	0
Lieutenant-Colonel Weston R A M C	1	1	0
Dr Charles Gordon Gilson	1	1	0
Dr A S Davie	1	1	0
Dr W Gordon	5	5	0
Dr J H F Jerrard	2	2	0
Mr J M Ackland	1	1	0
Dr J H Wheale	1	1	0

TORPEDOING A HOSPITAL SHIP

No doubt the German Admiralty will find some hair which can be split to excuse the murderous attack by a submarine upon the British hospital ship *Asturias* 15 miles off the Havre lightship on Tuesday last But the fact remains that in defiance of humanity and the plain letter of international law a German torpedo was fired at a Red Cross vessel at 5 o clock on a February afternoon, when it was too light for the attack to be made by error Fortunately the attempt failed, but it will not be forgotten

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THE WAR AND THE SHORTAGE OF DOCTORS —At the recent meeting of the Executive Committee of the General Medical Council, Sir Donald MacAlister gave some figures comparing the number of medical students now in attendance with the number at the beginning of the October session, 1913 The figures showed a reduction in the first year students of 49, second year 220, third year 256, fourth year 202, fifth year and higher 312 From these figures it is clear that for the next few years from 200 to 300 fewer medical men will qualify This information has been communicated to the War Office, with a view to releasing for the completion of their curriculum the senior medical students enrolled in the Royal Army Medical Corps or serving with the Red Cross

WOUNDED ALLIES RELIEF COMMITTEE —This committee was established on the outbreak of war to coöperate with the Admiralty the War Office, and the Red Cross Societies for the relief of wounded allies Working in close coöperation with the British and Belgian Governments, it has arranged for 1800 wounded Belgians in hospitals in various parts of England and Scotland, and there are now about 60,000 of these men registered at the committee's bureau of whom about 20 000 are in this country The register is officially recognised by the Registrar General as the source of information concerning Belgian soldiers The committee has arranged, and is now arranging, accommodation for convalescents on leaving hospital It has become clear that the Wounded Allies Relief Committee is faced with a great undertaking and a great responsibility which it is anxious to discharge

The hospitals organised by Dr Haden Guest at the Hotel Majestic in Paris at Limoges and at Nevers are doing valuable work in cordial relationship with the French authorities The funds provided for general Red Cross purposes are only to a very small extent available for other than British wounded and Belgian resources are, by the unhappy situation of that country exhausted In order to meet these great needs which are bound to increase the Wounded Allies Relief Committee appeals for a sum of £100 000 to be spent in the immediate work of the relief of the sick and wounded of our gallant allies Remittances should be sent to the honorary treasurer 217 Strand W C

THE BELGIAN SOLDIERS' FUND —This fund is appealing for regular weekly support in order to provide the Belgian soldiers at the front with a constant supply of food, comforts and warm clothing The need of these men is very great for their own people most of whom are either in the hands of the Germans or refugees in foreign lands are unable to send them the parcels from home that have meant much to the British Expeditionary Force Food is soon used up and clothing soon becomes unwearable from the conditions in the trenches Therefore the Belgian Soldiers Fund is appealing for weekly gifts of groceries such as 1 lb packets of coffee biscuits cocoa lump sugar rice chocolate macaroni split peas or one tin of meat milk jam meat extract &c or one warm garment a week The fund is also sending comforts of food and clothing to the Belgian military hospital Contributions in money or in kind and donations towards field kitchen comforts for providing hot meals to the men in the trenches will be gratefully received by the Secretary the Belgian Soldiers Fund 19 [illegible]-street Oxford-street London W

DUBLIN CASTLE HOSPITAL — This hospital, which is now ready for the reception of wounded soldiers, was thrown open to [illegible] one afternoon last week for inspection by the public The original intention was to provide accommodation for 500 soldiers, but at the suggestion of the War Office the actual number of beds has been reduced to 250 There is little doubt that a much larger number can be put up should occasion require. The several rooms of the State apartments have been fitted up as wards for soldiers, notably the large rooms known as the Throne Room, the Gallery, and the Supper Room They are lofty, bright, and cheerful rooms, well heated, though they have the defect of a northern aspect There are no beds in St Patrick's Hall, which is to be fitted as a recreation room A number of smaller rooms, including those occupied by the King and Queen on their last visit to Ireland, have been specially fitted for officers These rooms contain three or four beds each, and have a pleasant southern aspect The theatre is a large circular room, which is fairly suitable for its purpose Those in charge of the undertaking have made their arrangements with great expedition, and the hospital should be thoroughly efficient

VACANCIES FOR MEDICAL OFFICERS —Captain A Mowat, commanding the Highland Mounted Brigade Field Ambulance Royal Army Medical Corps, writes from the Drill Hall Rose street Inverness, as follows "Medical officers are urgently required for service with the above unit There is also a vacancy for a medical officer for the 4th (Reserve) Cameron Highlanders I shall be glad to give full information regarding pay and duties to anyone who applies to me at the above address "

IN *Le Matin* of Jan 17th appeared the following notice in reference to Mr Bruce Burnside who is now acting as surgeon in one of the French Red Cross hospitals "The President of the French Republic has granted a silver medal of the second class for the saving of life to Dr Bruce Burnside a British subject, who distinguished himself by his courage and his devotion in saving, under particularly perilous circumstances, a child who had fallen into the river Guer, at Lannion, on the 29th of October, 1914 "

JAPANESE RED CROSS SOCIETY —On Jan 29th Queen Alexandra received at Marlborough House the members of this society who have arrived in England for service and are now at Netley The unit, which was presented to Her Majesty by the Earl of Onslow, included Dr Jiro Suzuki, late Surgeon General of the Imperial Japanese Navy and Dr Tsuneyshi Ashima The personnel consists of 2 surgeons, 2 chief nurses, 20 nurses, a secretary, and an interpreter They arrived at Liverpool on Jan 22nd when they were welcomed by Lord Onslow and Surgeon General Sir B Franklin on behalf of the British Red Cross Society and by Mr H Bonar on behalf of the War Office On Jan. 27th Lord Emmott on behalf of the Government, entertained the four leading members of the party to dinner at the Carlton Hotel Mr F Dyke Acland Under Secretary for Foreign Affairs, presiding Similar Japanese Red Cross ambulances have been despatched to France and Russia

WAR GIFT FROM THE IMPERIAL COLLEGE —On Feb 2nd Surgeon General Sir Alfred Keogh, K C B, Director General of the Army Medical Department, was presented with a portable X ray apparatus of the War Office pattern by the staff and students of the Imperial College of Science and Technology At the outbreak of war Sir Alfred Keogh who is Rector of the College was given leave by the governing body to act as Red Cross Commissioner in France, and he was subsequently called back to his former post at the War Office by Lord Kitchener The X ray apparatus will be handed over to the No 15 General Hospital for use at the front Mr A H D Acland chairman of the governors of the College presided over a large gathering, and the presentation was made by Professor J B Farmer on behalf of the staff and Mr R L Carr on behalf of the students

LIEUTENANT-COLONEL M J WHITTY, R A M C, who has held the post of senior medical officer of the Liverpool recruiting area for the past eight years has been appointed medical officer of recruits in the Western Command

IT is announced that Sir Thomas Lipton's yacht *Erin* with a British Red Cross party for the Balkans on board have arrived safely at Brindisi should have been the guardians of the profession in this matter," writes one who knew Basil Morison well, "he entertained some scorn He was the chairman of his division in opposing the panel system, and it is not too much to say that his strenuous exertions in this movement, with an underlying failure of health which he refused to acknowledge, materially hastened the crisis which resulted in his regrettable death"

While he was a man of great determination of character and with a singleness of purpose in the pursuit of right, Basil Morison was among his friends gentleness personified, and he probably had not an enemy He was in the habit of remarking, especially during his last illness, when he at times suspected that his course was run, and expressed a little disappointment that it should be so, that, after all, it was what a man *did* that mattered, not what reward or recognition he obtained for his work Though his material reward was not great, as so often happens in such cases, the inspiration of his example and his memory will be a force for good among his personal friends Three months ago his heart began to fail acutely with an angina sine dolore, and he was removed to the residence of his brother, Dr Alexander Morison, where he was under the joint care of his friends, Dr Leonard Guthrie and Dr George Johnston, and of his brother Perfect rest eventuated in a promising improvement, and he contemplated spending some time with a friend in the country before trying to resume work But accidental exposure on a boisterous day, when he was, brave to the last, rather imprudently but characteristically testing his degree of recovered power, always with a view to working again, caused a recurrence of cardiac failure, and after a week's struggle the end came "He was," writes a personal friend, "a man of deep but unobtrusive religious feeling, attached more importance to the conclusions of St Paul than to those of Renan and Strauss, and died as he had lived in the light of the life to come It is well with him"

In 1887 he married Caroline, the eldest daughter of the late Colonel Herne, of the 103rd Regiment (Royal Bombay Fusiliers) She survives to mourn him with many attached friends

The War.

MEDICAL PRISONERS OF WAR

A FEW weeks ago we recorded the liberation and return to England of three officers of the Royal Army Medical Corps and two British Red Cross surgeons who had been taken prisoners by the Germans whilst attending wounded British and Belgian soldiers, and kept in captivity Vivid accounts of the disgraceful treatment which several of these medical men received at the hands of the Germans appeared in the press at the time, but why the enemy should have chosen to release these particular medical men when there were so many others in exactly the same case has not yet been explained

The Geneva Convention of July 6th, 1906, which replaced the earlier Convention of 1864 was signed on behalf of the German Government, and subsequently ratified by it Nevertheless, the German authorities have obstinately refused to release the British medical personnel captured by them Sir John Byers, in an interesting letter to the *Times* recently, gave cogent reasons why an interchange of medical prisoners of war ought to be arranged without delay But it must not be forgotten that no reasons are really needed for the prompt return to their own side of medical prisoners, since by international law medical men engaged in professional duties are immune from capture Article 9 of the Geneva Convention of 1906 runs as follows —

> The personnel engaged exclusively in the collection, transport, and treatment of the wounded and the sick as well as in the administration of medical units and establishments, and the chaplains attached to armies shall be respected and protected in all circumstances If they fall into the hands of the enemy they shall not be treated as prisoners of war

Article 10 covers the case of British Red Cross surgeons, and begins as follows —

> The personnel of Voluntary Aid Societies duly recognised and authorised by their Government who may be employed in the medical units and establishments of armies is placed on the same footing as the personnel referred to in the preceding article, provided always that the first mentioned personnel shall be subject to military law and regulations

Article 12 provides for the return to their own side as soon as possible of recognised medical officers who have fallen into the hands of the enemy —

> The persons designated after they have fallen into the hands of the enemy shall continue to carry on their duties under his direction, and when their assistance is no longer indispensable they shall be sent back to their army or to their country at such time and by such route as may be compatible with military exigencies They shall then take with them such effects, instruments, arms, and horses as are their private property

Lastly, Article 13 should be quoted, for its terms seem, in many cases if not in all, to have been violated by the German authorities —

> The enemy shall secure to the persons mentioned in Article 9 while in his hands the same allowances and the same pay as are granted to the persons holding the same rank in his own army

The extracts which we have given make it quite clear that the enemy to suit his own purposes has deliberately ignored the Convention to which he was a party The question of exchanging military and Red Cross officers falling into the enemy's hands does not arise The only ground for this repudiation of its duty which Germany could conceivably bring forward is Article 24 —

> The provisions of the present Convention are only binding upon the contracting powers in the case of war between two or more of them These provisions shall cease to be binding from the moment that one of the belligerent powers is not a party to the Convention

With so many nations engaged in this world war, it may, for aught we know, be possible by some quibble to contend that some one or other of the States now at war omitted to sign or to ratify the 1906 Geneva Convention in the precise form laid down and that Germany is thereby absolved from carrying out any duties which happen to be distasteful or inconvenient

THE CASUALTY LIST

For some weeks past the casualty lists have been lighter and we have had to record no names of medical officers in the navy or army as killed wounded, missing, or captured H M S Viknor however, contained Surgeon Vernon Lickfold Matthews, R N, among her officers and it is assumed by the Admiralty that he lost his life with her Lieutenant J R Waddy, R A M C, was reported wounded on Jan 31st

NEWPORT (MON) ROYAL GWENT HOSPITAL.—Resident Medical Officer Salary for first six months at rate of £100 per annum second six months £125, and third six months £150 with board, residence and laundry

NORTHAMPTON COUNTY ASYLUM—Second Assistant Medical Officer Salary £250 per annum with board &c

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £120 per annum with board residence and laundry Also Assistant House Physician for six months Salary at rate of £100 per annum with board residence and laundry

OLDHAM ROYAL INFIRMARY—Second House Surgeon. Salary at rate of £120 per annum with board residence and laundry

PADDINGTON GREEN CHILDREN'S HOSPITAL, London W—House Surgeon Salary at rate of £80 per annum with board residence, and washing

PAISLEY BURGH INFECTIOUS DISEASES HOSPITAL—Resident Medical Officer Salary £150 per annum, with board washing and attendance

PLYMOUTH INCORPORATION OF GUARDIANS WORKHOUSE AND INFIRMARY—Resident Assistant Medical Officer Salary £250 per annum, with apartments, rations and washing

PORTSMOUTH ROYAL HOSPITAL.—House Surgeon for six months Salary £150 per annum with board &c.

PRESTON ROYAL INFIRMARY—Assistant Resident Medical and Surgical Officer Salary £120 per annum with board, residence, and laundry

QUEEN'S HOSPITAL FOR CHILDREN Hackney road, Bethnal Green E—Assistant Surgeon

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN S.E—Second Resident Medical Officer Salary at rate of £100 per annum with board and washing Also Temporary Honorary Assistant Physician to Out patients

ST MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plaistow E—Junior Resident Medical Officer Salary at rate of £90 per annum with board residence and laundry

SALFORD COUNTY BOROUGH—Assistant Tuberculosis Officer Salary £350 per annum

SALFORD ROYAL HOSPITAL.—Casualty House Surgeon Salary at rate of £100 per annum with board and residence.

SALISBURY GENERAL INFIRMARY—House Surgeon and Assistant House Surgeon unmarried. Salary £100 and £75 per annum respectively with apartments board lodging and washing

SCARBOROUGH HOSPITAL AND DISPENSARY—Senior and Junior House Surgeons Salary £100 and £80 per annum *respectively* with board residence &c.

SHEFFIELD CHILDREN'S HOSPITAL.—House Surgeon. Salary £150 per annum with board and residence

SHEFFIELD ROYAL HOSPITAL.—Female Assistant House Surgeon and Assistant House Physician Salary £85 and £80 per annum respectively with board residence and washing

SIXTH (RESERVE) BATTALION THE BLACK WATCH (ROYAL HIGHLANDERS)—Medical Officer

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £120 per annum with rooms board and washing

SOUTH SHIELDS INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY—Junior House Surgeon. Salary £115 per annum with residence, board and washing

STOKE-ON-TRENT EDUCATION COMMITTEE.—Assistant School Medical Officer Salary £300 per annum

STOKE ON TRENT NORTH STAFFORDSHIRE INFIRMARY Hartshill—House Physician and House Surgeon unmarried. Salary at rate of £150 per annum with board residence and washing

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £120 per annum with board lodging and washing

SWANSEA UNION INSTITUTION—Resident Assistant Medical Officer Salary £295 per annum

TAUNTON AND SOMERSET HOSPITAL, Taunton—Senior House Surgeon. Salary £120 per annum with board lodging and laundry

TRURO ROYAL CORNWALL INFIRMARY—House Surgeon, unmarried. Salary £150 per annum with rooms board and washing

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon unmarried. Salary £100 per annum with board residence &c.

WAKEFIELD CLAYTON HOSPITAL.—Senior House Surgeon. Salary £100 per annum with board lodging and laundry

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon and Anæsthetist. Salary £110 per annum board residence, and laundry

WALTHAMSTOW URBAN DISTRICT COUNCIL HOSPITAL FOR INFECTIOUS DISEASES Chingford—Resident Medical Officer Salary £250 per annum with rooms and board

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon unmarried. Salary £150 and £120 per annum respectively with residence board and laundry

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford E—Junior House Surgeon Salary at rate of £100 per annum with board residence and washing

WHITECHAPEL UNION INFIRMARY Vallance-road E—Second Assistant Resident Medical Officer Salary £[illegible] per annum with rations apartments and washing

WIGAN ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY—Female Junior House Surgeon Salary £130 per annum with board, apartments and washing

WEST [illegible] FIFTH RESERVE BATTALION THE QUEEN'S REGIMENT—Medical Officer

Births, Marriages, and Deaths.

BIRTHS

[illegible]—On Jan [illegible] the wife of Captain [illegible] a daughter

[illegible]—On Jan [illegible] S.W., the wife of Kenneth [illegible]

DEATHS

[illegible]—On Jan [illegible] William [illegible] aged [illegible] years

[illegible] M.D., aged [illegible] years

[illegible]

Notes, Short Comments, and Answers to Correspondents.

THE ARMY MEDICAL SERVICE LOOKING BACKWARD

A CORRESPONDENT writes The first definite information of medical men in the battlefield occurs in the reign of Henry V, when Nicholas Colnet as physician and Thomas Morestede, as surgeon, accompanied the King in his expedition into France The pay of each of these officers was 1s a day and a bodyguard of three archers As a security for this payment Colnet and Morestede were allowed to take with them certain valuable jewels belonging to the King Morestede took with him 12 assistants who each received 6d a day He was also supplied by the King before starting with a sum of money to provide a suitable equipment Further he was provided with a "chariot, two waggons, and two sumpter horses" Morestede was present at the battle of Agincourt where he and his assistants must have found abundant scope for their energies for the casualties were enormous The casualties on the English side are not known, but the mortality among the French is said to have exceeded 11,000 Morestede's medical colleague must also have had his hands full, for the English troops suffered badly from dysentery The war over, Morestede returned to London and took an active part in the Surgeons' Guild. He became wealthy and added an aisle to St. Olave's Church, Jewry, where he was buried

THE DEARER LOAF

To the Editor of THE LANCET

SIR,—As you so truly say in the leading article in your issue of Jan 30th that nourishing bread is of the utmost importance to "the extreme poor often limited, sadly enough, to bread with butter or jam," I venture to direct attention to the advantages of wholemeal ground to a uniform fineness, so that the digestive juices can surround the particles and extract their nutriment. The Bread and Food Reform League has emphasised the importance of this subject for over 30 years, and has also advocated that, when finely ground wholemeal and wheatmeal (a grade from which a little of the coarse bran has been removed) cannot be assimilated it is advisable to encourage the use of household flour containing the maximum nutriment of the wheat grain that can be obtained with a smaller amount of indigestible woody fibre The league especially advises the retention of the "germ" and the strong gluten, found in flours commercially designated "patents," which are now abstracted and used for expensive breads.

Recent scientific investigations prove that serious disease is produced by minute alterations in foodstuffs, and that the vitamines found in wholemeal, wheatmeal, and old fashioned household flour, but removed from fine white flour, are most important elements of nutrition when bread forms the principal food As practical experience shows the beneficial results secured by the use of these breads when genuine I venture to hope that your readers will most kindly encourage their adoption and thus help to promote the healthy nutrition of the people.

I am, Sir, yours faithfully,
MAY YATES,
Honorary Secretary Bread and Food Reform League

5, Clement's Inn London, W C Feb 1st, 1915

THE CENTRAL COMMITTEE FOR NATIONAL PATRIOTIC ORGANISATIONS

THE task laid on for itself by this committee seems in every way worthy of vigorous support It is that of stimulating and instructing public opinion throughout the country in respect of the causes and objects of the war, of arousing the nation to a sense of its danger and keeping it alive, for the great driving power of public opinion upon which ultimately the end of the war will depend must not be left to shift with the temporary dominance of various temperaments or the changing fortunes of war Any weakening or wavering or a patched up truce would only expose our children under far more disadvantageous circumstances to the rule and methods of a ruthless militarism that is a standing menace to civilisation democracy and liberty throughout the world Another portion of the committee's work consists in translating into the languages of the respective neutral countries the full evidence on which the Allied case rests and taking measures for its circulation therein The President of the committee is Mr Asquith, and the

Medical News.

UNIVERSITY OF CAMBRIDGE —It is proposed by the council of the Senate to offer the following grace for approval by the Senate "That on the recommendation of the State Medicine Syndicate the examination for the diploma in Psychological Medicine be not held in the present academical year"—The following medical degrees have been conferred —

M B and B C—C L. Gimblett Caius

WEST LONDON MEDICO-CHIRURGICAL SOCIETY —A pathological meeting will be held *to-day*, Friday, Feb 5th, in the society's rooms, West London Hospital. Specimens will be shown at 8 P M and the chair will be taken at 9 o'clock.

ON Thursday evening, Jan 28th, Mr W G Martin, on his retirement from the post of head printer of THE LANCET after nearly 40 years of service, was entertained to dinner by past and present members of the staff, when a presentation was made to him by the Editor on behalf of some who have worked with him

THE Council of the University of Sheffield have appointed Mr Arthur J Hall, M A , M D Cantab , F R C P Lond., to the post of Lecturer in Medicine

THE PROFESSIONAL CLASSES WAR RELIEF COUNCIL.—The Lord Mayor of London has issued invitations to a public meeting to be held at the Egyptian Hall of the Mansion House on Tuesday, Feb 16th, at 4 P M , to consider how distress among the professional classes, attributable to the war, can best be prevented or relieved The Archbishop of Canterbury and Sir Edward Clarke will address the meeting, and further information can be received from the honorary secretaries of the Council, 13, Prince's gate, London, S W

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication*

CROCKER J H Medical Officer of Health of Richmond Surrey Captain R A.M.C (Ter S S) has been appointed Honorary Physician and Registrar to the Red Cross Hospital, Richmond overflow to the 2nd London (City of London) General Hospital Chelsea

GUTHRIE, DOUGLAS M D F R C S Edin has been appointed Temporary Surgeon to the Edinburgh Ear and Throat Infirmary

LEASK, HENRY L. G M.D Glasg *F R.F P S Glasg*, has been appointed Surgeon to the Glasgow Eye Infirmary

MCALLISTER, A. C M B B S Lond *M R C S L.R C P Lond* has been appointed Obstetric Registrar *to King's College Hospital, S E*

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

AYLESBURY ROYAL BUCKINGHAMSHIRE HOSPITAL —House Surgeon unmarried. Salary £150 per annum with board, washing and lodging

BENENDEN KENT NATIONAL SANATORIUM —Medical Superintendent. Salary £350 per annum with house

BIRKENHEAD BOROUGH HOSPITAL.—Senior House Surgeon Salary £120 per annum with board and laundry

BIRMINGHAM CITY MENTAL HOSPITAL, Rubery hill —Female Junior Assistant Medical Officer Salary £200 per annum with apartments board laundry &c

BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY —House Surgeons Senior and Junior Salaries £150 and £130 per annum with board residence and laundry

BOURNEMOUTH ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST —Resident Medical Officer Salary £[illegible] per annum with board residence and laundry

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon Salary £120 per annum with board residence and laundry

BRADFORD CITY —Two positions on Staff of Medical Officer of Health in connexion with scheme of Child Welfare Salary £350 per annum

BRECKNOCK COUNTY AND BOROUGH INFIRMARY —Resident House Surgeon Salary £120 per annum with apartment board attendance laundry &c

BRIDGWATER HOSPITAL.—House Surgeon unmarried Salary at rate of £125 per annum with board lodging and washing

BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL.—House Physician Salary £100 per annum with apartment board and laundry Also Junior House Surgeon and Assistant House Surgeon with charge of beds Salaries £[illegible]0 per annum with apartments board and laundry

BRISTOL EYE HOSPITAL.—House Surgeon Salary £100 per annum with board residence and laundry

BRISTOL GENERAL HOSPITAL.—Senior House Surgeon. Salary at rate of £200 per annum, with board, residence &c.

BRISTOL ROYAL INFIRMARY —Throat Nose and Ear House Surgeon Salary at rate of £120 per annum with board apartments and laundry

BURNLEY VICTORIA HOSPITAL.—House Surgeon Salary £1[illegible] per annum with residence board, and washing

BURY INFIRMARY —Junior House Surgeon. Salary £150 per annum with board residence and washing

CANCER HOSPITAL, Fulham road, S W —House Surgeon for six months Salary £100 per annum

CANTERBURY, KENT COUNTY ASYLUM Chartham —Third Junior Assistant Medical Officer Salary £250 per annum, with quarters board washing &c.

CARLISLE CUMBERLAND AND WESTMORLAND ASYLUM Garlands —Junior Assistant Medical Officer unmarried Salary £250 per annum with board lodging and washing

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST Victoria Park E —House Physician for six months Salary at rate of £7[illegible] per annum with board residence and washing Also Resident Medical Officer Salary £200 per annum with board &c.

COLCHESTER ROYAL EASTERN COUNTIES INSTITUTION FOR IMBECILES AND THE FEEBLE MINDED —Female Medical Officer Salary at rate of £200 per annum with board apartments attendance and washing

COVENTRY COVENTRY AND WARWICKSHIRE HOSPITAL.—House Physician Salary £110 per annum, with rooms board, washing and attendance

DERBYSHIRE COUNTY COUNCIL.—Tuberculosis Dispensary Officer. Salary £400 per annum

DOMESTIC SERVANTS INSURANCE SOCIETY —Medical Referee and Adviser one hour per day Salary 150 guineas per annum.

DUDLEY GUEST HOSPITAL.—Senior Resident Medical Officer Also Assistant House Surgeon Salary £150 and £120 per annum respectively with board residence attendance and washing

DUMFRIES AND GALLOWAY ROYAL INFIRMARY —Female Resident House Surgeon

EAST LONDON HOSPITAL FOR CHILDREN Shadwell —Resident Medical Officer House Physician and House Surgeon

ECCLES AND PATRICROFT HOSPITAL —House Surgeon unmarried Salary £70 per annum with board lodging and washing

EXETER ROYAL DEVON AND EXETER HOSPITAL.—Senior House Surgeon for 12 months Also House Physician and Assistant House Surgeon for six months Salary at rate of £250 per annum for senior post and £150 for junior posts with board apartments and washing

GLOUCESTER COUNTY ASYLUM Barnwood near Gloucester —Assistant Medical Officer unmarried Salary £250 per annum with board, lodging laundry and attendance

HACKNEY UNION INFIRMARY High street Homerton N E —Junior Assistant Medical Officer Salary £250 per annum with rations, apartments and attendance

HALIFAX ROYAL INFIRMARY —Second and Third House Surgeons unmarried Salary £120 and £100 per annum respectively with residence board and washing

HAMMERSMITH INFIRMARY Ducane road Wormwood Scrubs W —Second Assistant Medical Officer Salary £130 per annum with board lodging washing and attendance

HOSPITAL FOR DISEASES OF THE SKIN Stamford-street Blackfriars S E —Clinical Assistant

HUDDERSFIELD COUNTY BOROUGH —Medical Inspector of School Children Salary £300 per annum.

HULL, VICTORIA CHILDREN'S HOSPITAL, Park street —Female House Surgeon and Female Assistant House Surgeon Salary £60 and £50 per annum respectively with board and laundry Or Male Resident House Surgeon Salary £60 per annum with board and laundry

KENSINGTON TUBERCULOSIS DISPENSARY 119 Ladbroke-grove W —Temporary Medical Officer Salary at rate of £500 per annum

LEEDS HOSPITAL FOR WOMEN AND CHILDREN —House Surgeon for six months Salary at rate of £50 per annum

LEEDS UNIVERSITY —Demonstrator of Bacteriology Salary £250 per annum

LEICESTER EDUCATION COMMITTEE.—Temporary Assistant Medical Officer Salary £300 per annum

LIVERPOOL, COUNTY ASYLUM Rainhill —Locum Tenens Assistant Medical Officer

LIVERPOOL INFIRMARY FOR CHILDREN —Two Resident House Physicians for six months Salary £30 each with board and lodging

LONDON HOMŒOPATHIC HOSPITAL, Great Ormond street and Queen square Bloomsbury W C —Surgeon for Diseases of the Eye

LONDON LOCK HOSPITAL, Dean street Soho W —House Surgeon for six months Salary at rate of £100 per annum Also Honorary Anæsthetist once a week.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury —Visiting Surgeon. Salary £100 per annum

MANCHESTER CORPORATION —Two Assistant Tuberculosis Medical Officers Salary £3[illegible]0 each per annum

MANCHESTER, COUNTY ASYLUM Prestwich —Assistant Medical Officer unmarried. Salary £250 per annum with board apartments attendance and washing

MANCHESTER EDUCATION COMMITTEE.—Two Assistant School Medical Officers Salary £3[illegible]0 per annum

MANCHESTER, HULME DISPENSARY Dale-street Stretford road —House Surgeon Salary £1[illegible]0 per annum with apartments attendance coal and gas

MANCHESTER, MONSALL FEVER HOSPITAL —Second and Third Medical Assistants Salary £175 and £1[illegible]0 per annum respectively with board lodging and washing

MANCHESTER ST MARY'S HOSPITALS FOR WOMEN AND CHILDREN —Resident Surgical Officer at High-street Hospital Salary £[illegible] per annum with board and residence Also House Surgeon for three or six months Salary at rate of £7[illegible] per annum with board and residence Also House Surgeon at Whitworth-street West Hospital for three or six months Salary at rate of £[illegible]0 per annum with board and residence

MIDDLESBROUGH COUNTY BOROUGH —Temporary Chief Tuberculosis Medical Officer Salary £5[illegible]0 per annum

MILLER GENERAL HOSPITAL FOR SOUTH EAST LONDON Greenwich road S.E —Junior House Surgeon for six months Salary £[illegible] per annum with board residence and laundry

TUESDAY —2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr A. G Auld) Surgical (Mr Howell Evans) Nose Throat, and Ear (Mr H. D Gillies) X Rays and Electrical Methods (Dr Metcalfe) 3.30 P M. Medical In patient (Dr A. J Whiting)

WEDNESDAY —Clinics:—2 P M. Throat Operations (Mr Gillies) 2.30 P.M. Children's Out-patient (Dr T. R. Whipham) Skin (Dr G N Meachen) Eye (Mr Brooks)

THURSDAY —2.30 P M. Gynæcological Operations (Dr A. E Giles) Clinics:—Medical Out patient (Dr A. J Whiting) Surgical (Mr Carson) X Rays and Electrical Methods (Dr Metcalfe). 4.30 P.M Clinical Demonstration —Dr R. M Leslie: Selected Medical Cases

FRIDAY —2.30 P M. Operations Clinics —Medical Out patient (Dr A. G Auld): Surgical (Mr E. Gillespie) Eye (Mr R. P Brooks)

THE THROAT HOSPITAL, Golden square, W

MONDAY —5 15 P M Special Demonstration of Selected Cases

THURSDAY —5 15 P.M Clinical Lecture

ST JOHN'S HOSPITAL FOR DISEASES OF THE SKIN 49 Leicester square W C

TUESDAY —4 P.M. Dr J L. Bunch: Some Common Skin Diseases

THURSDAY —6 P M. Chesterfield Lecture —Dr M. Dockrell Fungus Diseases of Skin and Hair

ROYAL INSTITUTION OF GREAT BRITAIN Albemarle-street, Piccadilly W

TUESDAY —3 P M Prof C S Sherrington: Muscle in the Service of Nerve (Lecture III)

THURSDAY —3 P M Dr P C Mitchell: Zoological Studies War and Evolution—Nations as Species (Lecture I)

FRIDAY —9 P.M. Dr W S Bruce Recent Advances in Oceanography

ROYAL SANITARY INSTITUTE 90 Buckingham Palace-road S W

TUESDAY —7 30 P M Discussion on Tall *versus* Short Men for the Army (opened by Dr M S Pembrey)

MANCHESTER HOSPITALS POST-GRADUATE CLINICS

THURSDAY —ANCOATS HOSPITAL, Mill-street.—4.30 P.M., Dr A. Renshaw: Vaccine Treatment of Respiratory Diseases

For further particulars of the above Lectures &c see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters whether intended for insertion or for private information must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed " To the Sub Editor "

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed " To the Manager*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title-page to Vol II of 1914 were given in THE LANCET of Dec 26th 1914

VOLUMES AND CASES.

VOLUMES for the second half of the year 1914 are now ready Bound in cloth gilt lettered price 16s, carriage extra.

Cases for binding the half year's numbers are also ready Cloth gilt lettered price 2s by post 2s 3d

To be obtained on application to the Manager, accompanied by remittance

TO SUBSCRIBERS

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices 423 Strand London W C are dealt with by them. Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows —

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
Three Months	0 6 6	Three Months	0 7 0

(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs 50 per month.)

Subscriptions (which may commence at any time) are payable in advance Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden *Branch*") *should be made payable to the* Manager, Mr CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W C

TO COLONIAL AND FOREIGN SUBSCRIBERS

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO , 51, Fifth Avenue, New York, U S A.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office Feb. 3rd 1915.

Date		Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp Shade.	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks.
Jan	28	29 63	N E	..	43	33	34	32	35	Overcast
	29	29·72	N E	...	53	40	35	32	35	Overcast
,	30	29·94	S W	..	44	40	35	36	38	Overcast
	31	29 54	W		52	44	38	39	41	Cloudy
Feb	1	29·93	W	0·14	59	49	38	37	39	Cloudy
,	2	29 31	S W	0·20	53	51	39	43	49	Raining
,,	3	29 83	S W	...	58	50	41	43	45	Cloudy

The following magazines journals &c. have been received —Interstate Medical Journal American Journal of Tropical Diseases and Preventive Medicine Medical Review of Reviews Indian Medical Journal British Review Homœopathic Recorder Practitioner Journal of State Medicine Journal of Pathology and Bacteriology Bulletin of the Johns Hopkins Hospital Dominion Medical Monthly Journal of the Royal Sanitary Institute British Journal of Dental Science &c.

Communications, Letters, &c , have been received from—

A.—Mr C A Achner Lond. Dr J Atkinson Dr Auregan Lannion Mr Oswald Addison Lond Messrs R Anderson and Co Lond Messrs C Ash Sons and Co Lond Messrs. Allen and Hanburys Lond. Ardath Tobacco Co Lond

B.—Mr W H Bird Torquay Sir John Byers Belfast Bristol Royal Infirmary Secretary of Messrs Burgersdijk and Niermans Leiden Mr C Cloudesley Brereton Lond Birkenhead Borough Hospital, Secretary of Bristol General Hospital Secretary of Messrs Butterworth and Co Lond Mr H [illegible] Carnes Messrs J Beal and Son Brighton Blackburn &c Royal Infirmary Secretary of Bread and Food Reform League Lond Hon Secretary of Mr G L Bannerman Lond Dr W Ironside Bruce Lond. Dr H E Bond Kingston Jamaica Messrs Charles Barker and Sons Lond. D S N Bruce Lond. Drs Bunts Crile and Lower Cleveland *Boston Medical and Surgical Journal* Manager of Messrs W H Bailey and Son, Lond Mr H Blakeway Lond.

C.—Mr S Forrest Cowell, Lond Mr Ewart G Culpin Lond Chadwick Trust Lond. Secretary of *Chemical World* Lond Publisher of Child Study Society Lond. Hon Secretary of Messrs J and A. Carter Lond. Messrs G Curling Wyman and Co. Lond. Mr I C Coombes Knaphill Captain T J Crean V C France Dr H F Comyn Surbiton Central Council for National Patriotic Organisations Lond Captain Walter G H Cane R.A.M.C Hastings

[Lists [illegible] continued on the Correspondents page vice presidents are Lord Rosebery and Mr A J Balfour Contributions or offers of other assistance should be made *to the secretary* the Central Committee, Canadian Pacific Building, 62, Charing Cross, W C, from whom also further information can be obtained

POPULAR MEDICINE IN GERMANY

To the Editor of THE LANCET

SIR —In reference to your remarks on Father Kneipp's book, published under this heading last week, I may call the attention of your readers to Rehm's Allerlei, published in Ulm in 1805 Rehm was a Prussian and Polizeidirektor, and his book therefore is marked by a Protestant rationality, in strange contrast to the Rev Father's romantic note It is interesting to compare his work, however, with such books as the Scottish 'Tippermalluch's Receipts and the English One Thousand Notable Things, which were popular domestic medicine books of the latter end of the eighteenth century Rehm, it must be confessed, contains very little quaint folklore as do Tippermalluch and the English chap book There is nothing in his pages to remind one of the medicinal stones mentioned in the Scandinavian mythology Nor do cannibalism and charms here appear But the pharmacopœia of Rehm is evidently traditional Against the tape-worm he proceeds as he might against a dragon An immense tripartite dose is given to the patient It comes traditionally from Leibarzt Vogler, "of blessed memory" The worm is expelled seriatim at intervals of an hour or so, and the first dose is composed of quicksilver and pounded shells A paste made of the yolk of an egg mixed with pounded sal ammoniac is recommended as a remedy for cataract Oil of spurry (spergula) is stated to be a sovran remedy for hæmorrhage of the lungs and it is noted that cattle feed and grow fat upon it, while it increases the wool bearing capacities of sheep Certain harmless directions are given for the treatment of epilepsy, and it is noted that the disease is popularly supposed to reside in the thumbs whence the vulgar are always anxious to keep the patient's thumbs from being bent in upon the palms of his hands A barbaric way of keeping fish fresh in winter is to pack them in snow, which benumbs but does not kill them—at least, this is Rehm's experience Curious side lights such as this are thrown on the life of the times For instance, a story is told of the shooting of a mad dog the fat of which was at once sold to a druggist for some reason or other The deaths of dogs and even human beings are often attributed to the bite of flies that have escaped from fly papers Frost bite is frequently mentioned and it is cured by medication rather than by the application of snow The juice of potatoes is used as a substitute for soap and bread made of the same tuber is described and lauded as an article of diet

Reading this book, we feel that we are in a primitive kindly world of peasants scarcely in a savage one, still less in one that would adumbrate the latter day Prussian

I am, Sir, yours faithfully,

Feb 2nd, 1915 BOOKWORM

A SWEDISH REMEDY FOR FROST BITE

WE have received from Mr Edward Edwin, of 39, Beauchamp road Lavender Hill London S W samples of an ointment called 'Vetterin," which he states has been used for years with the greatest success in Sweden for the treatment of frost bite Mr Edwin quotes a number of letters from Swedish medical men which speak so confidently about the merits of this preparation as to make it well worthy a trial elsewhere than in Sweden

THE LESION IN TETANUS

To the Editor of THE LANCET

SIR,—I have read in THE LANCET of Jan 2nd p 17, a report of the successful treatment of tetanus in a case having the remarkably short incubative period of two days There is nothing in the report showing at all conclusively that the condition arose from abrasion of the hip, protected as it must have been by clothing, and as the percentage of recovery in tetanus is increased as the incubation period is lengthened—recovery in five-day incubation cases being rare even under massive doses of antitetanic serum—is it not well to assume the existence of some trivial lesion, oral intestinal &c, acting as a nidus for the infection rather than accept a recent absolutely superficial injury as the field of ultra virulent infection?

I am Sir yours faithfully

THOS B ROGERS, D V S

Woodbury, N J, Jan 17th 1915

Cheval —The very small average of six miles a day would not appear to justify, financially speaking, the keeping of a car unless our correspondent has a place attached to his house where he can keep it and has the intention of extending the sphere of his operations If he will tell us the cost of his present system of hiring a brougham, whether he would drive a car himself and where he would keep it, we shall be better able to advise him He could probably get a booklet on the subject of the running cost from Messrs De Dion Bouton, 10, Great Marlborough street, London, W

COMMUNICATIONS not noticed in our present issue will receive attention in our next

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Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY, *Burlington House London W*

THURSDAY —Papers:—Dr D H Scott: Lepidostrobus kentuckiensis formerly Lepidostrobus Fischeri Scott and Jeffrey—A Correction —Mr T Lewis and Mr M A Rothschild The Excitatory Process in the Dog's Heart Part II The Ventricles (communicated by Prof E H Starling) —Mr A J Walton: On the Variation in the Growth of Mammalian Tissue in Vitro according to the Age of the Animal (communicated by Prof W Bulloch)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street W

FRIDAY

CLINICAL SECTION (Hon Secretaries—Thomas H Kellock David Forsyth): at 8 P M

Cases

Mr H Morriston Davies (1) Bronchiectasis treated by Ligature of the Branch of the Pulmonary Artery (2) Mediastinal Teratoma—Result of Operations on (3) Osteitis Fibrosa Cystica of the Femur

MEDICAL SOCIETY OF LONDON, 11, Chandos-street Cavendish square W

MONDAY —8 30 P M *Discussion on Gunshot Wounds of the Head* (introduced by Sir Victor Horsley) Followed by Sir David Ferrier Mr R Warren, Mr W H Jessop Mr L B Rawling and others

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, *Lecture Theatre of the Society 17 Bloomsbury-square W C*

TUESDAY —8 P M Communications from the Society's Research Laboratories:—Prof H Ll Smith Acetylsalicylic Acid —Prof H G Greenish and Mr A E Beesley: Discolouration of Sodium Salicylate in Solution by Alkalines

HUNTERIAN SOCIETY Barbers Hall Monkwell-street E C

WEDNESDAY —9 P M *Annual Oration:*—Dr H R Andrews: William Hunter's Work on Midwifery

SOUTH WEST LONDON MEDICAL SOCIETY Bolingbroke Hospital Wandsworth Common S W

WEDNESDAY—9 P M Dr A F Hertz: Flatulence

CHILD STUDY SOCIETY LONDON Royal Sanitary Institute 90 Buckingham Palace-road S W

THURSDAY —6 P M Lecture:—Dr C W Kimmins: With the British Association in Australia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST GRADUATE COLLEGE West London Hospital, Hammersmith road W

MONDAY —10 A M Dr Simson: Diseases of Women 10.30 A M Medical Registrar: Demonstration of Cases in Wards 12 noon Dr Bernstein: *Pathological Demonstration* 2 P M Medical and Surgical Clinics X Rays Mr D Armour: Operations *Dr Pritchard Bacterial Therapy Department.* Mr B Harman and Mr Gibb Diseases of the Eye

TUESDAY —10 A M Dr Owen: *Demonstration of Cases in Wards* 12 noon Mr T Gray: Demonstration of Fractures &c. 2 P M, Medical and Surgical Clinics X Rays Mr Baldwin: Operations Dr Davis: Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin

WEDNESDAY —10 A M Dr Saunders: Diseases of Children D Davis: Operations of the Throat Nose and Ear 11 A M Mr Souttar *Demonstration of Minor Operations* 12 noon Lecture —Mr Souttar Abdominal Diagnosis 2 P M Medical and Surgical Clinics X Rays Mr Pardoe Operations Dr Simson: Diseases of Women Mr Gibb: Diseases of the Eye

THURSDAY —9 A M Dr Bernstein Bacterial Therapy Department 12 noon Lecture: Dr G Stewart Neurological Cases 2 P M Medical and Surgical Clinics X Rays Mr D Armour: Operations Mr B Harman: Diseases of the Eye

FRIDAY —10 A M Dr Simson: Gynæcological Operations 10.30 A M Surgical Registrar Demonstration of Cases in Wards 12.15 P M Lecture —Dr Bernstein Applied Pathology 2 P M Medical and Surgical Clinics X Rays Mr Baldwin Operations Dr Davis Diseases of the Throat Nose and Ear Dr Pernet Diseases of the Skin

SATURDAY —10 A M Dr Saunders: Diseases of Children D Davis Operations of the Throat Nose and Ear Mr B Harman Eye Operations. 12 noon Lecture —Mr Souttar: Surgical Anatomy of the Abdomen 2 P M Medical and Surgical Clinics X Rays Mr Pardoe: Operations

NORTH EAST LONDON POST GRADUATE COLLEGE Prince of Wales's General Hospital Tottenham N

MONDAY —Clinics —10.30 A M Surgical Out patients (Mr E Gi[illegible]le) 2.30 P M Medical Out patients (Dr T L Whi[illegible] Gynæcological (Dr J B Banister) 3 P M Medical In patients (Dr R M Leslie)

An Address

ON

GUNSHOT WOUNDS OF THE HEAD

Delivered before the Medical Society of London on Feb 8th, 1915,

By Sir VICTOR HORSLEY, F R C S Eng , F R S ,

CAPTAIN R.A.M.C (T F) CONSULTING SURGEON UNIVERSITY COLLEGE HOSPITAL SURGEON NATIONAL HOSPITAL FOR PARALYSED AND EPILEPTIC.

Mr President and Gentlemen,—The subject of gunshot injuries of the head is, of course, an enormously wide one, and it includes not only the important question of how the actual injury to the brain is produced, but the subject can clinically also be profitably discussed from another point of view altogether—namely, causes of death and how to prevent them I shall speak more in the former direction, and especially because I have not been permitted to see any cases in the present war except a few exceptional instances which happened to be referred to me unofficially

Physical Effects Produced by High velocity Bullets

I made a large number of experiments[1] on this subject over twenty years ago when the 0 303 rifle was introduced into the services, and the results were fully confirmatory of those in part arrived at previously and independently on the Vetterli rifle by Professor Kocher, especially as to the so called explosive effect of high velocity projectiles It occurred to me then that what was required was a registration method To this end I employed modelling clay, a substance which roughly resembles the tissues in that it contains a considerable percentage of water in its interstices, but differs with advantage in that when disrupted it remains exactly as the explosive force had deformed it, so that all that was necessary was to fill the cavities produced by the bullet with plaster of Paris and thereby obtain an absolutely accurate record of the whole effect of the shot

The method immediately showed several things first, that the so called explosive effect was directly proportional (1) to the sectional area of the bullet, (2) to its velocity, (3) to the amount of water present in the substance through which a bullet passes and (4) that the forces of disruption were at an angle to the axis of the flight of the bullet which I have never been able to determine completely I have obtained by means of the clay plaster method further points concerning the ballistics of the projectile which could not be reached in any other way The most practically important for our present subject are (1) Where in the course of the bullet most mischief is done, and (2) by what force

Point of Maximal Disturbance

The casts show that the maximal disturbance is produced of course as soon as the bullet at its highest velocity is surrounded by the largest mass of wet tissue In the animal the conditions are governed by other considerations of which the most important is that the water holding material is surrounded by an elastic skin, and that the so called larger aperture of exit necessarily results from the driving out of the limb or trunk all the fragments of tissue, bone, and particles of fluid to which the velocity of the bullet has been communicated The larger aperture of exit is a matter therefore of what happens to be struck in the interior of the skin envelope

Forces Producing the Injury

These relate to the two movements of a bullet—first, its progression forward, and secondly, its spin around a central axis given to it by the rifling It is ordinarily assumed that the progression forward movement is the more important, but in my opinion it is not so, although, of course, the amount of injury naturally depends on the length of traverse of the body by the bullet The most important movement from a pathological point of view, I suggest, is the rotatory spin, and I came to this opinion by observing, to my surprise, that the rotation of the bullet was still visible on the plaster cast even up to the moment when the bullet ceased to penetrate any more

It is quite clear that under these circumstances the disruption of the tissues must be attributed in the main to the rotating forces of a bullet, and the transverse section of a plaster cast of the cavity made by a bullet fired into wet clay—in which, therefore, there is a maximum disruption due to the water—shows that the particles of fluid are thrown off practically at right angles to the axis of flight It is interesting to notice also in some of the casts that these disruptive tears have very often a spiral direction antero posteriorly, the turns of which are of the same length as the spirals of the grooves of the rifle Sometimes these have also shown an interesting degree of direction backwards, and then the tear is circumferential to the axis of flight, which reminds one very forcibly of the compression waves of air shown in Professor Boys s beautiful photographs of a 0 303 bullet during its flight It is clear that if the density of the clay varied suddenly, as it does not infrequently, the results would be a fixation in the plaster of the disruption wave quite comparable to that of the more labile fluid air as in Professor Boys s experiment

Influence of Shape of Bullet

We must now consider the question how far the shape of a bullet affects the question of degree of destruction The so called explosive bullet, or dum dum, is a soft nosed lead bullet which deforms very easily, and by its expansion greatly increases the sectional area. Very considerable confusion seems to have arisen recently because the modern jacketed rifle bullet has been made more and more pointed until there is a very great contrast between the long, sharp nose and the flat base It has actually been supposed that this bullet makes a much worse wound if it advances through the tissues base foremost instead of the apex, whereas, of course, the result being proportional to the sectional area, it makes no difference

This brings me to the next point, of which a good deal has been made on purely hypothetical grounds —namely the question of the modern pointed bullet turning over during its passage through the tissues Undoubtedly turning over of an elongated projectile is a very common event To find out whether it was more common now with the modern shaped bullet than with the old conical projectile I asked Mr Daw of Messrs Hollands and Hollands kindly to make for me some 0 22 calibre cartridges with

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[1] [illegible] the Royal Institution of Great Britain [illegible]

Dr Charles W Chapman Lond. Dr S D Clippingdale Lond Professor Hastings Crossley Eastbourne Messrs J and A. Churchill Lond Lieutenant-Colonel S Monckton Copeman, R.A.M.C (T)

D.—Mr A. J Davy Lond Lieutenant M Donaldson R.A.M C Havre Professor Sheridan Delepine Manchester Dr Vincent Dickinson Lond. Dumfries and Galloway Royal Infirmary Treasurer of Domestic Servants Insurance Society Lond Secretary of Sir Bryan Donkin Lond. Sir J M Davidson Lond Messrs Dawson and Sons Lond. Derbyshire County Council Derby Medical Officer of Health to the Mr H Dickinson, Lond.

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F.—Major E Finch R.A.M C Sheffield Messrs Fannin and Co Dublin

G.—Mr H Ginn Worcester Mr V G Gibbs, Hull Mr H N Gilbey, Lond. Great Yarmouth Hospital Secretary of Captain B Gale I M S Brighton Guest Hospital Dudley Secretary of Dr A J Gregory Westcliff Mr P O Gill Exmouth

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J.—Miss E M James Lond Dr E T Jenson Lond. J C Major A. E Johnson R.A.M C, Lond Captain P A. Lloyd Jones, R A M C, France Mrs Walter Johnson Holyhead Messrs Jepson Brothers and Co Lond

K.—Rt Hon. Lord Knutsford Lond

L.—Dr R Bruce Low Lond. Dr C E Lea Manchester Mr E Muirhead Little, Lond Local Government Board Lond Leicester Education Committee Secretary of Rai Bahadur Kanouji Lal Lucknow Messrs Lee and Nightingale Liverpool; Dr J C G Ledingham Lond Leeds University Dean of Dr J Oswald Lane Hereford Mr H K. Lewis Lond *Lincolnshire Chronicle* Lincoln Manager of Mr Lockhart-Mummery Lond The Right Hon the Lord Mayor Lond Dr J Wickham Legg Oxford Liverpool Corporation Superintendent of Stationery Department

M.—Dr Hector Mackenzie, Lond Mr John D Marshall Lond Dr Mencière Compiègne Mr H Mills Llantwit Medical Agency Lond *Medical Journal of Australia* Sydney Editor of Mr Walter J Matthews Bristol Messrs C Mitchell and Co Lond Manchester Corporation Medical Officer of Health of Dr Hugh Munro, Lond. Mr J F Mackenzie Edinburgh Mr Ernest Marshall Lond Captain A Mowat Inverness Captain J F MacMillan Sandown Dr J A Murray Lond. Messrs Z P Maruya and Co Tokyo Dr Alexander Morison Lond Captain C S Myers R A M C (T) Le Touquet Dr T Davys Manning Weymouth Dr James Munday Kurseong

N.—Mr F Newland Pedley, Lond. Dr F M. Neild, Shanghai National Association for the Prevention of Infant Mortality, Secretary of Nottingham General Hospital, Secretary of Newcastle-upon Tyne Corporation Medical Officer of Health to the Dr A. B Norman Oakham

O.—Dr George Ogilvy, Lond Our Dumb Friends' League Lond. Secretary of Messrs Oppenheimer, Sons and Co, Lond. Mr H H Olcott, Boston, U S.A. Oldham Royal Infirmary Secretary of

P.—Mr A E Hayward Pinch Lond. Pharmaceutical Society of Great Britain Secretary of Dr L H Pegler Lond Press Etching Co, Lond *Punch* Office, Lond.

R.—Royal Academy of Medicine in Ireland Dublin Mr Thos B Rogers Woodburn N J; Royal Institution of Great Britain Lond. Royal Waterloo Hospital for Children and Women, Lond Secretary of Royal Buckinghamshire Hospital, Aylesbury Secretary of Royal College of Surgeons of England Lond, Secretary of Royal Surrey County Hospital Guildford Secretary of *Red Cross News* Glasgow Editor of; Mr J Reid Edinburgh; Royal Society Lond Royal Society of Arts Lond Royal Sanitary Institute Lond., Secretary of

S.—Dr J D Shapland Lond Mr J O Segrue Lond Salford Royal Hospital Secretary of Swansea Guardians Clerk to the Raja Sir H Singh Jullundur City Mr B Singh Skardu St. Mary's Hospital for Women and Children Lond Secretary of St Mary's Hospitals for Women and Children Manchester Secretary of Mr W Stuart Low Lond St Andrew's Hospital Lond Secretary of Stoke-on Trent Education Committee Secretary of Sheffield Royal Hospital Secretary of, Sheffield Royal Infirmary Secretary of Messrs Squire and Sons Lond Mr T Strain Hounslow Mrs Sharp, Lond. St. John's Hospital Lond Secretary of Mr W B San Lond Springfield State Hospital Sykesville Superintendent of; Sheffield Children's Hospital Secretary of

T.—Dr Makoto Takahashi Lond; Dr H A Taylor Ebbw Vale, Dr F Taylor Lond Messrs C Tuckey and Co Lond. Dr F W Tunnicliffe Lond Dr Seymour Taylor Lond

V.—Victoria Hospital Burnley Secretary of Verkehrverein Davos N G A

W.—Mr G H Whale Lond. Dr Lennox Wainwright, Folkestone Messrs Whitehead Morris and Co Lond. Women's Industrial Council Lond. Workers Educational Association Lond Secretary of; Mr James Williamson York *Western Daily Mercury* Plymouth Proprietors of Dr James Watt Wartle Messrs J Woodhead and Sons Huddersfield Deputy Surgeon General A Gascoigne Wildey R.N Lieutenant Beckwith Whitehouse R A M C Rouen Captain H L. Whale R A.M C Lond Messrs J Williams and Son Bradford Dr D G Wishart Edinburgh Major Cuthbert Wallace R.A.M C

Letters, each with enclosure, are also acknowledged from—

A.—Miss A. Althaus S Leonards on Sea; Ancoats Hospital Manchester Secretary of Dr M [illegible] Aroum [illegible] Lieutenant Colonel H C L. Arnim I M S Lond

B.—Mr F J Burghard Lond Mr J D Brash Birmingham Birkenhead and Wirral Children's Hospital Secretary of Mr W K. Brewer Lond. Dr C G S. Baronsfeather [illegible] Mr W Bryce Edinburgh Dr J H Beadle [illegible] Mr I Baker Lond Bayer Co Lond. Dr G T Beeton, Caversham British Oxygen Co Lond. Mr E Blatchley Lond; Dr W Langdon Brown, Lond; Mr T H C Benians Lond. Barnwood House Hospital, Gloucester, Medical Superintendent of Messrs. Bennett Bros Salisbury Dr R M Buchanan Glasgow Blackburn Guardians, Clerk to the Dr N W Bourns Lond.

C.—Dr F R Cosgrave Burton Messrs Carnrick and Co Lond. Chester Corporation Accountant to the Dr H B Christensen New Westminster Canada Corbett Estate Office Droitwich Dr H W Crowe Yelverton Church Army Lond Secretary of Dr E H Colbeck Lond Cheltenham General Hospital Secretary of Croydon Corporation Accountant to the Mr O G Connell St. Albans; Dr A. R. Carmichael Liverpool; Dr J A Clark Chicago Dr C Chaplin Angmering Messrs Cargills Glasgow

D.—Messrs. F Davidson and Co Lond Durham County Council Accountant to the Dorland Agency Lond., Mr W Donaldson Flotta Mr H M Davies Lond Mr T N Darling Pau; Messrs Duncan Flockhart and Co Edinburgh Mr A E Dale Lond Mr R Dunstan Paignton

E.—Dr W H Evans Cardiff Mr G W Eglinton Street; Miss Eskholme Rotherham; Messrs W and T Evans Cork Messrs Elliott, Son and Boyton Lond

F.—Dr A. Fleming Corstorphine Mr R F Flood Bundoran Fellows Medical Manufacturing Co New York Miss Fox Lond Mr J M Forbes Mountain Ash; Fife District Asylum Cupar Clerk to the Mr H Frowde, Lond

G.—Rev J W Gardner Greenock; Gloucester County Asylum Clerk to the Gloucestershire Royal Infirmary Gloucester Secretary of Lieutenant-Colonel J W Grant I M S Brighton Messrs Gale and Co Lond Galen Manufacturing Co Lond. Dr C G Gibson Launceston Dr Gordon Munn Norwich Dr Major Greenwood Lond General Life Assurance Co Lond Dr A. F Galloway Lond Sir Rickman Godlee Bart Lond Dr Greene Gerrard's Cross Dr J Geoghegan Turks Island

H.—Mr T C Howard, Letchworth Messrs J Haddon and Co Lond Mr W L Hampton Perth Messrs Hawksley and Son Lond H. Lond. Messrs T Holland and Son, Lond Messrs Hogg and Son Lond Dr J Hunter Invercargill Captain T A. Hughes I M.S Bannu Major T Hunter I M S Moradabad Mrs H Lond Mr J J Hemming Margate Dr A. C Hartley Nairn Mr R Holton Hednesford Hospitals and General Contracts Co Lond

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J.—Dr W Jackson Nelson J D J

K.—Messrs H S King and Co Lond King Edward VII Hospital Cardiff Secretary of Mr W S Kerr Sheffield King Edward VII Sanatorium Midhurst Secretary of Messrs P S King and Co Lond. Dr W Kirkpatrick Stourbridge Kreochyle Co Lond Mr I M Kharegat Lond

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M.—Dr A. MacConkey Elstree; Maltine Manufacturing Co Lond Messrs. Mather and Crowther Lond. Manchester Corporation Treasurer to the Mr I M Moriarty Dingle Dr W H Miller Edinburgh Mr R. Miyake, Okayama Dr N Malouf Kassala Mr J E May, Lond Messrs McAinish and Co Toronto Manchester Royal Infirmary Secretary of Sir Berkeley Moynihan Leeds Dr M J Menzies Edinburgh Dr Justin McC McCarthy St. George's Salop Dr J E Milne Aberdeen Dr R. H Morrison Melbourne Dr A E Morison Sunderland

N.—Northampton County Asylum, Clerk to the Newcastle on Tyne Corporation Accountant to the Nottinghamshire County Council Nottingham Clerk to the Northampton Corporation, Clerk to the Nottingham General Dispensary Secretary of

O.—Dr C M O'Brien Dublin; Dr E R Orchard Kingussie Messrs Osborne Peacock Co., Manchester Mrs. Owen Isleworth Messrs Orrock and Son Edinburgh

P.—Dr A. B Pies [illegible] Pearson's Antiseptic Co Lond. Portsmouth Corporation Accountant to the Mr D Pettigrew Sheffield, Colonel Perkins, Windsor

R.—Dr J W Rodgers Dorking Messrs Raimes and Co York Mr O Riedinger, Paris Dr R. Dr John Russell Scarborough; Mr F Rawlings Manchester; Registered Nurses Society Lond., Secretary of Messrs Robinson and Sons Chesterfield Dr J B Ridley Croydon Royal Portsmouth Hospital Secretary of; Royal Eastern Counties Institution Colchester Secretary of; Dr R M Rowe Lond Dr T F Ryan Nhill.

S.—Mr W L Roper Saunders, Newcastle-on Tyne Stoke-on Trent County Borough Accountant to the; Sheffield Education Committee Secretary of St. John Ambulance Association Lond. St George's Hospital Medical School Lond., Secretary of Messrs Spiers and Pond Lond; Dr W M Scott Sittingbourne Salop County Council Shrewsbury Accountant to the Salford Royal Hospital Secretary of Societe Europeenne de Publicite Paris Mr B Scott Sway St Andrew's Hospital, Northampton Clerk to the Stirling District Asylum Larbert Clerk to the Mr J P Sharples Wye Messrs W H Smith and Son Lond Dr W Shipton Buxton Mr L Scudamore Abertysswg South Shields Guardians, Clerk to the Mr A. N Sen Calcutta.

T.—Staff Surgeon D D Turner R N Lond Mr H G Terry Bath Mrs [illegible] Glasgow

V.—Messrs Van Houten Lond Victoria, British Columbia, Treasurer of the Provincial Department Victoria Children's Hospital Hull Secretary of

W.—Warrington Infirmary &c Secretary of Wolverhampton and General Hospital Secretary of Fleet Surgeon E C Ward R.N. Chatham The [illegible] Oxford Willesden Urban District Council Clerk to the [illegible] Asylum Glasgow Secretary of; Dr A C Wilson Edinburgh West Sussex County Council Worthing Clerk to the; Messrs J Wright and Sons Bristol; Mr T [illegible] Mr W C Ward Plymouth Walsall and District Hospital Secretary of [illegible] Hospital Secretary of Dr [illegible] Wilts County Council Education Committee Trowbridge Treasurer to the Dr J H W[illegible] Khartum

Y.—Yost Typewriter Co., Lond.; Mrs Burney Yeo Lond.

3 *Sepsis*

This is, of course, primarily and in the vast majority of cases due to incomplete disinfection of the original wound, but also to the fatal and detestable practice of "leaving head cases alone," which being the outcome of ignorance both of the functions of the brain and of the principles of antiseptic surgery, led many surgeons of the old school (some of whom apparently still survive) to leave a patient steadily to die rather than perform the duty of attempting to save him I believe this wicked tradition was also in part created by the fact that the leucocytic barrier, whether subdural or intracerebral, was occasionally quite equal to fighting off the infection, and because such a neglected patient got well, the non comprehending surgeon said, 'Let us leave head cases alone as a rule!' It is to the credit of the British Army Medical Service that they showed in their observations and work during the South African War the falsity of this error We may hope, therefore, that the example of the brilliant surgery of officers like Major Sherran will prevent cases arriving in England under conditions hopeless of restoration both of life and function

One word in conclusion on general septic infection Suppose the subdural space is infected and cerebro spinal meningitis results Are these cases necessarily fatal? Evidently they are not, as, indeed, Mygind had always contended What is to be our routine? A case I saw with Dr Fraser at Southampton, and which I hope he will publish, suggests that the course adopted in that instance might be generally tried—viz, free opening and disinfection by irrigation of the cranial subdural space at the seat of the injury, a liberal lumbar puncture (1½–2 ounces), repeated if improvement arrested, and autogenetic vaccine treatment I understand that at Cambridge repeated lumbar puncture has been most efficacious in the treatment of the parallel condition of epidemic cerebro spinal meningitis

4 *Hernia Cerebri*

A great deal of unnecessary importance used to be given to the condition known as hernia cerebri, as its occurrence was proportionate to the septic decomposition which characterised the condition of most of the wounds In consequence of this latter factor we must divide the subject under the two headings of aseptic and septic hernia

Aseptic hernia cerebri—In consequence of the explosive effect of a bullet on the normal brain, if portions of the bones of a skull are carried away as, for instance, in the formation of a gutter, then the rise of intracranial tension will cause a certain amount of extrusion of the brain substance This is accompanied by extrusion of the lacerated brain against the *edges** *of* the opening in the skull Owing to hæmorrhage in the brain substance produced by the explosive effect such a hernia tends to remain only just so long as there is increased intracranial tension, as for example in the cases of removal of cerebral tumour where aseptic herniæ can be studied not infrequently

Septic hernia cerebri—I come now to the more difficult question of septic hernia and their significance An infection of the bruised brain may present simply a localised suppurating cavity, in which case there is no hernia If, however, the leucocytic barrier of the cavity is imperfect and the hemisphere in consequence happens to become the seat of general cerebritis then hernia of necessity follows, and if the mischief spreads the hernia increases because of the spreading infective œdema of the brain The subdural leucocytic barrier may be quite effective in some cases and yet the hernia increases This was what one finds referred to very largely in the writings of the old surgeons, and in this case undoubtedly after some time some of the increase is due to the development of granulation tissue in the brain that projects Such herniæ, if the subdural barrier is good, yields completely to treatment with absolute alcohol and cutting away as the surface rapidly necroses Various substances have been used for this purpose—e g, formalin, but for many years I have never found anything better than absolute alcohol

FUNCTIONAL DISTURBANCE OF THE BRAIN

The first and most important practical question is how far compensation for loss of functions due to loss of cerebral substance occurs, possibly this is a question which, though attacked by neurologists for 50 years, must remain essentially indeterminate until the function of every part of the brain is accurately ascertained It will be simplest, perhaps, to consider the matter by two examples—first, a sensory region of the cortex, and secondly, the kinæsthetic I desire to premise my examples by suggesting that in the human adult there is no evidence of compensation by education or substitution of function in other parts of the brain for function lost by reason of permanent destruction of given areas Recovery due to absorption of hæmorrhage and re establishment of partly blocked circulation, however may be expected to go on for several years if not interrupted by epilepsy and secondary mental change

(*a*) *Sensory Cortex*

The most specialised centre and most clearly arranged topographically is the visual area I will, therefore, confine my remarks to that sensory function, and a case that I saw in October last with Dr Simpson illustrates very well the problem

The patient an officer in an infantry regiment, was hit by what was apparently a Mauser bullet on the right side of the head just below the parietal eminence The bullet passed through the occipito-temporal region, making a deep gutter through the brain and under the skull, emerged through the middle of the right half of the occipital bone, and buried itself in the muscles at the back, where it was extracted by an incision on the field. The patient, who was totally blind, reached London—namely the 3rd London Base Hospital—on about the fourth day after receiving the wound Nothing was done to the wound on the head so far as can be ascertained When I saw him in a nursing home on the seventh day both wounds were inexpressibly foul, the posterior two-thirds of the head was œdematous, the patient who as before stated was completely blind, could with difficulty be roused to an order, and his temperature was 101° F

Under an anæsthetic the apertures in the scalp were explored by a large flap incision, and it was then found that in addition to the comminution of the skull at the apertures of entry and exit, there was also a line of fracture and comminution about 4½ inches long connecting the holes Further, the whole lambdoid suture was started so that the occipital bone was loose—i e, both halves On clearing away the fracture blood and pus came from underneath the bone but I considered that the subdural leucocytic barrier had already sealed off much of bullets of the same weight as the ordinary conical pattern, but pointed like the modern service projectile, and of course with the same load This he very kindly did, and I show you the records of experiments made by the clay method under as nearly as possible similar conditions, the first being an imitation service bullet, the second the old conical pattern (both these being 0 22 calibre), and the third the larger 0 310 soft lead bullet to contrast with the service bullet, and to settle again the question of the deformity caused by the various projectiles respectively This point, I may mention, I had already dealt with in my first experiments 20 years ago, and which, as I have already stated, went to show that the apex of a bullet had no bearing on the immediate question of amount of destruction I have also dealt with it in a report furnished to Lord Kitchener and published by him

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* [illegible]

Turning Over

Some misconception as regards turning over has arisen, because it seems to be imagined that a very pointed bullet might turn over and over round a transverse axis through the middle of its length, progressing, in fact, like a wheel, but this is not the case, it only turns over once Turning over is very common, but as is shown when the bullet enters clay or soap it does not happen until nearly half its course has been passed over—i e, when the progressive velocity is greatly reduced and the advance of the bullet becomes more sensitive to obstructions which will first affect the light tip, the momentum of which is very different to that of the base Further, in consequence no doubt of the greater obstruction and friction set up when the bullet travels at right angles to its long axis, its traverse of the tissues is much reduced, but the spin due to the rifling continues to the end

As regards the disturbance of the tissues caused by turning over the net result is conversion of a tubular wound into a cleft which is nearly triangular in cross section, a narrow isosceles triangle, the base of which is caused by the base of the bullet and the apex by the point. When turning over has reached its complete development there is certainly rather more appearance of disruption, but on measuring the circumference of such a cast there is little difference between the "turned over" region with the immediately precursory cylindrical part of the bullet's course The practical conclusion which follows from these facts is of course, that turning over is not to be credited, as it has been, with doing much harm, the real cause of great destruction of tissue, &c, being, of course, the high velocity and rapid spin

Fragments of Bone

The clay plaster method showed me another fact that I had not considered fully It is that the deep penetration of the brain by a fragment of bone is in the first place the simple consequence of the high velocity of the bullet being communicated to such bodies much lighter than itself and therefore capable of proceeding as far as and even farther than the shot In view of the fact that any such fragment may be infected, it follows that at the first operation every reasonable search must be made for fragments as they certainly may later cause the death of the patient

Dr Bruce's beautiful radiogram is an interesting example because the shrapnel bullet partly caught by the edge of the hole, nevertheless has sent on five fragments, one streaked with lead, deeply into the brain This was the case of an officer who came under my care some ten days after he was wounded at the end of August There was a foul small round wound above the left frontal eminence which Dr Spitta found was infected with staphylococcus aureus, and it led into an abscess cavity about 2 inches deep I removed the purulent débris, fragments, &c, cut away the original wound in skin and bone, and disinfected with sublimate lotion, hydrogen peroxide, and weak carbolic Vaccination with autogenetic vaccines was carried out by Dr Spitta for two months The patient has made an excellent recovery, the cavity has after three months cicatrised, and he has returned fit for light duty The distance of penetration of the bone fragments in this case is exaggerated, of course, by the retention of the shrapnel bullet on the inner edge of the hole

CLINICAL FEATURES

Perhaps the most important subdivision of clinical conditions which are special is that of causes of death

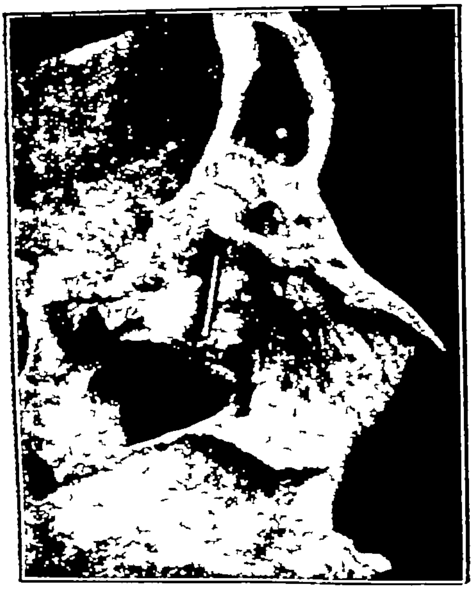
1 *Concussion*

Several cases have been reported of fatal concussion without penetration of the skull These are, of course, perfectly possible because they fall into the same category as the deaths caused by the simple blow of a cricket ball They are apparently due to direct paralysis of the respiratory and cardiac centres in the bulb Mr Walter Spencer and I showed many years ago that mere pressure on the unopen skull, if sufficiently severe on thin parts, could affect the intracranial tension so as to interfere with the functional activities of these centres

2 *Rise of Intracranial Pressure*

Duret showed many years ago that the most paralysing effects on the centres of organic life were produced most easily by force applied in what he called the fronto bulbar axis, and he showed that the effect of shock applied to the frontal region was transmitted largely by the cerebro spinal fluid to the interior of the ventricles and even to the fourth ventricle This is undoubtedly the first effect of a gunshot wound to the head, and evidenced by functional inhibition of the respiratory centre, as Kramer and myself showed first in 1897 Concurrently one has, of course immediate hæmorrhage and therefore an equal immediate rise of intracranial pressure If this is not relieved the embarrassed respiratory centre fails At the same time the vagal centre is at first stimulated and causes very slow beats of heart, and as the pressure rises this gives place to paralysis of the vagal mechanism, and then begins the fatal and final stage Probably a certain number of deaths in cases of this kind could be saved by immediate operation, and I have under my observation now an officer whose life was so preserved by Major Sherran R A M C who, recognising the urgency of this condition just described, operated at the field dressing station within a very few minutes of the infliction of the wound by trephining and washing out the extravasated blood thus releasing the pressure and saving the patient's life The patient is now gradually recovering In many cases if there is a good blood pressure the intracranial tension often prevents a rapid hæmorrhage

FIG 1.



Bone specimen showing the fronto-nasal passage with probe passing through the dotted line shows the route of anterior entry through agger and other anteconchal cells. Note the anterior entry " is well in front of the cribriform plate

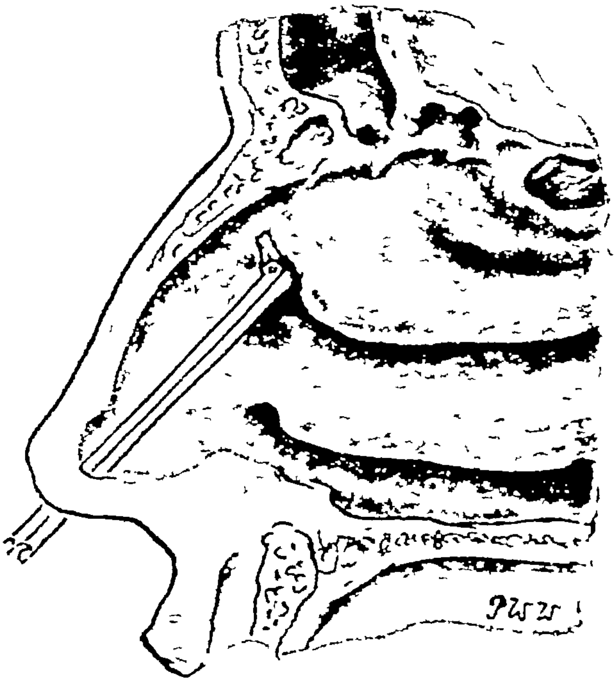
opening in the uncinate groove and infundibulum, is more or less surrounded by anterior ethmoidal cells, and of those that lie in front of this passage we recognise as fairly constant the one or two agger cells below and the usually smaller ethmoidal cells above All these lie in front of the free margin of the anterior end of the middle turbinal, and for this group I therefore suggest the term ' anteconchal cells ' By opening up and removing the anteconchal cells we obtain a much more anterior or direct route to the frontal sinus than by endeavouring to locate the more posterior frontal sinus passage at its lower end and following it in its upward and forward direction, the difference between the old posterior and what I call the anterior route being obvious in the specimen (Fig 1) By entering the sinus through the anterior route we keep in front of the cribriform plate, while by retaining the anterior end of the vertical plate of the middle turbinated bone, and restricting the operation to the outer side of this vertical plate, we ensure our being also to the outer side of the cribriform plate, which is the only serious danger zone if we avoid all force in introducing instruments The operation appears a dangerous procedure unless we bear in mind that the operative field is not only outside, but also in front of the anterior extremity of the cribriform which was not the case when operating by the old route

The clinical and also the anatomical conditions to be dealt with largely determine the extent of the operation required In a large proportion of patients the simple removal of the anterior ethmoidal cells by the anterior route forms a new fronto nasal passage large enough to admit a No 17 or No 19 sound—i e the passage is about 6 mm in diameter and has therefore about nine times the sectional area of the normal 2 mm wide passage This suffices for very free drainage and the patient can usually very soon learn to wash out the sinuses daily

Such operative measures are restricted to anterior ethmoidal cells, and though undertaken for frontal sinus suppuration they are not extended to the frontal sinus itself in any part This removal of the anterior ethmoidal cells which obstruct the exit of discharge below the frontal sinus ostium has been the object of the intranasal operations for frontal sinus suppuration for many years, but when attempted in the more or less haphazard way of working from the lower end of the fronto nasal passage it is a difficult matter to follow up the course of the passage, as one is working from below upwards and forwards in a dangerous area In 1911 at the annual meeting of the British Medical Association, Mosher, of Boston, demonstrated his method of opening the agger cells *from above* and so clearing away these anterior ethmoidal cells in a systematic manner At the same time I demonstrated the method I adopt, which effects the same result *from below and without destroying any part of the vertical plate of the ethmoid*, a point I think of import inasmuch as it does not involve fracturing through this vertical plate in close proximity to the cribriform plate and laying open venules and lymphatics in this dangerous area to the risk of infection by the purulent discharges from the frontal sinus

Tilley has adopted Mosher's operation with this difference, that he removes the anterior end of the middle turbinal at the beginning instead of as a final step, and since February, 1914, has used a rasp for assisting in the more complete removal of the agger cells In the more favourable cases, those in which the frontal sinus ostium is naturally large, being merely obstructed by the diseased ethmoidal cells of the fronto nasal passage below the sinus ostium, this relatively simple operative measure is very often attended with good result

FIG 2



To show the initial point of entry in the intranasal frontal sinus operation The small [illegible] forceps are seen cutting the point of attachment of the middle turbinal to the outer nasal wall thus entering the fronto-ethmoidal cells the subdural space The wound was very thoroughly disinfected, irrigated with peroxide of hydrogen and sublimate lotion As the flap incision was a very free one no further incisions were made in the œdematous skin on the left side of the head All lacerated portions of brain tissue were removed Besides pus there were several sloughy and dark pieces of tissue obviously necrosed The bacteriological inspection of the head wound gave (by Major Embleton) an almost perfectly pure culture of the bacilli of malignant œdema The patient has made a good recovery so far after frequent dressings with peroxide of hydrogen and weak carbolic lotion

The immediate question in this case, however, is the recovery of sight This began to return in the top right hand corner of both fields, and has now spread until the patient can see probably over most of the upper right quadrant, but he is a good witness The first recovery of the upper part of the field in this central case interests me because I have shown that in peripheral lesions—i e , optic neuritis—the pressure is most severe on the upper half of the nerve and disc, and therefore preservation of sight is chiefly in the upper quadrants (This patient had a remarkable congestion of his discs, but no true swelling)

My immediate point is that no recovery has taken place in the gravely injured lobe, neither, I fear, can any be expected As regards the representation of the upper and lower halves of the visual field in the lower and upper parts of the calcarine cortex and the bearing of this further consideration on the present case nothing can justly be said, seeing that the whole occipital suture being started there must have been bruising of some degree, even if slight, affecting the left calcarine region Mr Cruise, who has had charge of the case ophthalmologically throughout, will very kindly report on the case

(b) *Kinæsthetic Cortex*

The consideration of the loss of function of the Rolandic region is much more difficult, since paralysis of movement is no simple question of the destruction of a so called motor centre, but also that of a number of sensation conditions and memories

1 *Loss of movement* —So far as the loss of motor function alone may be discussed I desire to suggest, from the experience of cases who were wounded in the South African War, that the chief movements of the hand are not restored if the whole arm area of the anterior gyrus has been destroyed

2 *Loss of kinæsthetic memories* —The retention of power to move a segment of a limb at all is one thing but the ability to effect that movement without clumsiness is quite another This depends on the conservation of what I term the topognostic sense—viz , the relation of a spot touched on the body, to our knowledge and conception of our position in space , and that chiefly in the relation of the spot touched to (*a*) the distance from the body—i.e , 'proximality' , and (*b*) the distance to the mid line of the body or "axiality' The loss of the sense of appreciation of these relations and distances is what we call, in popular language clumsiness, and I have shown that this topognostic sense is represented in both central Rolandic gyri Further, I believe it is permanently lost if the arm area of both gyri is permanently destroyed Thus far, therefore, there is no compensation possible by substitution activity of the lower centres Coarser coördinated movements of shoulder, elbow, wrist, and even of the hand however, can be furnished by such lower activities

THE PERNASAL OPERATION FOR FRONTAL SINUS SUPPURATION BY THE ANTERIOR ROUTE[1]

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A FEW years ago the improved technique of operating on the frontal sinuses by the external radical method, and more particularly by the Killian operation, seemed to have solved the question as far as cases of frontal sinus suppuration attended with severe symptoms were concerned The reported successes left the impression that skill and experience were the only essentials for a good result—that is to say, good in the sense of obtaining a cessation of discharge, headache, &c., though not seldom far from good in the cosmetic result But these earlier successes have been discounted by several instances of septic osteomyelitis occurring in the practice of those who may justly be regarded as very highly skilful a complication almost invariably fatal, while numerous instances of very grave deformity from absorption of the "bridge" in the Killian operation, failure to obtain cessation of suppurative discharge and headache, have made every rhinologist pause before advising a radical operation unless the symptoms are so urgent that, notwithstanding these undoubted risks, obliteration of the sinus involved must be advised And though so far I have escaped the worst of these complications, it is, I fear, more by good fortune than the result of special skill

Intranasal methods of securing effective drainage by the removal of the anterior end of the middle turbinate body and of the anterior ethmoidal cells around the lower end of the fronto nasal passage, so as to render lavage of the frontal sinus, by means of a fine 2 mm cannula, have been practised for many years, and in a large percentage of cases such lavage has proved of undoubted value But there are many cases where either the sinus cannot be entered and lavaged at all by these methods, or where, if lavage is possible, the passage for the escape of secretions is still so narrow that the drainage is most inefficient and the symptoms unrelieved, so that some improved intranasal operation has long been a desideratum Schäffer, Spiess, and others managed to open into the frontal sinus floor through the roof of the olfactory fissure, but the results were disappointing, and in the hands of one follower fatal, hence the method was abandoned To Fletcher Ingals is due the credit of introducing the method of following up the tract of the fronto nasal duct—that is, entering the frontal sinus outside the middle turbinal and through the natural frontal sinus ostium All modern methods are developments of Fletcher Ingals s operation—e g , the operations of Halle Segura &c Unfortunately the operative methods of all these pioneers are open to grave objection on account of their inherent danger and hence I have endeavoured to devise an intranasal operation which is comparatively safe and certainly in most cases highly efficient

The fronto nasal passage in its downward course from the bony ring of the upper ostium to its lower plate here, and there is no danger provided the instrument is really in the sinus

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[1] Abstract of a demonstration in the Laryngological Section at the annual meeting of the British Medical Association [illegible]

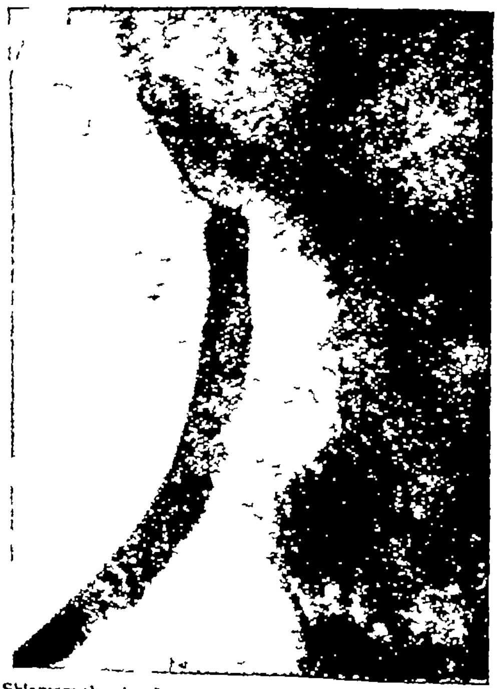
One advantage that may be claimed for this method of entry as compared with methods with unguarded burrs is that the mucous membrane is not stripped from the posterior and lateral walls of the new passage, for although the cell partitions are clipped away the mucous membrane of the cell bottom is mostly retained Only anteriorly is the bone laid bare, and that for a strip about 6 5 mm wide, and this can apparently recover itself by extension from the muco periosteum on either side Is it not better to have a 6 or 7 mm. wide passage which is lined with mucous membrane than a wider one stripped of mucosa which can only granulate over and which is much more liable to subsequent contraction

At the conclusion of these procedures the sinus is well lavaged and finally the anterior end of the middle turbinal may be removed or left for some days, as when it is left intact the channel may become narrowed by subsequent granulations In many patients I find it unnecessary to remove any portion of the middle turbinal either at the time of operation or subsequently and in such cases the nasal passage appears to be intact and normal except that a large fronto nasal passage is found running up to the sinus

After treatment—This consists 1 In lavage of the sinus first with saline solutions and weak peroxide of hydrogen and some mild antiseptic, such as colloidal or other silver preparations iodine solutions &c and later with stronger solutions if necessary 2 In the passage of the largest sound the canal will take comfortably, repeated at short intervals to prevent adhesions and to ensure the passage remaining widely open until the sinus has become healthier or the discharges disappear 3 The use of vaccines, &c, has to be considered. But in cases of streptococcal infection it is always safer to give 30 to 50 c c of polyvalent antistreptococcic serum immediately before operating, and follow with sensitised vaccines

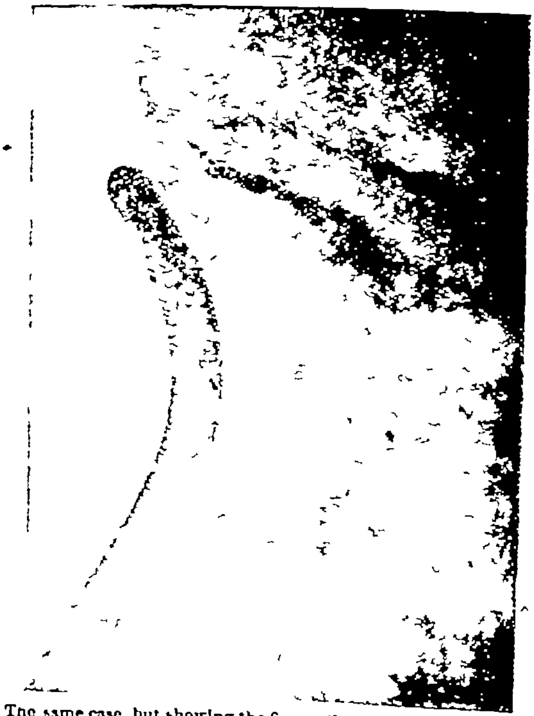
If a sufficiently wide fronto nasal passage to admit a bougie 15 mm in circumference is obtained without cutting away the thick part of the nasal crest, and the sinus infection is recent, or there is no reason to believe that polypoid degeneration of the mucosal lining has occurred, I do not use a burr or other means for cutting away any part of the floor of the sinus unless subsequent observation seems to render this desirable (Provided efficient drainage is maintained, and the patient has been relieved of pain, headache, and inconvenient discharge, only the lesser operative measures are performed)

FIG 5



Skiagram showing 6 mm thick round bougie entering frontal sinus but carried back so as to impinge against tabula interna because the nasal crest is thick

FIG 6



The same case but showing the 6 mm (No 19 French scale) bougie entering well into the sinus after reduction of the nasal crest by burring

These two Figures are from the same patient reproduced actual size direct from the skiagram.

I have entered more than 100 frontal sinuses by this anterior route, doing either the intranasal or the pernasal "complete" operation

Many have been cured, nearly all have been relieved But in some few cases it has been necessary to do an external operation subsequently, while in another small percentage it has been impossible for me to reach the sinus pernasally These exceptional and difficult conditions I propose to discuss in another communication

Clifton Bristol.

INFECTIOUS DISEASES IN DUNDEE —The monthly report of the Dundee Public Health Department shows a marked increase in the number of cases of measles and whooping cough Altogether 803 cases were notified during the month of January and of these 320 were of measles as against 175 cases the preceding month, and 334 were of whooping cough as compared with 132 during December In January of last year only 324 infectious diseases notifications were made

This we may term the incomplete operation But a "complete" pernasal operation—i e, an operation not only on the ethmoidal cells but also on the frontal sinus ostium—is called for when, in association with frontal sinusitis, the agger cells and the other anteconchal cells are poorly developed, or the nasal crest projects backward in marked degree It then becomes necessary to remove the nasal crest by a rasp or burr, sometimes very freely, so as to afford a large entry, measuring 7 or 9 mm antero posteriorly by 6 mm wide, because, after stripping the mucous membrane towards the front and removing the bone, granulations tend to close the passage in the process of healing Thus, unless the passage is a good deal larger than seems necessary it may contract so much that the operation is ineffectual as a means of obtaining the all essential permanent free drainage

Operative Technique

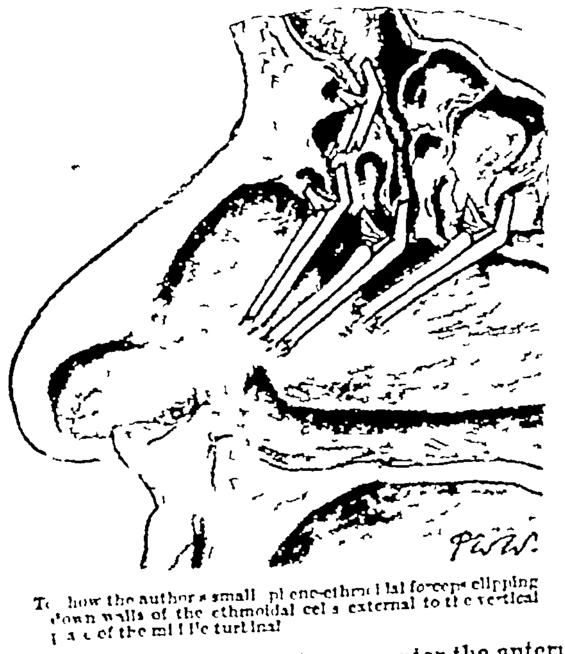
It is assumed that the extent and depth of the frontal sinuses have been determined by skiagrams prior to operation

Anæsthesia—Even the "complete" pernasal operation on the frontal sinus may be done under local anæsthesia, but in the majority of patients a general anæsthetic is desirable, and more especially if operation on the maxillary antrum or sphenoidal sinus is to be done at the same time Yet, as far as pain is concerned, one may do any of the procedures described for frontal sinus disease under cocaine anæsthesia, using a 20 per cent solution of cocaine hydrochloride with a little adrenal extract The patient may be sitting up or lying flat on the back, or slightly inclined, it makes no difference to the ease of operation

A *Removal of Anteconchal Cells, the "Intranasal" or Incomplete Operation*

1 With the small angular ethmoidal forceps engage the anterior margin of the middle turbinate at its point of attachment to the outer nasal wall Cutting through this the forceps enter the anterior ethmoidal cells in front of the fronto nasal passage (see Fig 2)

FIG 3

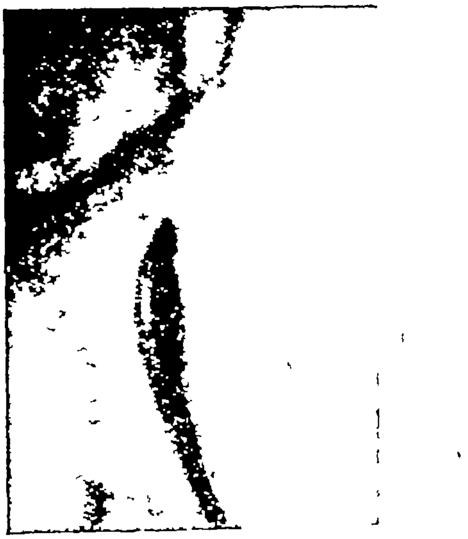


To show the author's small sphenoethmoidal forceps clipping down walls of the ethmoidal cells external to the vertical plate of the middle turbinal

2 Keeping to the outer side of the vertical plate of the ethmoid, clip away all the agger cells and the other anteconchal cells right up to the crista nasalis (Fig 3)

3 The anterior ethmoidal cells lying behind or above the fronto nasal duct, including the bulla ethmoidalis, are now removed by the forceps as far back as may be necessary

FIG 4



Skiagram showing the 4 mm wide guarded electric burr reducing the crista nasalis in a patient

4 Using the larger forceps, the thicker projecting partitions of the cells are laid open and punched away Only the blunt tip of the female blade can come in contact with the roof, hence with any reasonable care there is no risk of the roof being perforated

5 The author's sounds are then passed into the sinus, so as to gauge the size of the fronto nasal channel thus formed Often No 18 or 19 will enter, sometimes 19-23 or 19-25 (The figures give the circumference in millimetres, hence 19 has a diameter of 6 05 mm, or ¼ in A 19-25 sound measures 6 mm in width and 8 mm in antero posterior diameter)

6 With the small forceps, which now enter freely, the projecting walls of any remaining ethmoidal cells may be clipped away to render the passage more free

B *The "Pernasal" Frontal Sinus or Complete Operation*

7 If a large enough sound will not enter it may be necessary to enlarge the frontal sinus ostium, and to this end the bone corresponding to the nasal crest *may* be shaved away by the sharp rasp till these large sizes can be introduced or the crest reduced first by the smaller guarded burr When a No 10 sounds enters the sinus the bony boss can be further burred away with the 4 mm wide burr until the burr enters the sinus (Fig 4) When the frontal sinus opening lies well to the outer side and tends to guide entering sounds towards the orbital roof, it is well to, unless contraindicated by skiagram draw the rasp or burr towards the front so as to enlarge the frontal ostium to the front and inwards rather than towards the orbital roof outwards One is in front of the cribriform

and in the absence of any such evidence of change in the blood pigment there are grounds for attributing the altered appearances solely to the opacity of the plasma Thus the only situation where this change of colour is seen is in the retinal vessels, the general tint of the fundus, which is dependent upon the light reflected from the choroidal vessels, may be a little pale but is not otherwise altered, nor is that of the cheeks It must be borne in mind that the retinal vessels are peculiar in this, that resting as they do upon the surface of the retina light is reflected direct from their central axial stream without having to traverse any but transparent media In the case, however, of the normal choroidal vessels the light reflected from them has to traverse a light diffusing medium in the form of the retina with its pigment epithelial layer, and consequently the *normal* choroidal vessels, as seen with the ophthalmoscope, differ markedly in appearance from *normal* retinal vessels When now the central axial stream of the retinal vessels is surrounded by a plasma, which on separating has the appearance of cream, the effect of a ground glass instead of a transparent envelope is produced

Much diffusion of the light reflected from the axial stream results from this, and in this particular the condition of *normal* choroidal vessels is approximated, and consequently the appearance of the two sets of vessels as seen with the ophthalmoscope is very similar This is seen in three particulars—viz 1 The "ground glass" effect of the opaque plasma does away with the central light streak seen in normal retinal vessels, as a consequence of which the cylindrical contour is lost, and the vessels have the appearance of flat bands or ribbons as is seen in normal choroidal vessels 2 The colour of the retinal vessels in lipæmia, where the salmon tint is moderately saturated, is almost exactly that of normal choroidal vessels 3 In both instances there is the difficulty of distinguishing arteries from veins It is probable, therefore, that the marked change in colour of the retinal vessels is due entirely to the condition of the plasma, and does not imply a change in the blood pigment

Distension of vessels—In none of the reported cases are the vessels described as being less well filled than normally, but in several there has been a well marked degree of distension of them In Case 2 both arteries and veins were very full and turgid, they were not less than twice their normal diameter, and this was also the case in Heyl's patient, in the remaining cases, however, distension was not conspicuous, the vessels are described as being well filled (Turney and Dudgeon), a little larger than normal (Hale White), rather dilated (Heine), and this last description would apply to Case 1

Vision—There may be very marked lipæmia of the retina without any serious interference with vision In Case 1, 27 hours before death, in reply to an inquiry, the patient said he did not notice any alteration in his sight, he could see about the ward quite well and could read a newspaper rapidly and without trouble Turney and Dudgeon say of their patient that "so far as rough tests go her vision may be described as normal" and in Heine's case, though the vessels looked as if they contained milk instead of blood there was no difficulty with vision In the cases of Reis and Heyl there was loss of vision it would seem possible however, that the defect in these cases was due to an accompanying retrobulbar neuritis and not necessarily due to the presence of lipæmia. The optic disc is always quite clear, and there is no obvious œdema of the retina, nor are there areas of exudate, and it is a striking fact that retinal hæmorrhages which so readily occur in altered conditions of the blood have never been recorded in lipæmia.

Prognosis—There is no doubt that lipæmia of such degree as to give rise to the appearances of lipæmia retinalis implies a grave condition, for I have been able to find one case only in which the patient survived after its discovery It is, however, clear that recovery is possible and that the normal appearance of the fundus may be restored, for Hale White says of his case that "the colour of both sets of vessels became more healthy, and was quite natural after he had been in two months"

Whilst, then, with a general improvement in the patient's condition lipæmia may disappear, there are grounds for surmising that towards the end of the patient's life it may also disappear and constitute an omen of grave import It has been shown that a large ingestion of fat increases the amount of neutral fats in the blood, and the plasma may be milky from this cause (Schäfer[8]) The fat in the blood in lipæmia, however, is independent of food taken (Naunyn,[9] Gerhardt*), and its source would seem to be the reserve stores of body fats, as is the case in the lipæmia of starvation (Hunter[22]) If, then, in a case of diabetes the patient should escape coma sufficiently long for his store of body fat to become exhausted, it might well be expected that lipæmia, if previously present, would disappear Whether in fact this does occur one cannot state, it did not happen in either of the present cases, but in neither was there marked emaciation It was, however, demonstrated by Boggs and Morris *in* their experimental lipæmia (*vide infra*), and the cases of Turney and Dudgeon and of Zandy[10] lend some colour to the possibility of its occurrence in man

Turney and Dudgeon found at the post mortem examination of their case that "the great omentum had a very remarkable appearance, in that all the fat was gone from it and the tissues had a gelatinous appearance, all the fat round the viscera was similar, and this was well seen in the heart" The subcutaneous fat, although diminished, had not disappeared Corresponding with this disappearance of the body fat they find that, whereas film preparations of the blood obtained during life showed a very large number of fat droplets of all sizes, similar films of the blood obtained post mortem, prepared by the same method, failed to show the slightest evidence of fat They were however, able to show abundance of fine fat granules in the tissue cells Similar observations were made in Zandy's case

Turney and Dudgeon suggest that this "disappearance of the fat from the blood in the large vessels is a vital phenomenon conditioned possibly by the febrile state of the last few days of the patient's life", it would seem, however, that the remarkable manner in which the stores of body fat had become exhausted might supply an explanation of this

Differential diagnosis—Heyl in his original paper suggests a certain similarity to leukæmic retinitis The very characteristic colour of the retinal vessels in lipæmia is entirely absent in leukæmia, this alone would differentiate the two conditions In addition, however, in leukæmic retinitis the veins are usually greatly more distended than the arteries, especially in the myelogenic variety, and hæmorrhages are always present, these features are

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* Gerhardt reports the case of a dog which had spontaneous diabetes; the blood contained 1.3 per cent of fat, though the animal had had no food for nearly [illegible] hours

LIPÆMIA RETINALIS

By R FOSTER MOORE, M A, B C Cantab., F R C S Eng,

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THE earliest accounts of the condition of the blood to which the term lipæmia is applied are by Rollo, of London, in 1798, and Mariet, of Edinburgh, in 1799 The ophthalmoscopic picture which is associated with this condition was first seen and described by Heyl in 1880, since when very few additional cases have been reported The appearances of the eye fundus are so striking that they cannot be overlooked, and are so characteristic that having once been seen they cannot fail to be recognised, and in addition, so far as I can discover, they form the only means, apart from a blood examination, of diagnosing the condition of lipæmia.

The two cases which form the basis of the present remarks were under the care of Dr A E Garrod, Dr J Calvert, and Dr Morley Fletcher at St Bartholomew's Hospital, to whom I am indebted for permission to publish them

CASE 1 —The patient a man aged 23 years, was admitted under the care of Dr Calvert on Oct 2nd, 1914, suffering from diabetes mellitus He had all the essential symptoms of the disease His knee jerks and plantar reflexes were absent, he had lost much flesh, and was a little drowsy on admission He was of a fresh colour; his fundi were normal The examination of the urine resulted as follows Specific gravity 1031, reaction alkaline, phosphates were present Albumin was present in small amount on one occasion only Acetone and aceto-acetic acid were present throughout The quantity passed varied from 7 to 13 pints The maximum quantity of sugar passed was 266 grammes and the minimum 139 grammes in 24 hours On Nov 9th examination with the ophthalmoscope at 11 A M revealed the condition of lipæmia retinalis and the appearances had not changed at 6 P M The patient said he was feeling very well, but on inquiry the Sister informed me that he had been drowsy His colour was fresh and good, it did not strike me as being abnormal His capillary circulation as tested by pressure on the finger nail was as free as my own The composition of his alveolar air was examined on three occasions by Dr George Graham with the following results Nov 9th, 7 P M, 2 56 per cent CO_2, 10 P M 2 2 per cent Nov 10th 9 A M 1 0 per cent On the morning of Nov 10th air hunger was very apparent Ten ounces of blood were withdrawn from the arm by Mr H J Bower and examined by Dr T H G Shore and Mr W H Hurtley The patient died in coma at 2 15 P M A post mortem examination was not permitted

CASE 2 —The patient a woman aged 25 years, was admitted to John Ward on April 19th, 1905 under the care of Dr Garrod suffering from diabetes mellitus, she had previously been admitted under Dr Garrod and also under Dr Morley Fletcher Her symptoms were of 15 months duration From March to June 1904 she was under Dr Garrod s care At this time she was passing 5 pints of urine with a specific gravity of 1045 in 24 hours, the amount of sugar was 4 2 per cent and a strong ferric chloride reaction was present The eye fundi were normal On her discharge the amount of urine was reduced to about 50 ounces sugar was absent and thirst had disappeared From Nov 4th 1904 to Feb 8th 1905 she was under Dr Morley Fletcher s care She was now passing from 5 to 8 pints of urine which contained 5 2 per cent of sugar and a strong ferric chloride reaction was again present She was sent to a convalescent home on Feb 8th having gained 9 lb in weight, her urine still gave a marked iron reaction and contained 4 6 per cent. of sugar The eye fundi were normal On April 19th she was readmitted under Dr Garrod She was suffering from marked dyspnœa and had vomited Her breath smelt strongly of acetone. Her knee-jerks and plantar reflexes were absent The urine had a specific gravity of 1020, contained much sugar, and showed a well marked iron reaction She died in coma 44 hours after admission Twenty hours before death venesection was performed by Dr F A Hepworth, and a high degree of lipæma was so discovered The fundus oculi was now examined, and the striking appearances of lipæmia retinalis were seen A post-mortem examination was not obtained

Ophthalmoscopic appearances —Case 1 —The fundi were examined 27 hours and again 20 hours before death, and the condition of the blood was recognised by this means The abnormal features were almost entirely limited to the appearance of the retinal vessels These were of a salmon colour on the disc and for a short distance beyond, but when traced towards the periphery the colour became much less saturated, and gradually merged into a cream colour with almost no pink tinge The colour of arteries and veins did not differ at all In the centre of the disc a faint central light streak was seen on the arteries, and by this means, but by no other, could the arteries be distinguished from the veins, towards the periphery both sets of vessels were identical in appearance Both arteries and veins were well filled, perhaps a little abnormally so, but there was no turgidity or obvious distension The general tint of the fundus was rather pale The optic disc was normal in appearance, its edges were perfectly sharp and clear cut, and there were neither hæmorrhages nor exudates anywhere to be seen

Case 2 —The foregoing description would apply in every essential particular to this case but there were two differences of degree The colour of the vessels was of a more saturated salmon pink and extended further outwards into the peripheral vessels, and all the vessels, whether arteries or veins, were markedly distended and therefore tortuous, they were about twice their normal diameter

Lipæmia is described as occurring in a number of widely differing diseases—e g, chronic alcoholism, phthisis, asphyxia, nephritis, phosphorus poisoning, pneumonia, peritonitis, gout, starvation, and diabetes I have, however, been unable to discover any reported case in which lipæmia retinalis was observed, except where diabetes was the cause

A description of the appearances seen with the ophthalmoscope is given by the following observers Heyl,[1] Hale White,[2] Fraser,[3] Futchner,[4] Heine,[5] Reiss,[6] and Turney and Dudgeon[7] All were cases of diabetes in young subjects, the oldest was 35, the youngest 17, and the average age was 24 In several of these cases a general pallor of the fundus is described, and in two cases some visual defect, but otherwise in no case is any abnormality described except as regards the appearance of the retinal vessels The colour of the vessels is the most striking feature, arteries and veins being quite indistinguishable from each other by this means There is general agreement in describing the largest vessels as being salmon coloured and the peripheral vessels as being cream coloured, differences exist only as to the distance towards the periphery to which the salmon colour extends

So far as can be judged from the descriptions of reported cases, the intensity and extent of this salmon tint were greatest in the present Case 2 whilst at the other extreme, in Heine s case the vessels looked as if they contained milk and not blood, in Fraser s[3] case the vessels are described as being white, and in Turney and Dudgeon s report it is stated "the only place where anything approaching a red tint is seen is in the vessels as they come up into the centre of the disc Before they have crossed the disc this has completely gone, to be replaced by a pale cream colour

The change of colour of the retinal vessels is so striking that one is tempted to conclude that this implies a chemico physical change in the hæmoglobin In no case that I have found has a spectroscopic investigation of the blood been carried out

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THE OPERATIVE TREATMENT OF BULLET WOUNDS INVOLVING THE VERTEBRAL CANAL AND ASSOCIATED WITH COMPLETE PARALYSIS

BY L J J MUSKENS, M D,
AMSTERDAM

DURING a prolonged visit to Antwerp I had under observation in the various hospitals six cases of lesion of the spinal cord caused by shrapnel or rifle bullets In the worst two cases of the series where the symptoms suggested complete severance of the cord I advised exploratory operations, and through the kindness of the medical men in charge of the cases (Mr H S Souttar, of the British Field Hospital, and Dr Bremken, of the Elizabeth Hospital) I was permitted to perform laminectomy The observations made during and after these operations appear to me to be of some interest, for in each case the cord and dura *mater* were found intact, although both patients displayed an almost complete loss of all reflexes and complete flaccid paraplegia These symptoms, I consider, were due to intradural hæmorrhage while the history of the two cases appears to indicate that operative procedure may be beneficial

CASE 1—*Patient* aged 28, married one healthy child Examined first Sept 19th 1914 He was wounded on Sept 10th but was *unable to say* whether by shrapnel or bullet At the time he was injured he estimated that the enemy were 200 metres distant When hit he felt a blow and fell down at the same time losing all sensation in both lower limbs the right arm and trunk He was carried half an hour by comrades travelled by vehicle for half an hour, then by motor to Aerschot and from thence to Antwerp by rail When admitted to the British Field Hospital he was in collapse and saline injections were administered. At this time the pulse was 120 vomiting was persistent and [illegible] of urine were removed after his arrival It was found necessary to catheterise the patient twice daily On Sept 17th he was taken down to the X ray laboratory when severe vesical hæmorrhage occurred and the patient again collapsed the pulse rose from 90 to 145, temperature was [illegible] Digitalis and pituitrin were given and after six hours he recovered The urine was at this time strongly alkaline with an ammoniacal odour while there was a [illegible] The large quantity of blood in the urine made it [illegible] to examine [illegible] The vesical [illegible] was very troublesome for three days during [illegible] [illegible] at length [illegible] [illegible] the patient improved somewhat, being able to take nourishment, but incontinence of both urine and fæces *continued* *The examination* of the patient's back showed the point of entrance of the bullet at the level and to the left of the sixth dorsal spine as a brownish wound about the size of a halfpenny with slightly inflamed edges, but little, if any exudate. At the right shoulder, where the bullet made its exit, the humerus was broken while the whole region was swollen and had a profuse purulent discharge

The *physical* examination made *on Sept 19th, 1914, may* be taken as presenting a general view of the patient At this time he was a broad shouldered, well built man with a pulse of 90, but weak in character There was absolute loss of motility and sensibility below a line passing through the upper part of the ensiform cartilage, or about the level of the seventh rib *Immediately above* this level the patient complained of continuous pain and irritation over a girdle area Associated with these distressing symptoms was a feeling of numbness ("as if swollen") also over the same area. Over the whole body below this line the reflexes had almost disappeared. The abdominal and knee reflexes were gone, but a very slight cremasteric reflex was apparently occasionally elicited. The true plantar reflex was absent, but after repeated deep pricking of the sole of the foot a slight flexion of the great toe was observed, evidently as the result of summation of stimuli It was further noticed that this reaction was better marked if the patient was instructed to make a fist during the application of the stimulus The Achilles jerk was elicited in a slight degree on both sides when the gastrocnemius was tapped with a metal hammer The mobility of the hands and fingers appeared normal, any restriction of the movements of the right arm was due to the complicated fracture of the humerus The abdomen showed marked dermography There was no upward movement of the umbilicus when the attempt to sit up was made There was complete anæsthesia in regard to all forms of sensibility all over *the body* below the girdle zone of hyperæsthesia already described Repeated lumbar punctures failed to get any cerebro-spinal fluid The X ray photographs gave no information as to the nature or character of the deep lesion On Sept 20th, 1914, the field hospital not being provided with the necessary apparatus, Dr Benham (the physician in charge of the case) invited Dr Sano to come and examine the case with his portable apparatus Dr Sano stated that the rapid contraction of the quadriceps elicited on closing the galvanic current was more marked at the negative than at the positive pole With the faradic current a moderately strong convulsion of the quadriceps was provoked, but if the electrodes were applied over the nerve the contraction was slow and wormlike.

From a general consideration of the symptoms it seemed possible and even probable, that the lower part of the cord had nervous connexion with the upper and further, that the symptoms might be caused by particles of bone pressing on the cord. As there was not the slightest sign of spontaneous *improvement*—on the contrary a bedsore developed in the right heel, it was decided to do an exploratory laminectomy The operation was performed on Sept 24th At the time of operation the patient was rather weak, pulse rapid and weak, and temperature 39 4°, this rise being the first of that degree during his stay in hospital The *hæmorrhage* from the bladder was still present but Mr Souttar's *urethroscopic* examination indicated that it was due probably to vaso-motor disturbances The patient was placed in the prone position usual in kidney operations, and the posterior wall of the vertebral column from the second *to the seventh* dorsal vertebræ removed. The cord so exposed was found to be non pulsating, and it was necessary to remove a higher vertebral arch so as to expose the normal cord The dura mater over the non pulsating part of the cord was exceedingly tense, while the cord appeared to be of about twice its normal volume. The sides of the vertebral column were rapidly examined but nowhere was any injury to the dura mater found The condition of the patient necessitated the administration *of* saline and strychnine, and no time could be spent in attempting to examine the frontal portion of the cord but the reappearance of pulsation in the cord was taken as proof that the *operation* had succeeded in relieving pressure. The wound was closed with silk and horsehair suture Sept 25th The temperature went down at once after the operation while the distressing girdle pains ceased Dr Sano stated that the upper border of absent in lipæmia I do not think that lipæmia retinalis having once been recognised would ever be confused with any other condition

Experimental lipæmia —Czerny[11] made the following experiment —

Fat was injected into the jugular vein of a dog, it having been first ascertained that the eye fundi were normal Forty eight hours after the injection numerous hæmorrhages were present in the retina, but there is no mention of appearances at all like those of lipæmia The retinal hæmorrhages in this case were no doubt due to the presence of minute fat emboli, and their method of production was almost certainly precisely similar to that of the retinal hæmorrhages so usually seen in cases of infective endocarditis

Boggs and Morris[12] produced lipæmia by bleeding rabbits to the extent of 25 c.c on six days out of seven for a period of some weeks In from 8 to 16 days, when the red cells had been reduced to about 2,000,000 per c mm , the serum became milky , when, however, the bleeding was continued over long periods the animal became intensely emaciated, all the coarse body fat disappeared and the serum lost its milky character There is no mention of the appearance of the eye fundus in these experiments

These experiments would seem to lend support to the surmise that should a lipæmic patient survive sufficiently long to become greatly emaciated the lipæmic condition of the blood might disappear

Boggs and Morris, as a result of their observations, suggest that lipæmia may occur clinically in cases of anæmia, and state that they have seen a moderate degree of it in a case of anæmia secondary to hæmorrhoids In any case of severe anæmia, pallor of the fundus as of the skin is present, and the retinal vessels, both arteries and veins, have a paler tint than is normal, and show less difference than is usual between the colour of the two sets of vessels These appearances are, I believe, entirely due to the dilute condition of the blood in such patients I have examined the fundi of 36 patients admitted to the wards of St Bartholomew s Hospital suffering from severe secondary anæmia, which was due in most cases to bleeding from gastric or duodenal ulcers

The average blood count of these 36 patients was 2,506,000 red cells, and the average hæmoglobin percentage was 40 , in one case the red cells were so few as 580 000 In most of these the pale colour of the vessels is noted, and in two cases the approximation in colour between arteries and veins is specifically remarked Retinal hæmorrhages in the vicinity of the disc are so common as to be the rule

It is worthy of note that in two of these cases Boggs and Morris s experimental conditions were in large measure fulfilled Both had had bleeding piles for many years, one of them for ten years and in both severe anæmia had resulted The blood examinations were as follows —

Case 1	Red blood cells	2 790 000	Hæmoglobin	34 per cent
2		3 930 000		40 „

In the latter of these two cases severe impairment of sight had resulted from the continual loss of blood, and further testimony of the extent to which this slow blood letting had progressed was evidenced by the degree to which his blood forming tissues had undergone compensatory hyperplasia , seven weeks after his piles had been ligatured by Mr R C Bailey his red cells had increased to 6 200 000, his hæmoglobin percentage to 105 and his now extraordinarily florid appearance contrasted markedly with his previous bloodless condition

In neither of these two cases nor in any of the 36 cases mentioned however were the appearances of the fundus at all like those seen in lipæmia nor have I seen anything similar in chlorosis or pernicious anæmia.

No doubt low or moderate degrees of lipæmia may exist without causing visible retinal changes Normal plasma contains from 0 2 to 0 5 per cent of fats, either as glycerides or cholesterin esters of the fatty acids, and under certain physiological conditions these amounts may be exceeded without producing retinal changes Heine believes that the appearances of lipæmia retinalis are only produced when the amount of fat in the blood reaches 4 or 5 per cent , it may occasionally rise so high as 15–18 per cent (Umber, F [illegible])

Conclusions

Lipæmia retinalis occurs in young diabetics who are usually bordering on coma, and it consequently implies an immediately grave prognosis, but recovery from the condition may occur

It implies a high degree of lipæmia and it is probable that in no condition other than diabetes does lipæmia attain a sufficiently high degree to give rise to the appearances of lipæmia retinalis

Vision may remain unaffected in spite of a very high degree of lipæmia retinalis

The conspicuous changes in colour and appearance of the retinal vessels are probably entirely dependent upon the opacity of the plasma, and do not indicate a change in the hæmoglobin

Lipæmia retinalis supplies so striking and characteristic an ophthalmoscopic picture that it cannot be overlooked nor mistaken for any other condition

Examination of the Blood by Dr T H G SHORE

The blood was taken from the median basilic vein, and as it flowed had a noticeably milky or chalky tinge After a very few minutes the quantity collected in the bleeding bowl showed a whitish layer collecting on the surface The blood clotted rapidly, and as the serum separated the whitish material separated with it, giving the appearance of blood mixed with milk or cream Some of the blood was taken straight into a centrifuge tube, and after coagulation had taken place was separated into two layers , the lower, about half the volume of the blood, looked quite normal, but the upper consisted of the milky serum looking after this treatment more than ever like milk No separation of the constituents of the upper layer could be effected by the centrifuge The opacity could not be removed by treatment with ordinary quantities of ether, but a slight greasy mark remained on blotting paper after the evaporation of the ether, showing that some small amount at any rate appeared to be due to an ether soluble fat Under the microscope red and white corpuscles were quite normal in appearance An actual count was not done Lying free in the serum, both in the fresh blood and in the centrifuge separated serum, a very large number of minute feebly refractile spots were to be seen, not at all like globules of fat, and no such globules could be seen These small bodies did not appear to be crystalline, and could not be made to stain with Soudan III They were not visible in a film stained by Leishman s or Jenner s methods The presence of intra or extra cellular glycogen could not be demonstrated

Chemical examination by Dr Hurtley is not yet complete, but an interesting point has been made out in the total absence of β oxybutyric acid in the blood, although the smell of acetone was very apparent in the breath, the blood, and the urine with a certain amount of inflammation surrounding it The wounds were thoroughly cleaned up and the damaged tissue removed, irrigated, and dressed with fomentations For the next few days the large wound was treated with iodine irrigations and boracic fomentations the latter four hourly, and the patient was apparently doing well

On Nov 1st, at 9 30 A.M, the patient complained of slight stiffness in the jaws and the muscles at the back of the neck, also that the wound in the thigh was "burning" very much Temperature 99°F Tetanus was at once suspected, and on inquiry it was ascertained that he had received no injection at the clearing hospital The wounds did not appear worse, they were cleaning up fairly well. He was given a mixture containing the three bromides, iodide, and nepenthe, four hourly, and an injection of morphia ¼ gr was administered In the afternoon he received an injection of 1500 units of antitetanic serum subcutaneously In the evening the wound in the thigh was causing intense pain and "burning very much, temperature 100° He received an injection of morphia gr ⅙, and calomel was administered On the 2nd the morning temperature was 100° Trismus was very marked, risus sardonicus was obvious, and there were jerking movements all over the body He received a further injection of 1500 units of antitetanic serum subcutaneously On the 3rd the temperature was 100° The patient was removed to a small darkened ward by himself. He now had very marked and violent jerking movements, and arching of the back The abdomen was retracted and very hard and board like He was unable to be fed by the mouth and rectal alimentation was resorted to On the 4th the patient s condition was about the same He was given an injection of antitetanic serum intrathecally of 3000 units chloral hydrate gr xx was given four hourly, and the bromide mixture was discontinued The injections were administered by Major (temporary) B Hudson The wounds were progressing satisfactorily, but were still very painful Temperature 100 On the 5th the wounds were less painful and the patient felt better The jerking movements, especially of the legs were still marked and the trismus &c, were still present On the 6th the temperature was 100 stiffness of the jaws was relaxing and the jerking movements were less violent The bromide mixture was resumed On the 8th the trismus was less marked and the temperature was normal On the 12th the patient was very cheerful The jerking movements and the trismus were very slight and the wounds were clean On the 18th all signs of tetanus had quite disappeared and the patient felt well On the 22nd he was discharged to hospital ship

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ST MARK'S HOSPITAL FOR CANCER FISTULA, AND OTHER DISEASES OF THE RECTUM —On Feb 11th Sir Richard Biddulph Martin presided at the annual general meeting of this hospital and in moving the [illegible] of the report referred to the improvements which had been made in the nurses' quarters and in the operating theatre The finance and general work of the hospital were satisfactory The War Office he said had [illegible] the hospital's offer of 12 beds for the wounded and three of the hospital's five surgeons had volunteered for [illegible] The seventy ninth annual report which was [illegible] stated that during 1914 the total number of new [illegible] was 1[illegible] as compared with 185 in 1913 and [illegible] year was 732 [illegible] The number of [illegible]

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF OBSTETRICS AND GYNÆCOLOGY

Ruptured Unilateral Solid Cancer of Ovary Removed —Squamous celled Carcinoma —Inversion of Uterus —Exhibition of Specimens

A MEETING of this section was held on Feb 4th, Dr W S A GRIFFITH, the President, being in the chair

Dr HERBERT SPENCER read notes of the case of a patient, aged 27, who had a Ruptured Soft Solid Growth of the Left Ovary, measuring 5¾ by 3½ inches, with about a gallon of free blood stained fluid in the peritoneum The tumour was removed, the other ovary, appearing healthy, was left behind. The patient subsequently had two children and remained well seven years after the operation Similar cases were recorded by Hofmeier and von Velits The tumour had the microscopic characters of a medullary carcinoma. Dr Spencer did not agree with *Pfannenstiel's opinion* that in all cases of unilateral papillary tumours, cancer and endothelioma of the ovary, the other ovary should be removed, for he had seen examples of all those conditions remain well seven years after unilateral ovariotomy He suggested, however, that, notwithstanding its microscopic characters, it was possible that the specimen shown was not malignant —Dr CUTHBERT LOCKYER said that he was not convinced from a casual examination of the microscopic section of Dr Spencer's specimen that it was a carcinoma, he thought it would very likely prove to be an endothelioma, and if that were so the long immunity from recurrence would be more easy to understand, as endothelioma of the ovary was far less malignant than solid carcinoma of that organ —Dr HENRY BRIGGS remarked that the tumour shown and admirably described by Dr Spencer stirred the unsettled problem as to what these tumours really are As solid adenomata, in the Departmental Museum of the University of Liverpool, Dr Briggs said he had had them illustrated and catalogued for over 15 years, repeated and recent revisions of the catalogue had left them as they were awaiting any more acceptable advance in histology —Dr AMAND ROUTH asked how Dr Spencer proposed to decide whether the removed tumour was malignant or benign at the time of operation, and what course he would now pursue as regards the second ovary if he decided that the one removed was carcinomatous?—In reply Dr SPENCER said he saw no evidence that the tumour was an endothelioma, structurally it was a typical medullary carcinoma, and it did not resemble microscopically the endothelioma he had met with in a dermoid In reply to Dr Routh s question he thought in the case of such a soft tumour as the one shown (which in the fresh state resembled a spleen), it would be difficult to cut satisfactory rapid sections at the time of operation He had not yet decided whether the tumour was malignant or benign, but had made a suggestion on that point in his paper A similar case he would treat similarly If the ovary, apparently normal at the time of operation grew subsequently, he would remove it, but with very little hope that malignant disease affecting both ovaries would not recur

Mr GORDON LEY (for Dr RUSSELL ANDREWS) read a short communication on Squamous celled Carcinoma occurring in a Cystic Teratoma of the Ovary

Dr R D MAXWELL read a short communication on Inversion of the Uterus (1) Acute (2) Chronic —The subject was discussed by the PRESIDENT Dr J P HEDLEY, Dr ROUTH Dr BRIGGS D SPENCER, Dr E L HOLLAND Dr COMYNS BERKELEY Dr T G STEVENS and Dr G F BLACKER.

Mr GORDON LEY demonstrated a Fibroid of the Uterus showing Invasion by Tubercle —The specimen was remarked upon by the PRESIDENT Dr STEVENS and Dr LOCKYER

The PRESIDENT showed an example of the "Bowel Pack," suggested by Mr J L Aymard of Johannesburg, in THE LANCET of Jan 16th p 159 which he had made and found that it answered the purpose well It is made by coiling fine wire on to a pad of 'cellular' cloth the wire being sewn by a running stitch along its whole length. The wire he used was No 22 gauge pure tin fuse wire and was covered in by a single layer of lint sewn on to the pad anæsthesia had become lowered some 3 to 4 cm. or to the level of the ninth rib. The knee-jerk was still absent, but the plantar reflex was almost brisk on the right side. Sept. 29th: The anæsthesia had receded to below the costal arch. The right plantar reflex was practically normal, while the left was elicited only after repeated stimulation. I had to leave Antwerp on Sept. 30th, and further notes of the case have not yet reached me, but the patient is said to be in much the same condition (in Ostend, Oct. 10th).

In this case the loss of the deep reflexes would, according to Bastian, have led one to suspect complete rupture of the cord. The slight contraction of the gastrocnemius, elicited by tapping the tendon with the hammer, might have been taken as the result of direct muscular irritation, while the slight plantar reflex might have signified only that the lower part of the cord was intact. The two facts which led us to suspect that the bullet had passed over but had not ruptured the cord were the absence of the complete reaction of degeneration after nine days (Sencert),[1] and that muscular exertion of the left hand (the right arm being injured) tended to increase the slight rest of the plantar reflex. It is evident from the post-operative history that these suspicions were justified, and that no complete rupture of the cord existed.

CASE 2.—Patient, aged 21, wounded Sept. 9th, 1914, at Aerschot. Examined Sept. 26th. A wound made by the entrance of a rifle bullet was found in the left flank at the level of the fifth dorsal spine, the exit of the bullet was at a point 4 cm. to the right of the ninth dorsal spine. When struck the patient fell down and was instantly paralysed. He suffered severely from lancinating pains extending downwards to both knees, and there was incontinence of both urine and fæces. Below the level of the second lumbar segment there was complete loss of motility, while the reflexes were almost completely lost. Irritation of the skin below the scrotum if continued for 10 to 20 seconds, was followed after an interval of about the same time by a slight contraction of the cremasteric muscle on the same side. With the faradic current both the peroneus and gastrocnemius reacted subnormally, on both sides the kathode make and break current resulted in approximately an equal contraction of both muscles. There was a large eschar on the right buttock, which was continually irritated by urine and fæces. Operation for this desperate case was, in consultation with Dr. A. Claus, decided on, and in preparation the eschar and the bullet wounds were treated with tincture of iodine the day preceding the operation. The cord was exposed between the fifth and seventh dorsal spines. The dura mater was exceedingly tense, while the cord was non-pulsating and much increased in volume. The dura mater was quite uninjured. Here again the bullet had passed by the side of the cord. Dr. Bremken and I were, however, able to satisfy ourselves as to the presence of certain splinters of bone which were pressing on the cord. These splinters we were not able to remove completely, but on pressing them back pulsations returned to the cord. It was decided not to open the dura mater because of the risks of infection, and the wound was closed. Sept. 29th: The patient vomited a great deal after the operation and the temperature went up to 39·6° C., the pulse being 150. The dressing, which was soaked with blood, was removed and replaced by fresh dressing. A little later the temperature fell, and the patient said that a certain degree of "feeling" had returned to his legs. During the first few days of October this patient was forwarded to Ghent. I have not been able to gather any further information about him.

In severe cases of injury to the spine the important question is whether to operate or not. In all other fractures and dislocations the surgeon has a valuable guide in the X ray photograph, but it is of less use for injuries of the back. In fact, each case must be judged on its own merits, and no rule for general guidance can be formulated. We do not refer to neurological symptoms, on which a diagnosis of complete or incomplete rupture of the cord might be based.

It has of course been definitely shown (Bastian, Bruns) that where the cord is completely severed the deep reflexes are lost, but the mistake must be avoided of assuming from an absence of reflexes that the cord is completely cut. Sano[2] long ago urged the necessity for more frequently exploring these cases, but so lately as 1909, in a discussion held by the French Association of Surgery, the general feeling was distinctly adverse to exploratory laminectomy because of the uncertainty of diagnosis. Electrical examination is advocated by Sencert[3] as an aid in diagnosis; it is certainly helpful, but not infallible.

From my limited experience I venture to draw the following conclusions: 1. The absence of all deep reflexes must not be taken as an absolute proof of complete rupture of the cord. 2. The rapid fluctuation in pressure caused by a passing bullet appears to be sufficient to damage seriously the blood and cerebro-spinal fluid circulation in the cord and to induce complete flaccid paraplegia. It is probable that the pressure exerted by bony splinters is of secondary importance. 3. In cases of paraplegia following on bullet wound to the vertebral column, when there is no recovery of mobility or sensibility ten days after injury, laminectomy appears to be justified. 4. If the opening of the bony canal is not sufficient to restore pulsation in the cord the theca should be opened and the blood clot removed as thoroughly as possible.

It must, however, be pointed out that sanguine hopes of complete recovery should not be entertained. From our experience with caisson paralysis it is evident that the cord is peculiarly liable to damage through variations in pressure. Air bubbles are in such cases formed in the grey matter. It appears quite possible that a bullet passing the intravertebral canal, but leaving the cord itself unhurt, may cause, besides intrathecal hæmorrhage, similar lesions. It will be rarely, if ever, possible to remove the blood clot completely, and further experience must be looked for in order to ascertain whether lasting amelioration in such cases will ensue. Also local serous meningitis may supervene, and in such cases it is highly probable that the patient may benefit from the operation.

A CASE OF ACUTE TETANUS WITH RECOVERY

(From an Evacuation Hospital, British Expeditionary Force, France.)

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THE following is a report of a case of severe acute tetanus with recovery, no prophylactic dose of antitetanic serum having been given.

Private ——, wounded on Oct. 22nd, 1914, was admitted to this hospital on Oct. 26th with two shrapnel wounds, one, a large deep ragged septic wound situate on the anterior surface of the right thigh, about the junction of the middle and lower thirds, involving the extensor muscles and passing upwards and backwards for about 3½ to 4 inches, cone-shaped in character, the other wound situated on the posterior aspect of the left knee-joint being about 2 inches by 1 inch in size and quite superficial was seen in April, and a skiagram then taken showed a condition of affairs very similar to that which could be seen in one taken this month There were very slight limitation of flexion, more of extension, some limitation of abduction and adduction marked limitation of internal rotation, but none of external rotation The range of movement in this direction was however, not increased There was shortening of the limb, and the great trochanter was raised to above Nélaton's line to an extent practically corresponding with the shortening Thickening at the upper end of the shaft and of the neck of the femur could be felt The skiagram showed curvature and enlargement of the upper end of the shaft and of the neck of the femur, the bone was expanded and the cystic condition and septa were easily seen The epiphysis of the great trochanter was unaffected The only alteration since April was a slight increase in expansion of the outer aspect of the bone

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[1] XXVme Congrès de Chirurgie, 1912, Paris.

[2] Archives de Neur [illegible]

[3] XXIIme Congrès de Chirurgie, 1909, p. [illegible]

Mr Stanley Boyd exhibited a case similar to that last shown by Mr Davies, in a girl aged 12. There was expansion of the upper end of the left femur, and a skiagram showed a central translucent area and also a fissure There had been pain in the upper part of the femur for which the child had been kept in bed After going out she had been knocked down by a boy while at play, when the fissure had been produced At an operation, tissue was removed from within the swelling which looked like the growing edge of sarcomatous growth, but which microscopically proved to be connective tissue undergoing ossification Since then the translucency had become almost normal and the child ran about free from pain or discomfort

Mr R H Jocelyn Swan read a short paper on So-called Frost-bite based on 100 cases among soldiers returned from the front, 80 of whom had been under his care at the Royal Herbert Hospital, Woolwich The only causal condition common to all was continuous standing with wet feet There were two distinct groups of cases (1) Those in which there was little destructive change but marked subjective symptoms were present, and (2) those in *which there* was gangrene of various amounts from a superficial skin lesion to that in which one or more toes were destroyed In the first group there were cutaneous anæsthesia and analgesia Joint sense and vibration sense might be lost Patchy hyperæsthesia was sometimes present, and there was pain on movement or pressure He regarded the condition as resulting from nutritional change and not as a neurosis which had been suggested by some With respect to the second group the gangrene was often greatest in the great toe, and the majority were examples of dry gangrene It was more usual for one foot to be affected but there was no ready *explanation* as to why this should be so The gangrene had no relation to points of pressure He thought that the condition was attributable to the dependent position of the feet to we and to want of exercise and not to cold Canadian officers had told him that the condition was quite unlike that of true frost-bite with which they were familiar As preventive measures he suggested the wearing of a thin mackintosh covering outside the sock, but inside the puttee and the free use of vaseline or whale oil to protect against the wet and that the boots should be large enough to allow of free movement of the toes The men should be instructed to carry out this movement —Dr Galloway likened this condition to thrombotic phlebo-arteritis obliterans —Dr E G Fearnsides said that the cases could be classified into three groups (1) Those with objective signs with perhaps some sensory loss but without subjective symptoms, (2) an intermediate group with slight alteration of sensation showing blunting of sensation but without anæsthesia and a band of hyper [illegible] the upper border of the affected area and (3) those in which sensation was lost over an area of the [illegible] type which in ordinary civil practice would be [illegible] In the Balkan War it had been agreed [illegible] the changes [illegible] in origin

LARYNGOLOGICAL SECTION

[illegible] of the Nasal Septum [illegible] in the chair [illegible]

between the perichondrial flaps and stitches and varnish for the line of incision for several years, he concludes that there is less discomfort and better drainage than after packing the nose The after-results have been good, and there has been no hæmorrhage or hæmatoma of the septum —Dr P Watson Williams said that packing the nose might cause serious disadvantages, as in cases of sinusitis —Sir StClair Thomson agreed, but stated that in simple cases his practice had been to replace the whole of the septum in small pieces and to pack the nose with sponge tissues so that the parts remained in position

The following cases and specimens were shown —

Sir William Milligan A woman, aged 30, with Chronic Lymphangitis of the Nose commencing three years earlier —Dr Watson-Williams had seen similar cases with latent sinusitis —Mr H Tilley suggested a blood culture for vaccine treatment —Dr Broeckart had obtained excellent results by excision of the hypertrophied tissues

Mr E D D Davis 1. A boy, aged 14, from whom he had completely enucleated a large Nasopharyngeal Fibroma with a strong dissector and the finger without splitting the palate under intratracheal ether 2 Three post-mortem specimens illustrating Diseases of the Pituitary Body treated by Killian Hirsch operations —The President referred to the dangers of these operations —Mr W G Howarth said that it was important to distinguish the cases in which the disease was below the sella turcica from interpeduncular and pontine tumours The latter were generally fatal

Dr W H Kelson A man suffering from Laryngeal Obstruction following acquired specific disease The larynx showed fleshy masses resembling pachydermia

Mr W M Mollison A patient with Traumatic Fixation of the Right Vocal Cord and Displacement of the Right Arytenoid Cartilage. He had been operated on ten years back for goitre. Such a condition was common after goitre operations, sometimes the lesion was caused by pressure of the thyroid gland and antedated the operation

Mr W Stuart Low 1. A man with Dyspnœa caused by Tracheal Compression Skiagrams of the chest (exhibited) showed a definite shadow but there was doubt whether this was caused by aneurysm or mediastinal tumour —Dr Kelson suggested the possibility of a syphilitic mass. 2 A patient with Epithelioma of the Pharynx and Tongue treated by Diathermy The glands of the neck had also been punctured with the cautery with marked improvement

Mr C I Graham A similar case to the foregoing after operation and dissection of the neck

Dr Jobson Horne An Epithelioma of the Tonsil in a woman aged 43

Mr H L Whale A circular piece of tin 1¾ inches in diameter, bent and jagged, removed from the gullet of a soldier by œsophagotomy Recovery was uneventful

Mr C W M Hope Mr H Buckland Jones and Dr Jobson Horne Soldiers who had had Gunshot Wounds of the Larynx or Pharynx.

Dr Dan McKenzie A patient with Synechiæ of the Nose treated by Diathermy with excellent result

Mr Tilley Three children of the ages of 7 8, and 10 years who had had Acute Suppuration of the Nasal Accessory Sinuses Complete recovery followed operation in all cases

Mr Graham A patient with Tuberculosis of the Nasal Fossæ and sections of the tissue containing tubercle bacilli stained *in situ*.

Sir StClair Thomson produced a report by Professor Shattock on his specimen of Laryngeal Growth exhibited in December, 1914, stating that the disease was early squamous-cell carcinoma

Dr Jobson Horne demonstrated microscopical sections of Pachydermia of the Larynx

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MEDICAL SOCIETY OF LONDON

Discussion on Gunshot Wounds of the Head

A meeting of this society was held on Feb 8th Sir John Bland-Sutton the President being in the chair

Sir Victor Horsley *opened* a discussion on Gunshot Wounds of the Head His paper is published on page 359 of this issue

Sir David Ferrier said that were it not for the President's express invitation he would not have ventured to take part in the discussion for he had little or no experience of

When one of appropriate size is placed in position it keeps the bowels out of the way of the area of operation, and is a valuable improvement on the ordinary pad It could be bent into any shape without injury —Remarks followed by Dr COMYNS BERKELEY, Dr J S FAIRBAIRN, Dr MAXWELL, and Dr SPENCER

CLINICAL SECTION

Exhibition of Clinical Cases —So-called Frost bite

A MEETING of this section was held on Feb 12th, Mr J CHARTERS SYMONDS, the President, being in the chair

Dr JAMES GALLOWAY showed a case of Splenomegalic Anæmia The patient, a boy aged 8½, had been observed by his mother to have a slight swelling of the abdomen 18 months ago This enlargement had increased He was said to have had an attack of jaundice about 15 months ago, his complexion was said to have become paler, and a year ago a severe epistaxis occurred There had been an eruption of small purpuric spots and an attack of hæmatemesis a few days before he was admitted to hospital in November, 1914 Since that date he had been under constant observation At first his condition became worse and another attack of hæmatemesis with copious melæna occurred The lad was pallid and had a slight degree of protrusion of the abdomen, the spleen was markedly enlarged, reaching the level of the umbilicus, the lower edge of the liver could be felt below the costal margin, and this organ apparently extended higher in the abdomen than normal, probably it was enlarged The blood had been frequently examined and the following report was characteristic Red blood fragility normal Wassermann negative Rouleaux and fibrin formation fair Red blood corpuscles, 2 900,000 per c mm, hæmoglobin, 30 per cent, colour index, 0 5, white blood cells, 840 per c mm, polymorphonuclear leucocytes, 57 5 per cent, small lymphocytes, 35 0 per cent, large lymphocytes, 1 5 per cent, eosinophiles 1 5 per cent, basophiles, 1 0 per cent, large hyaline, 3 5 per cent There was no history indicative of syphilis The father and mother appeared to be healthy There were three sisters and one brother who were in good health An uncle on the father s side had hæmatemesis associated with a swollen abdomen but had recovered his health An uncle on the mother's side had been treated for hæmatemesis and ascites The question of removal of the spleen arose

Mr H MORRISTON DAVIES showed the following cases 1 A case of Mediastinal Teratoma The patient a man aged 21, was admitted to hospital in March, 1913 Six weeks previously he had noticed a swelling over the upper part of the left chest, which increased rapidly in size and became red and painful He was admitted to an infirmary with a temperature of 104 8° F The swelling was incised through the third space and pus escaped It was noticed that the pus was of a peculiar consistency A few days later, as there was no improvement in the patient's condition, another opening was made in the anterior axillary line, portions of the fourth rib being excised The general condition became worse, and there was expectoration of large quantities of offensive sputum Some hairs were found in the discharge from the wound, and the condition was recognised as an infected dermoid He was then transferred to Mr Davies s care extremely emaciated and in a condition of profound toxæmia His temperature fluctuated between 102° and 104° The skin around the opening was excoriated, and there was slight bulging of the surrounding chest wall There was a copious discharge of pus sebaceous material, and occasionally hairs The heart was displaced to the right, and cough was accompanied by offensive expectoration Under local anæsthesia the third left costal cartilage was removed and the finger like processes of the teratoma could be seen A cavity was found extending inwards to the right of the sternum outwards to the anterior axillary line downwards to the fourth space, and upwards to under the first cartilages on both sides A week later as drainage was inadequate portions of the third and fourth left ribs were removed under open ether anæsthesia. The patient suffered very greatly from shock but improved slightly during the succeeding weeks After two months the left second costal cartilage was removed the second and third right costal cartilages were divided and the upper part of the body of the sternum was excised. After another month the teratoma was partially separated from the pericardium Two months later further attachments were divided so as to give better drainage These operations were done under chloroform anæsthesia, and were followed by great shock The patient improved, and cough and expectoration ceased Subsequently the projecting portions of the teratoma were on five occasions excised under anæsthesia by gas and oxygen In June 1914, Mr Davies began to separate the main mass of the teratoma from its attachments to the pericardium, aorta, and surrounding structures, it required five operations before the mass was excised This part of the growth half of which was exhibited, measured 13 cm by 8 cm by 7 2cm It contained, in addition to stratified epithelium hairs, sebaceous matter, mucous follicles, cartilage and bone cysts containing mucus, and lined by ciliated columnar epithelium A further portion was treated in the same way and excised in November, 1914, this measured 7 cm by 5 cm by 4 cm Very little of the teratoma remained The granulations over the pericardium and other structures were becoming rapidly covered with epithelium and the cavity from which the teratoma was removed had become obliterated to a great extent, partly by the mediastinum and partly by the expansion of the lung 2 A case of Bronchiectasis treated by Ligature of Branch of Pulmonary Artery The patient, a youth aged 17 was admitted to hospital in May, 1913 Seven years ago he had a severe attack of bronchitis, from which he never "properly recovered During the previous year his cough was much worse and he expectorated large quantities of offensive sputum Physical signs consisted of dulness, weak breath sounds, and coarse rales over the right base The sputum contained many different forms of organisms, including streptothrices Early in June the lung was completely displaced by nitrogen, and four days later the right side of the chest was opened through the fourth intercostal space and portions of the fourth and fifth ribs removed The branch of the pulmonary artery going to the lower lobe was then tied at the root of the lobe The patient was anæsthetised by infusion of ether and the lung was kept partially expanded by Mr Davies's hyperatmospheric apparatus As soon as the chest was opened the vagus was injected immediately above the hilum of the lung with 2 per cent. of novocaine The patient experienced practically no shock after the operation The temperature rose on the third day and 24 oz of clear fluid were aspirated from the right side of the chest A week later the temperature was still up, and turbid fluid, which contained streptococci was found in the pleural cavity This was drained through an opening in the incision After three days, as the discharge and sputum were now offensive, a counter opening was made behind through the ninth rib under local anæsthesia From this time recovery was uneventful By August the sputum was reduced to about ½ dr only per diem and a small sinus was present, he was discharged to a home The patient had since been working for many months He said that he felt perfectly well and only occasionally coughed (two or three times a week) A skiagram taken at the beginning of last year showed a shadow at the base of the lung, but in one taken this year the shadow had greatly diminished, and the diaphragm was visible for the first time since he came under Mr Davies s care 3 A case of Bronchiectasis treated by Rib Mobilisation (Wilms s operation) The patient a girl aged 15, deaf and dumb was admitted to hospital in September 1913 with extensive bronchiectasis involving the whole of the right side Over the left base the percussion note was impaired, the breath sounds were harsh, expiration was prolonged and there were moist sounds Nitrogen displacement was tried but failed owing to adhesions Portions of the first nine ribs were removed through a posterior incision Ten days later the second stage of the operation was done, the first to the seventh costal cartilages, including the costal margin being cut away There was slight shock after each operation The patient s general condition had much improved The cough and sputum were greatly diminished and the latter was no longer offensive The patient who previously was often drowsy and apathetic had become a bright girl and able to go out to work for the whole of each day 4 A case of Osteitis Fibrosa Cystica The patient a girl aged 14 fell on her left hip 18 months ago Pain was slight and passed off in the course of the day In March 1914 she again fell on her hip and since then she had had occasional slight pain and had limped continuously She was often necessary to rely on the large probe or finger. If no bullet could be found after a brief but thorough search one should desist, and later should the patient survive accurate estimation should be made by means of radiograms of the position of the bullet or fragment of shell when, if in an accessible position it would as a rule be sound policy to attempt its removal. The mortality of the cases with depressed fractures and lacerated brain was undoubtedly heavy but he could not help being struck with the powers of recovery shown in many instances and regarded with some degree of hope even very extensive injuries of the brain provided that these affected the more superficial parts of the organ.

Mr W. H. H. JESSOP called attention to the frequent occurrence of papillœdema after fractures of the vault by bullet and shrapnel, and to the rapid disappearance of it after decompression or trephining. Mr M. W. B. Oliver had told him that in 33 cases of vault fracture he had observed the condition in 16 cases and that in every case the ocular signs had disappeared quickly after operation. The swelling of the optic discs was not great and as a rule there were no hæmorrhages or effusion along the vessels, there was a ring of œdema round the periphery of the swollen disc. The vision was normal or little affected. The early occurrence and complete disappearance of the ocular signs on relief of intracranial pressure pointed to the papillœdema being due to pressure. The term "optic neuritis" ought not to be used for these cases. Two very interesting cases he had seen at No. 1 Base Hospital. One under Mr W. D. Harmer was due to shrapnel wound on the side of the head, the patient was at first completely blind and deaf. After 36 hours the complete blindness was followed by homonymous hemianopia. The central vision in each eye became normal after operation, and the deafness also was recovered from. The other patient under Mr McAdam Eccles and Mr G. E. Gask, had complete paralysis of the third fourth and ophthalmic division of the fifth nerves; the optic disc and vessels were normal, and the vision and fields of vision also normal. The X ray photographs showed six small pieces of shrapnel lying close together near the cavernous sinus. No changes had taken place after six weeks.

Major L. BATHE RAWLING, R.A.M.C. (T.), said that the few remarks which he had to make must necessarily be related to such cases of head injury as were seen after their admission into military hospitals in this country of men wounded from anything from three days to three weeks previous to admission here. However, so far as he could see there was less change in surgeons' views as to the correct surgical attitude in this particular branch of surgery than in some others. For example, they had had to alter somewhat their ideas as to fractures of the long bones, more especially in the event of the injury being compounded and associated with prolonged suppuration kept up by the presence of many loose fragments of bone with perhaps some additional foreign body. Free and extensive operations conducted for the removal of such sources of irritation had not been followed by the [illegible] anticipated. Surgery of fractures of the long bones had [illegible] rather conservative. With regard to head injuries, however, his experience had been such that he was more than ever convinced that operative interference should be carried out at the earliest possible moment [illegible] those hospitals where the necessary conveniences might be [illegible] the base hospitals in France and if [illegible] admission to hospital in this [illegible] France [illegible] In his [illegible] Surgery of the [illegible] 1912 [illegible]

mortality and, in addition, in those patients who recovered without operation the presence of depressed bone, blood clot in relation to the membranes and brain and foreign body would certainly assist in the development of those remote effects of head injury which were so well known, of such frequent occurrence, and so difficult to remedy. Consequently, from his general experience of head injuries and from that derived from cases under his care at the 1st London General Hospital, he advocated most strongly early operative interference. This consisted (1) in the treatment of the wound of entry or attempted entry and (2) in the removal of the foreign body. The presence of a foreign body, whether embedded deeply in the brain or not might be determined with reasonable certainty by investigating the exact nature of the wound whether direct, glancing, &c., though, so far as his experience went the absence of foreign body in the brain was the exception rather than the rule. In all cases, however, X ray pictures should be taken *before the operation*, stereoscopic if possible. Such pictures would not only show the position of rifle bullets, shrapnel bullets, or casing, &c., but would also afford direct evidence as to the presence and position of depressed and indriven fragments of bone. The fact that nearly all serious cases of head injury were septic like so many other wounds that came *from* the front merely strengthened his argument for early operation. The prolongation of suppuration was dependent on the presence of these depressed fragments and foreign bodies, and it would continue so long as these were allowed to remain with the consequent daily threatening of brain abscess, hernia cerebri, and meningitis. So far as actual technique was concerned the head should be shaved completely—a process that might require the use of several razors, the hair being matted with dirt, sand, and blood. The head should then be washed thoroughly with scrubbing brush and soap, dried, and painted *over* with iodine. When this had been done the scalp tourniquet should be applied, for it was important that the loss of blood from scalp vessels should be controlled efficiently. The scalp wound should then be enlarged freely in the required directions, the flaps thrown back, their edges touched up with pure carbolic acid, and their under surface with iodine. The condition of the *bone* could then be investigated. Fractures limited to the external or internal tables were rather more of text-book prominence than of actual occurrence, and it was necessary in practically all cases to trephine or remove loose fragments of bone in such a manner as to expose *freely* the underlying dura mater and brain. Depressed fragments should be elevated, *small* loose fragments of bone picked away, and larger fragments treated in a similar manner or thrown back if they retained any direct connexion with scalp or pericranium. In any case it was advisable to obtain a good view of the dura mater, and the surgeon should err on the side of *removing* too much bone rather than too little. Blood clot, derived from torn meningeal vessels or from the diploic tissue, should be wiped away and bleeding controlled, dural vessels being under-run and diploic foramina blocked with wax. With a dry field the dura now remained for inspection. If uninjured the scalp wound might be approximated with free and efficient drainage. If torn the dura should be slit up and a careful investigation carried out for fragments of bone or foreign body, all of which might be carried deeply and widely throughout the underlying brain substance. All such loose fragments must be gently picked away with all respect to the surrounding brain substance. During this procedure a stream of saline solution *at a* temperature between 110° and 115° F. would help to keep a clean field, washing away blood, brain, debris, &c. The ordinary probe would assist in the detection of such foreign bodies and the telephone probe in the presence of metallic substances. Personally he had tried the telephone probe on several cases previous to the war [illegible] invented by Sheen and described in 1905 and which had been [illegible] He must confess, however, that he [illegible] the presence of [illegible] the ordinary probe [illegible] whether the [illegible] be removed [illegible] might [illegible] of the injury he [illegible] more judicious in the [illegible] No deep probing the immediate effects of gunshot wounds of the head. He would like however, to express his high appreciation of the admirable exposition which Sir Victor Horsley had given of the mechanism of this class of injuries. His own experience was limited to the after effects of gunshot wounds of the head in the form of permanent lesions of different parts of the brain. These did not differ from the effects of lesions caused by disease or other forms of injury and corresponded in their symptomatology with the position of the lesion according to the *recognised principles* of cerebral localisation. Thus there might be met with hemiplegia, or *monoplegia* of different *types*, aphasia, motor or sensory, affections of vision, hemiopic or *quadrantic*, as well as a notable absence of either sensory or motor impairment in cases of lesions of the frontal lobes or other so called "silent" areas. *It* was astonishing what extensive lesions of the brain were compatible with a fair degree of both mental and physical health. One of the frequent and distressing effects of lesions of the motor area was the liability—apart from the monoplegia or hemiplegia—to Jacksonian epilepsy conditioned without doubt, by the septic character of the lesion, and the tendency of this epilepsy to persist, even after repeated operations with a view to removal of the irritative focus. Sir Victor Horsley was well acquainted with a case of this kind—an officer wounded in the Boer War, who was still hemiplegic and epileptic after a severe wound of the left motor area, though he had been operated upon on several occasions since that time. In regard to the immediately or rapidly fatal effects of gunshot wounds of the head it was not the result of the cerebral lesion as such (provided it was not in the medulla oblongata) but as Sir Victor Horsley and Dr Kramer had shown, of the hydrodynamic effect of the *passage* of bullets of high velocity through the incompressible semifluid contents of the cranium. This caused compression or compression with effusion and consequent paralysis of the vital centres of the medulla oblongata. The *primary cause* of death, as Sir Victor Horsley and Dr Kramer had shown, was paralysis of the *respiratory centre. Cushing was of opinion that the cessation* of respiration is secondary to vaso motor paralysis, but the *experiments* of *Dixon* and Halliburton had amply confirmed those of Horsley and Kramer. They had found that when the pressure of the cerebro spinal fluid is artificially raised by the injection of saline into the subcerebellar *cistern* the respiratory centre fails before either the cardiac or vaso motor centres and that death occurs unless artificial respiration is kept up. This had an important bearing on treatment. Sir Victor Horsley had pointed out that in certain cases death might be warded off by timely artificial respiration. This, of course, would only be available in cases in which there was no intracranial effusion. But it might be possible that with artificial respiration and free opening of the skull to relieve the intracranial tension, life might be saved. Perhaps some of the surgeons at the front when they read of the proceedings of that evening might be induced to resort to such treatment when appropriate occasions arose.

Mr RICHARD WARREN said that the cases on which his contribution to this discussion was based were met with partly in civil and military practice in England but more in the service of the Belgian Field Hospital at Furnes where he had had the opportunity of seeing patients within a few minutes of injury (from bombardment of the town) or within a few hours at the outside (when brought in from the firing line a distance of five or six miles). The subject was therefore being regarded rather from the point of view of immediate results than of the more remote effects, which also formed so important a part of the surgery of the cranium and its contents. The cases met with fell into two groups. Group 1. Injuries of the cranium with little or no effect on the brain. These were for the most part trifling but might present points of interest as in the following case which was sent to him by Dr A Craster. A Belgian aged 29 had been struck by a shrapnel ball three weeks before in the right temporal region. There was a small well healed scar in this region not obviously inflamed but the seat of intense pain and agonisingly tender on palpation. The pulse was 80, the temperature slightly abnormal and no other signs of intracranial trouble were present. A flap was turned down including the scar, the tissues were found to be inflamed and stained with lead and the pericranium was infiltrated and separated more readily than normally from the skull. Thinking that there might be some inflammatory collection below the skull he trephined, but found the subcranial space and dura normal nor were there any spicules of bone from a concealed fracture. The scar and thickened periosteum were cut away and the *patient* made an uninterrupted recovery with complete relief of symptoms. Group 2. Cases where the *skull was fractured*, whether in the form of a punctured fracture or one widely open and depressed. In most cases *of this sort the dura* was penetrated and the brain lacerated to a varying degree whereby these military cases differed from a large number of those met with in civil practice in which the dura remained intact and the prospect of infective meningitis was much less. As regards fractures of the skull puncture fractures were more often the result of bullet or shrapnel wounds, whilst the bursting of common shell was more prone to cause a widely open depressed fracture. Nevertheless, the last result might follow the impact of a bullet as was shown in the following case. A bullet entered the left orbit in a lateral direction and completely scooped out both eyes, the nasal fossæ, and a good part of the floor of the anterior fossa of the skull, with the result that there was much brain exuding into the widely opened nasopharynx. In spite of the severity of the lesion this patient was doing well six days later, when he had to be evacuated owing to the town being shelled. The main dangers from injuries of this type were primarily from the shattering of, or pressure by effused blood &c, on some vital part of the brain and later from the onset of meningitis, which was relatively common, since the dura was practically always opened. The widely opened *fractures* were also dangerous from the effects of contre coup on parts of the brain other than that immediately concerned in the fracture. It had long been recognised that the anterior part of the brain could be grossly damaged with but little immediate ill effects, and he had been a good deal struck by the *relative* well being of such patients. For example one patient arrived with a large depressed *fracture* of the right frontal bone (the result of a shrapnel burst) and a corresponding black eye like an over ripe *tomato*, and yet he *was quite conscious* calm and with but little shock. There could be little doubt that when the skull was shattered the *force of concussion* was thus in many instances broken and the brain as a whole saved from severe and possibly fatal shaking. *In* other cases of this nature, however, there was widespread pulping of the brain and death was rapid. The danger *from meningitis* once the dura was opened (as was the rule in these cases) was considerable, both in the punctured and widely *open* variety, still, a number of cases, even where a large amount of brain had prolapsed *escaped* this *complication in anything* more than a local degree and the large fungating hernia cerebri ultimately contracted and healed over. As regarded treatment the main points seemed to be to render the parts affected as aseptic as possible, for which *purpose* the weak alcoholic solution of iodine was well adapted. The second point was to render the openings in the skull (where the latter was penetrated) sufficiently large to avoid compression which might follow the swelling of the necessarily inflamed brain and at the same time to remove foreign bodies which might promote *sepsis. This was often* a simple matter in the case of shell wounds with wide openings, as the loose fragments of skull could be readily picked off and the rough edges of the aperture smoothed with rongeur forceps. The smaller holes caused *by bullets were more likely* to require an opening with the trephine to afford due access. Another point to be considered was the advisability of searching for bullets bits of skull &c. This should be done at once by searching carefully along the track of the penetrating object with a large blunt probe the size of a No 10 catheter in the case of small wounds caused by bullets or with the sterile finger in large lacerations. With a large blunt instrument it was not difficult to keep on the track of the foreign body and avoid further injury whilst the removal of bullets pieces of skull &c would diminish the risk at a later date of infective meningitis and encephalitis. Note should, of course be taken of [illegible] exit where the bullet had completely traversed the head as finding such clues would render prolonged searching for bullets unnecessary. When possible radiography, [illegible] was valuable, but under the emergencies of active service it by means of the sigmoidoscope and of the fæces by a pathologist. Physical examination of the abdomen alone is usually negative—often nothing being observed, at times tympanites exists, at others the colon may be felt contracted, especially the sigmoid. The temperature is usually normal or subnormal, and the pulse is slightly altered The treatment may be medical or surgical Medical consists of dieting, drugs, massage of the abdomen, and generally carried out over long periods, also hydrotherapy and lavage Suggestion and suitably dealing with the mental state and despondency The personality of the physician is a strong factor in the treatment Castor oil relieves pain as also does cascara combined with agar agar, calomel in 1/10th gr to 1/12th gr doses two or three times a day is also recommended If injections are required they should consist of olive oil introduced through a large nozzle carefully, the patient being on the left side at first and later in the genu pectoral position. Surgical treatment mentioned was short circuiting which has not proved very successful appendicostomy for continual lavage, and excision of entire colon Mr Daniel spoke in favour of appendicostomy, or in the absence of the appendix of cæcostomy, with the object of perfect lavage Lotions for this purpose might be normal saline, 5 per cent glucose as the least irritating but often chemical lotions must be used for the following reasons In some cases 1½ or even 2 pints of saline is passed through the appendix, it distends the sigmoid but is not expelled spontaneously, sometimes gentle massage over the colon leads to its expulsion but this sometimes fails In some cases an astringent may be necessary, of these the mildest are hazeline, zinc sulphate, a few drops of formalin or the smallest quantity of silver nitrate, either of which leads to spontaneous evacuation When the solution is retained it leads to a certain amount of diuresis As a rule the fluid is rapidly absorbed, but at times the absorption is slower Mr Daniel stated that on one occasion he passed the sigmoidoscope while the solution was retained and saw the sigmo rectal sphincter tightly closed, but a very slight pressure from below relaxed it, then after a small enema of half a pint was used the colonic fluid was usually expelled Some authorities believe that the non irritating qualities of olive oil suit the mucosa but he (Mr Daniel) found that ol paraffin liq placed within the bowel after the saline and bowel contents have passed does more good.

ULSTER MEDICAL SOCIETY —A meeting of this society was held in the Medical Institute, Belfast on Feb 11th Mr R J Johnstone opened a discussion on Cæsarean Section by reading a very interesting paper giving an analysis of 28 cases of this operation.—Sir Alexander Dempsey Dr John Campbell, Dr G A Hicks Dr C G Lowry and Dr Elizabeth Bell took part in the discussion

SANATORIUMS FOR TUBERCULOUS POOR IN SWITZERLAND —Switzerland has during the last 15 years been making strenuous efforts to provide adequate sanatorium accommodation for the tuberculous poor In 1913 not less than 14 sanatoriums with 1034 beds have been built to accommodate and treat 2722 patients the average duration of the treatment being 132 days Exact reports referring to 2377 tuberculous patients have just been published in the *Bulletin Sanitaire Suisse* Of 739 patients in the first stage 97 5 per cent. and of 555 in the second stage 90 5 per cent were improved while of 571 patients in the third stage the percentage of improvement reached the number of only 59 7 per cent It is to be hoped that from year to year fewer patients who have already reached the third stage will be recommended for admittance 1357 patients or 57 per cent. became able to resume their [illegible] occupation, 509 (21 4 per cent) were [illegible] at 1 [illegible] (16 6 per cent) greatly hindered in their [illegible] in the second and [illegible]

Reviews and Notices of Books.

Text book of Embryology Vol I, Invertebrata By E W MACBRIDE, M A., D Sc LL D, F R S, Professor of Zoology at the Imperial College of Science and Technology, South Kensington Edited by WALTER HEAPE, M A. F R S London Macmillan and Co, Limited. 1914 Pp 692 Price 25s net

THIS is the first of three volumes intended to deal with the enormous subject of embryology A second volume will be devoted to that of the lower vertebrata, and a third to that of mammals In this handsome, well printed, and superbly illustrated volume on invertebrate embryology the design is to associate the structural development of embryos with broad generalisations of what is known of their physiology—e g, the correlation between the function of certain organs of a larva and its habits of life, and between function and habit in the course of development Some results of experimental embryological research are included, while a novel feature is introduced whereby attention is directed to gaps in our knowledge, which indicate promising fields of research as well as the best means of attacking these problems

The author regards the science of comparative embryology as a gold mine from which rich rewards have already been reaped, but of which only a small part has as yet been developed, and which promises abundance of gratifying surprises and rewarding returns to the worker of the future, but although the labourers are few, the enormous record of facts already disclosed shows that the harvest truly is plenteous, so plenteous indeed that we sincerely trust the editor s hope of stimulating the interest especially of students of medicine will be realised We doubt, however, whether the average medical student would at once grasp the full significance of a sentence such as this taken at random "In the oligochaeta the prototroch is never developed at all, the embryo develops into a blastula, which is converted into a gastrula by invagination or by epibole"

An introductory chapter extending to about 30 pages dealing with growth, maturation, and conjunction of germ cells, chromosomes and their bearing on heredity, the recapitulation theory, embryonic and larval phases of development and factors modifying development, is followed by a short account entitled 'Practical Hints" as to methods of procedure applicable to all, or nearly all, classes of embryo Special methods are described with each phylum Then follow separate accounts of all phyla of the invertebrates from porifera to protochordata Each phylum is treated with a wealth of descriptive detail and illustrated by means of admirable figures in the text The 469 illustrations are drawn from many sources—some are original, many are composite, but all are superb and illuminating

In his "summary the author arrives at the far-reaching conclusion that in general the larval phase of development represents a former condition of the adults of the stock to which it belongs. This is in substance the recapitulatory theory, the so called law of biogenetics to which the author adds his testimony and in so doing gives a rational account of recapitulation 'The individual in its development recapitulates the development of the race An interesting survey of the Lamarckian doctrine leads the author to discuss the part that could only do harm, and unless the foreign body was detected with ease it was preferable to wait, further skiagrams being taken to investigate its exact position, and a second operation being performed later The position of a bullet might demand that the exploration should be carried out over an area distinct from that of the entry of the bullet Drainage must always be of the most efficient type, even to leaving a considerable area of brain exposed to the surface No perforating wounds of the skull had come under his care—doubtless due to the fact that they were so frequently fatal in character The more favourable cases were those in which the osseous and cerebral lesion occupied the frontal and temporo sphenoidal regions The more fatal lesions were situated in the posterior half of the skull, especially in the cerebellar region He would suggest that after the lapse of a few years the society should hold an inquiry into the *after results* of these head injuries There would, he feared, be plenty of material, and he would add that he was sure that the material would be all the more plentiful if operative interference was inadequate or postponed and, more especially, if such methods were not carried out at all.

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF STATE MEDICINE

The Vaccination Acts

A MEETING of this section was held on Jan 8th Dr T P C KIRKPATRICK, the President, from the chair, read a paper defining his position with regard to vaccination, and expressing his belief in its efficacy to prevent small pox in those who were sufficiently often revaccinated He gave a short synopsis of the history of vaccination in the United Kingdom In spite of the various Acts, the proportion of the population protected from small pox by vaccination was steadily diminishing, and showed a tendency to diminish more rapidly in the future He thought that it would be impossible either to make the compulsory clauses of the Vaccination Acts more stringent or to compel persons to be revaccinated, and under these circumstances vaccination would afford an unreliable protection from outbreaks of small pox. The experience of Leicester gave hope that such protection might be afforded by good sanitation Something should be done at once to meet the growing danger of epidemic small pox.

Dr NINIAN FALKINER considered vaccination necessary for the protection of the population Referring to the last Act mentioned in the paper—the Act of 1907—the year 1905 might be taken as the maximum of protection by vaccination in England Wales Scotland, and Ireland At that time the percentage of the population vaccinated in the different countries was England and Wales, 76 per cent , Scotland, 85 per cent , and Ireland, 82 per cent The figures for the year 1911 (four years after the passing of the Act) were England and Wales, 52 per cent , Scotland 58 per cent and Ireland 73 per cent , and when the figures for 1913 were available it was expected that a further decline would be shown in the number of those vaccinated The percentage of conscientious objectors in England and Wales had increased from 8 4 per cent to 28 4 per cent , and in Scotland from 5 6 per cent to 24 per cent

Sir JOHN MOORE referred to the perfunctory enforcement of the Notification Act in Ireland He looked upon it as a farce He was quite sure that sanitation would not afford any protection against small pox in Ireland so long as there were no medical superintendent officers of health except in Dublin Belfast Cork and Londonderry He quoted Dr C K Millard whom he looked upon as sitting on the fence—"I am prepared to admit that a universal system of vaccination and revaccination if effectively carried out would abolish small pox What was wanted Sir John Moore suggested was a Minister of Public Health The Local Government Board in Ireland were complaining that the Vaccination Acts were not being enforced and instead of getting a mandamus against the guardians whose duty it was to enforce these Acts they approached the corporation of Dublin and pointed out the necessity of providing extra hospital accommodation for expected cases of small pox He suggested that the most practical and effective protection against small pox was to be found in aseptic primary vaccination aseptic secondary vaccination, and, of course sanitation in the fullest sense of the term

Dr R J ROWLETTE said that Sir John Moore had told them the best methods for preventing small pox, and he (Dr Rowlette) was in thorough agreement with him , but the immediate problem was how much of that programme was practical He considered that the whole programme was not practical He did not think, nor had Sir John Moore suggested, that revaccination could at present be made compulsory As to the question of sanitation, he looked upon Ireland as without sanitation There was only one whole time medical officer in Ireland No attempt was made by any section of the community to make sanitation more efficient in Ireland The community paid certain medical men from £5 to £15 per annum to look after the health of a large district, which showed that the work was not taken seriously , on the other hand, vaccination had been taken seriously, and was fairly well done Sanitation at the present time was impossible in Ireland, since no one seemed to think it was required, and whatever chance there was of carrying out primary vaccination there was no chance of sanitation

The PRESIDENT, in reply, said it was now over a century since the medical profession had come to the conclusion that vaccination was the best preventive measure against small pox One must, however, consider the evidence In any other matter it would come as a striking phenomenon to learn that a community which had abandoned a preventive measure found greater immunity than a community that had adopted that measure to the fullest extent What had to be considered was what was going to be done in Ireland since primary infant vaccination could not be relied upon and compulsory revaccination could not be got As long as compulsory vaccination was relied upon the greatest lever which could be got for sanitary reform was lost He held no brief for antivaccinationists nor did he agree with them as to the alleged failure of vaccination to prevent small pox

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ÆSCULAPIAN SOCIETY —A meeting of this society was held in the Metropolitan Hospital on Feb 5th Dr David Ross, a past President, being in the chair —Mr Peter Daniel read a paper on Colitis and its Treatment Colitis, he said, is a mysterious condition much written about and little understood even by men who see cases post mortem The name even is confusing as it implies that the condition is confined to the colon, whereas in cases in which the colon has been removed mucus is still passed A name describing the condition better would be gastro-entero colitis For working purposes a simple classification based on the nature of the discharge answers very well (1) Colitis, with mucus discharge , and (2) colitis with all other forms of discharge Infantile diarrhœa, constipation and other bowel trouble enter strongly into the causation of mucous colitis, but it is difficult as a rule to obtain a history of such conditions In about 5 per cent a history of typhoid fever is obtained The history of spinal trouble scarlet fever sore throat diphtheria whooping cough and mumps is also associated but whether they have any bearing other than as causes of lowered resistance is difficult to say Oral sepsis plays a strong part in the causation and it is very rare indeed that a patient with mucous colitis gives a "clean history In cases of primary (mucous) colitis if the patient suffers from oral or naso-respiratory sepsis they almost always develop into the ulcerative or necrotic varieties in consequence of swallowing strepto- and staphylococci A marked condition in mucous colitis is the thinness and apparent elongation of the intestine, which permits looping and folding and is the effect and not the cause of the disease The symptoms of colitis are so variable that it is impossible to state them in a small space There are always pain and abdominal discomfort and distension coming on towards night There is aversion to anything tight about the waist Hot liquids increase the di[illegible] and probably cause a disinclination for food and nausea T[illegible] pain is unstable and hard to locate and consequently leads frequently to errors of diagnosis The only way to arrive at a correct diagnosis is by systematic investigation of the c[illegible] seems almost infinite of the ways in which "accidents" may take place, leaving as a matter of dispute whether they arose out of and in the course of the workman's employment In both these classes of dispute, we need hardly say, medical evidence is very frequently the most conclusive obtainable

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Dairy Chemistry

By HENRY DROOP RICHMOND F I C Second edition, revised With numerous tables and 49 illustrations London Charles Griffin and Co, Limited 1914 Pp 434 Price 15s net

Mr Richmond's book has always been accepted as a standard work on the chemistry of dairy products, although no new edition has been forthcoming until now, while the first edition was published in 1899 For some years past, however, the author has been seriously handicapped by ill health We are glad to learn that this unfortunate reason need no longer deprive all those closely connected with the examination of milk products of the advantage of gaining his more recent experiences on the subject

In his preface he admits that by lapse of time certain portions of the text had become obsolete, which has necessitated their rejection in the present edition and their replacement by matter based on the latest investigations We observe that amongst other new matter care has been taken to include the new and improved methods of analysis which have been devised within recent years for the examination of milk and milk products He has also reserved space for an account of the enzymes in milk and their detection, which, in view of the importance attached to these entities and of their presence indicating raw milk, claim special attention

The book is a thoroughly practical one, and this revised edition will be heartily welcomed by all those engaged in the control of milk products and in the business of the dairy and milk product factory

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Mutual Aid

By P KROPOTKIN London William Heinemann 1915 Pp 240 Popular edition, price 1s net

THIS admirable book was first published in 1902, and is now issued in a popular form on account of its subject matter being a sound reply to the argument of the Bernhardi school of thinkers, who, putting a mistaken construction upon Darwin's principle of the "struggle for existence, maintain that the horrors of the present war are a necessary corollary of that principle Prince Kropotkin puts forward the thesis—and maintains it by a wealth of facts collected from animal life, savage society, barbarian tribal life, mediæval society and modern life—that biological and social progress should be interpreted not in terms of overbearing brute force and cunning but in terms of mutual coöperation" The result is a work of singular interest, exhibiting very wide reading, written in a simple and clear style and naturally coloured all through with the candid and transparent personality of the writer

Few persons besides those who have studied the [illegible] specialists are aware how deeply the [illegible] into or we may say [illegible] the life of the mediæval city [illegible] in his informing chapters on this [illegible] should [illegible] The mediæval [illegible] village community It was an association of men and women working together for the common good of the members, and in this ideal they were at one, as the very name "universitas," the technical and legal word for a guild, shows There is a remarkable passage in the Psalms which demonstrates how deeply the notion of the connexion between a city and mutual interests had sunk into the minds of men. In Psalm cxxii. 3 the Prayer book version has, "Jerusalem is built as a city that is at unity in itself" The Vulgate version (the number there is cxxi) reads, "Civitas cujus participatio ejus in idipsum" The Septuagint reads, πόλις ἧς η μετοχη αὐτῆς ἐπιτοαυτό, "a city whose fellowship (sharing) is complete" But the original Hebrew expression means "a city that is well compact together," in reference, probably, to the protecting walls and towers, but without the idea of community or fellowship After his review of the mediæval city Prince Kropotkin points out how the State tried again and again in various countries to be the only bond of union, and shows how this attempted autocracy broke down owing to the reappearance of the mutual aid tendency Mutual aid, though in Prince Kropotkin's opinion somewhat fallen from its high estate by being confused with or contaminated by "charity," is to day really widespread both in public and private life

The appearance of this work is most opportune at a time when mutual aid is more needed than ever, and as its price puts it within the reach of even a very modest purse, we hope that it will be widely read and seriously thought over

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LIBRARY TABLE

A Synopsis of the British Pharmacopœia, 1914, and of the Poison Laws of Great Britain and Ireland By H WIPPELL GADD, F C S Eighth edition London Baillière, Tindall, and Cox 1915 Pp 196 Price 1s net —The modesty of the preface of this unpretentious little book almost disarms criticism After paying compliments to the new Pharmacopœia and conceding that for many purposes the volume itself must be consulted, the author proposes his book as a summary for students and as a pocket reminder for medical men and pharmacists Within a limited range the book will be helpful to those who wish to read while running but it will often provoke a desire for more detailed information or for further elucidation of the text The lack of guidance will be felt most acutely by those who refer to the section on Tests for Chemicals, which gives no information about the composition of the tests employed, we meet with T S ferric chloride and with T S mercuric chloride, but fail to find any indication of the strengths of these test solutions On the other hand, the employment of heavy type for the footnotes from the Pharmacopœia which call attention to alterations in strength of official preparations will be a great boon to the young man in a hurry The synopsis of the laws affecting the sale of poisons is clear and well arranged

The Mind at Work A Handbook of Applied Psychology Edited by GEOFFREY RHODES, with contributions by CHARLES BUTTAR, M D, E J FOLEY, and Professor L L BERNARD, Ph D London Thomas Murby and Co 1914 Pp 235 Price 3s 6d net —In this little compendium are two chapters by Dr Buttar on nervous anatomy and physiology, which exigencies of space no doubt have rendered almost too concise nine on elementary psychology, dealt with mainly, or at least to a may be played by hormones in relation to the theory of inheritance of acquired characters

In our opinion this work at once takes a place in the foremost rank of embryological studies It will prove indispensable to all earnest students of zoology It is dedicated to the memory of his teacher and friend Adam Sedgwick, and is a worthy tribute of a devoted pupil to a beloved and inspiring master

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Manual of Obstetrics

By EDWARD P DAVIS, A M, M D, Professor of Obstetrics in the Jefferson Medical College, Philadelphia With 171 illustrations London and Philadelphia W B Saunders Company 1914 Pp 463 Price 10*s* 6*d* net

THIS book is dedicated to the students and graduates of the Jefferson Medical College, and is interesting as embodying the teaching of a well known American obstetrician It contains a great deal of useful and accurate information on the subject of obstetrics, but there are a number of statements made and methods of treatment described which are hardly in conformity with the teaching on this subject in this country We are told, for example, that the "placental sound" is usually produced in the large uterine sinuses where the placenta is attached, and that the funic souffle is a hissing, rapid sound, a little slower than the fœtal heart and more rapid than the placental sound. The delivery of the crushed head by cranioclasm would mean to the English student the preliminary breaking up and removal of the vault of the skull, but Professor Davis employs the term for the operation of removal of the head by the craniotomy forceps after perforation without previous crushing The statement that cephalotripsy may be performed upon the unperforated head is not a usual one in modern text books The maternal mortality from placenta prævia is more commonly quoted as 5–10 per cent in most English text-books, rather than the 10–20 per cent at which it is estimated by the author

In the section on eclampsia the sentence that "when the resisting power of the patient is greater Nature may endeavour to save her life by producing convulsions" is an odd one, and we are surprised to find that Sellheim's proposal to amputate the breasts for eclampsia is quoted without any condemnation. The statement that when, after the rupture of an ovarian, tubal cornual, or broad ligament pregnancy, the ovum having passed upwards into the abdominal cavity it may engraft itself upon the surrounding omentum, mesentery, peritoneum, or bowel, and gradually develop a placenta and membranes, is misleading and inaccurate The description of abdominal pregnancy is poor, no attempt is made to distinguish between primary and secondary abdominal pregnancy nothing is said about the anterior or posterior subperitoneal varieties, and Taylor's important work on this subject is not even referred to It is difficult to believe that the author would really practise vaginal hysterectomy in the event of a retroverted uterus remaining in the hollow of the sacrum and infection developing after the death of the embryo, why not remove the ca se in the shape of the dead and no doubt putrefying embryo"

The legends of some of the figures show a want of care Thus "The Fœtal Heart Sounds" is the title given to a picture representing auscultation of the pregnant uterus "The external conjugate by external pelvimetry," Farabœuf for Farabeuf and such an expression as "The Infection of the Bacillus Coli Communis," are slips such as one does not expect to find in a book of this kind

Notwithstanding its defects, however, the book is worth reading as exemplifying the teaching and practice of an American obstetrician

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Butterworth's Workmen's Compensation Cases

Vol VII (New Series) Edited by His Honour Judge RUEGG K C, and DOUGLAS KNOCKER, Barrister at Law, M B Lond M R C S Eng L R C P Lond, D P H, assisted by EDGAR T DALE Barrister at-Law London Butterworth and Co 1914 Pp lxix. + 1011 + 28 Price 12*s* 6*d* net

THIS annual volume contains reports of all cases decided from October, 1913, to October, 1914, under the Workmen's Compensation Acts in the House of Lords and Court of Appeal, England, and selected cases from the Irish Court of Appeal and Scotch Court of Session It constitutes a useful work of reference for the library of a lawyer whose practice is to any considerable extent connected with workmen's compensation, and as the subject so closely concerns medical men it has also considerable interest for them

Cases of medical interest in which there were appeals during the 12 months dealt with include Walsh *v* Locke and Co (Newland), Limited (England), in which the old topic of the refusal of a working man to undergo a simple operation in order to regain the capacity to work was under review In this instance the refusal was that of a miner to have a stiff finger removed, so as to enable him to handle a pick without a "guarantee of success" The county court judge found the refusal to be reasonable, but the Court of Appeal held that there was no evidence to support that finding Jones *v* Davies, Limited (England), was an appeal concerned with the liability of the workman, unsuccessful in an application to have compensation continued to pay the fee of a medical man who had examined him for the employers in order to qualify to give evidence The question was whether the fee was recoverable when the examination had taken place before proceedings were commenced It was held to be sufficient that a dispute had arisen between the parties In Lewis *v* Port of London Authority (London) a good deal of medical evidence, some of it conflicting, had been given, and in the judgment of Lord Justice Pickford the position and the functions of the medical referee sitting as an assessor were discussed and defined, comparison being made with the practice of the Admiralty Court and the amount of weight there given to the advice of the nautical assessors "He is there," said his lordship "to give his advice, in the one case upon nautical matters and in the other case upon medical matters He is not there to give a judgment or to find the facts and his advice is no part of the judgment and may be disregarded by the judge, as it has been in the Admiralty Court on not very infrequent occasions"

Naturally, in a large number of cases there is record of accidents involving a considerable amount of medical testimony although in some of them the consideration of this may not have formed part of the duties of the Court of Appeal Perhaps the most interesting of these are concerned with the question whether incapacity is due to [illegible] accident or to "disease" and, again the same changes in the jaws, proceeding more quickly than in the teeth, (2) inheritance of the jaws from one parent and the teeth from the other, and (3) defective growth of the jaw as the result of disuse or environment subsequent to calcification of the teeth germs

British Dental Journal—The issue of this journal for February contains a paper by Dr E C Kirk on the Chemistry and Physiology of the Saliva. The author gives a complete résumé of the work on the physiology of saliva which has been carried out in America since 1909 He lays great stress on the composition of the saliva, and considers it a most important index of metabolism There is a reprint of an article by Dr C H Mayo on Mouth Infection as a Source of Systemic Disease and a useful paper by Dr Gilmer and Dr Moody on the Bacteriology of Alveolar Abscess

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD FOR 1913-14[1]

I

THE report of Dr Newsholme, medical officer of the Local Government Board, recently issued as a supplement to the Board's general report for 1913-14, has already been noticed in THE LANCET in general terms But many points therein merit special mention Although the several annual and special reports of the Medical Department are primarily designed for the information and guidance of health officers they nevertheless abound with records of scientific investigations respecting the nature and prevalence of disease which are of profound interest to every student and practitioner of medicine The arrangement of matter in the present report corresponds to that in its predecessors—the administrative considerations derived from the experience of the year being set out in relation to the course of events indicated by our national records of sickness and mortality We propose to comment mainly upon topics which are regarded by Dr Newsholme as exceptionally important, or which have been only sparingly discussed elsewhere.

Waste of Infant and Child Life

In the year 1913 English infant mortality was at the rate of 110 per 1000 births which is somewhat above the rate of 1912 but as compared with previous years the curve is considered satisfactory Equally satisfactory, likewise, is the aggregate decline of mortality at ages up to five years From a table based on the experience of 1911 it appears that out of a given total of births the largest number survive to the end of the fifth year in the rural districts the smallest number in the county boroughs Fully 88 per cent survive to that age in the southern division and 83 per cent in the midland whilst only 81 per cent survive in the north of England and in Wales A statement is added of the relative magnitude of the chief causes of mortality in infancy and early childhood which throws light on the possibilities of further reducing the waste of child life From this we gather that over one fifth of the deaths in infancy and nearly one third of the deaths under 5 years are due to infective diseases including tuberculosis Pneumonia and bronchitis which should also be classed as infective account for about one fifth of the deaths under 1 and under 5 years respectively Solution of the problem of protecting child life and securing correlative improvement in the health of survivors beyond childhood evidently consists largely in the prevention of infections In these and some other conditions the previous nutrition of the infant is of chief importance and the factor which determines the result of infection when acquired is not in[illegible] Study of the now available returns of mortality in early infancy leads to the conclusion that most of the deaths under the age of four weeks are due [illegible] before birth Comparing the [illegible] of the year 1912 with that of 1905 [illegible] in the [illegible] month of life the death-rate has [illegible] 8 per cent [illegible] in the next two months [illegible] per cent [illegible] in the second [illegible] and in the latter half of the period of infancy by [illegible] decline of mortality in the first month of life probably indicates that congenital disease and enfeeblement are largely responsible for fatality in this period

Government Grants in Aid of Preventive Schemes

At the instigation of their medical staff the Local Government Board have recently devoted serious attention to questions of infant life protection, the well-directed efforts often made by municipal and voluntary agencies for dealing with the matter having been duly appreciated By the representations of eminent members of the public health service as well as by their own departmental experience the Board are convinced of the necessity for more extensive and systematic measures than those that have hitherto been practicable Recognising the inability of many local authorities to bear the entire cost of adequate schemes for the promotion of maternity and child welfare, they are disposed to intervene with direct financial assistance Accordingly the Board have applied for Treasury sanction for the apportionment of grants in respect of work of this character initiated under official sanction by municipalities or by voluntary associations They further express their readiness to afford expert advice and assistance to sanitary authorities contemplating the initiation of schemes or the extension of those already in operation The action of the central authority in thus attempting to provide for one of the most pressing needs of local sanitary reform is a very valuable one

Infant Welfare Work

The necessity of safeguarding child life at its origin, upon which depend the health and vigour of survivors at adult ages, appeals with tenfold earnestness in time of war In view of the remarkable activity recently displayed by local authorities and voluntary agencies for the promotion of maternity and child welfare work, the medical officer devotes considerable space to the consideration of the subject. The development of a comprehensive scheme for this purpose has already been announced in two special reports by Dr Newsholme[2] dealing exhaustively with the problem of English mortality in early life From these documents a close interrelation became apparent at the outset between defective sanitation poverty, and intemperance on the one hand and excessive infant fatality on the other Account was also given of efforts already made in this country for reducing the waste of infant life In his report for 1905-6 Sir William H Power at that time medical officer to the Board distributed to the local medical officers of health improved and considerably extended forms of infant mortality tables for use in their periodical reports, and invited their coöperation in the hope of ensuring success for the new departure It is gratifying to learn that the response to this appeal has been eminently satisfactory, and has resulted in materially stimulating official study of this previously neglected subject. The statistics compiled since 1905 from the amended tables then issued constitute the basis of comparison in Dr Newsholme's two recent reports Appreciative reference is made in the present volume to important early efforts for the preservation of infants in certain towns of the north As early as 1899 Salford commenced a successful system of voluntary notification of births by midwives The action of Huddersfield in 1906 in securing the prompt notification of births is another significant indication of the strengthening of public opinion in favour of this measure, and doubtless helped to facilitate the passing of the Notification of Births Act of 1907 By the middle of 1914 this Act had been adopted by most of the principal authorities and its extension is still rapidly proceeding Consequent on this extension the number of health visitors has materially increased In addition to the numerous voluntary workers more than 600 health visitors are already employed by sanitary authorities for the care of infants This implies that there exists a paid health visitor for every 6000 children under school age in England and Wales Considerable saving of infant life is known to have resulted from the adoption of this Act especially in some of the northern industrial centres The expert advice given by health visitors whilst primarily beneficial to the infants, is frequently found effectual in securing improved health conditions in the homes visited In Manchester and Liverpool infant consultations are conducted under voluntary arrangements and in Sheffield periodical consultations are considerable extent, from the physiological side, by Mr Foley, two by the editor (containing much by way of quotation) on the subconscious mind dreams, suggestion, and hypnotism, and one by Professor Bernard on the applications of psychology to social problems We feel that the authors would have done themselves and their subject greater justice had the purview of the book been less comprehensive or its individual sections more detailed It suffers, as a whole, from the brevity with which its subjects are handled In a short glossary of psychological terms at the end the word psychosis is used in a sense different from that in which it is ordinarily used by the medical profession Organic sensations are said to be "those that arise from the body itself, as aches and pains," a definition which scarcely defines

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[1] [illegible] Wyman and Sons [illegible]

[2] THE LANCET Jan [illegible] p 129

A Manual of Normal Histology and Organography By CHARLES HILL, Ph D, M D, Professor of Histology and Embryology, Chicago Veterinary College, &c Third edition London and Philadelphia W B Saunders Company 1914 Pp 483 Price 10*s* 6*d* net—We have not much to add to our notices of the two previous editions of this book Doubtless its author intends it primarily for veterinary students, and to this is to be attributed the attention given here and in former editions to the subject of the teeth, as well as the new sections which appear now for the first time on the stomach in ruminants and on the hoof of the horse—this last a very interesting feature, though lying a little outside the needs of the medical student Other novelties in this edition are said in the preface to lie in the "topics dealing with heredity and sex, glands, blood and lymph" The index gives singularly little help in identifying the sections devoted to these subjects, "heredity" being assigned to p 26, on which the word does not even occur, while "lymph" is not indexed at all apart from compounds such as "lymph gland" and so forth A very simple division of white corpuscles is adopted, without any of the refinements of classification sometimes practised, but we do not mention this as a fault, The best feature of the book is its illustration,

Know Your Own Mind A Little Book of Practical Psychology By WILLIAM GLOVER Cambridge University Press 1914 Pp 204—Mr Glover has written a useful little book of everyday psychology, intended to popularise the subject With this end the matter has been dealt with on elementary lines and in simple phraseology, while numerous practical illustrations and illustrative instances ensure the attractiveness and readableness of the work It does not pretend to cover the ground completely or equally, but for the immediate purpose it serves very well, presenting that combination of technicality and lucidity which is a sufficient index of the author's own grasp of his subject The beginnings of mind are discussed, and how ideas get into the mind Mental machinery is sketched, apperception and what is implied thereby is rather more fully handled, and there are readable chapters on observation, judging, attention and interest The author's point of view is frankly Herbartian, but the applications of the teaching are essentially modern and up to date To the individual of average intelligence and education who wishes to know more of 'how it works' this fresh and well written précis of the mind's activities and diversities may be cordially recommended

JOURNALS AND MAGAZINES

Quarterly Journal of Medicine Edited by WILLIAM OSLER, J ROSE BRADFORD A E GARROD, R HUTCHISON H D ROLLESTON, and W HALE WHITE Vol VIII, No 30 January, 1915 Oxford At the Clarendon Press, London, Edinburgh, New York, Toronto, and Melbourne. Humphrey Milford Subscription price 25*s* per annum; single numbers 8*s* 6*d* net each—The contents of this number comprise 1 Notes of Further Observations upon Dyspnœa and its Relation to Blood Reaction, by Thomas Lewis and Joseph Barcroft The influence of reduced alkalinity of the blood or acidosis in the production of dyspnœic states is further examined by means of a study of the percentage saturation of the blood with oxygen when exposed at 37° C to 17 mm pressure of that gas From a study of a series of cases of heart disease the authors conclude that from the point of view of blood reaction and dyspnœa cases of heart disease may be divided into two classes The first comprises relatively simple and uncomplicated cases in which, though cardiac failure may be present, recovery generally occurs In this group no acidosis is found The other group comprises many of the cases of heart failure in middle aged or elderly subjects, in which reduced alkalinity in the blood is frequently present It appears, however, that the acidosis is not to be attributed to heart failure only and that there may be a renal factor in its production Some observations are recorded upon cases of mechanical dyspnœa which seem to indicate that acidosis may be a factor even in such cases 2 Observations on Thomsen's Disease by W Johnson and Geoffrey Marshall In a family of eight children, four were found to be affected with Thomsen's disease, and three of these have been carefully investigated As a result of their observations, Dr Johnson and Dr Marshall suggest that in this disease there is an increased resistance to the passage of nervous impulses and they believe this resistance to be in the synapses They found that strychnine has a marked effect in lessening the myotonic character of the contractions They believe that histological changes in the muscle are secondary effects—namely, a form of compensatory hypertrophy Their observations lead them to suggest the use of strychnine in the treatment of this disease 3 The Rationale or Modus Operandi of the Wassermann Reaction and Abderhalden's Test by J E R McDonagh From a study of the physico-chemical properties of the individual factors in the Wassermann reaction and in Abderhalden's pregnancy test, Mr McDonagh offers the suggestion that neither of these reactions is specific, but that they are group reactions which depend on certain physical conditions of the protein molecules He believes that in the Wassermann reaction we are dealing with a pure precipitation, and in Abderhalden's test with precipitation and hydrolysis 4 The Metabolism of Nitrogen in Dermatoses General Review by H L Tidy From a study of the literature the following general conclusions among others are arrived at changes in the nitrogenous excretion in various dermatoses are the result of the condition of the skin, and are not connected with the cause of the disease Retention of nitrogen is apparent and not real, and is accounted for by the abnormal excretion of nitrogen by the skin It is suggested that a low protein diet is worthy of trial in forms of dermatoses where the nitrogenous excretion is disturbed 5 The Treatment of Congenital Syphilis by Leonard Findlay and Madge F Robertson The results of treatment of congenital syphilis by means of neo-salvarsan are analysed, and it is stated that this drug is superior to mercury in alleviating many of the manifestations of the disease It is advised that the drug should be given intravenously, preferably into the veins of the scalp

Dental Record—To the February issue of this journal Mr C A Achner contributes a paper on the light wire splint for fractures of the mandible The best method of adapting the splint to various types of fracture is shown by a series of stereoscopic photographs The apparatus was reviewed recently in our columns—Mr J F Colyer contributes a further instalment of his paper on injuries of the jaws and teeth in animals Injuries to the tusks of elephants are described as well as injuries to the teeth of rodents and [illegible] vora.—Mr Norman G Bennett has an article on the re[illegible] ship between the size of the teeth and the size of the jaws He considers there is reason to uphold the [illegible] views [illegible] have been put forward to account for the great [illegible] that exists These views are (1) progressive [illegible]

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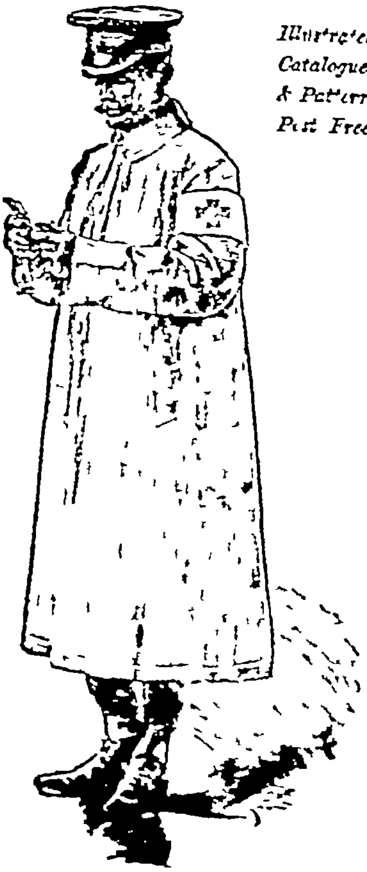

Illustrated Catalogue & Patterns Post Free held, the medical expenses being defrayed by the town council Under the direction of the Birmingham Health Department infant consultations are held at stated times, and at Bradford there is a municipal infant consultation centre and milk depot at which three whole time medical officers and 13 nurses are employed A new central infant welfare centre is being provided in this town to contain 20 beds for the accommodation of non infectious patients under school age

Antenatal Mortality

Under the Births Notification Act, which provides for the reporting of live births as well as of dead births occurring later than the twenty eighth week of pregnancy some estimate is possible of the loss of life preceding birth in addition to the large aggregate of infant mortality after birth, which is due to conditions arising in the antenatal period A table in the text indicates the existence of local differences in the ratio of dead births to registered live births, from which it seems that a variable proportion of dead births remain unnotified Dr Amand Routh is quoted as estimating that abortions at an early stage of pregnancy are probably four times as numerous as the dead births, which may be taken to average 3 per cent of the children born alive This would imply a total antenatal mortality of 150 per 1000 births, which is higher than the average mortality in the first year after birth The significant recent fall in the English birth rate has recently been referred to by Dr T H C Stevenson in his remarks on fertility in relation to social status [3] Evidence was adduced in support of the view that outside the range of extreme poverty the relation frequently observed between high birth rates and high death rates is by no means constant or unavoidable Among agricultural labourers, for example, who constitute nearly 5 per cent of the entire adult population, the families are of fully average size Yet their infant mortality is below the general rate by 22 per cent

Antenatal Preventive Work

As the result of inquiry the Board are assured that a considerable amount of antenatal health work is locally in progress, especially in connexion with maternity departments and infant consultation centres In the maternity departments of several metropolitan hospitals provisions exist for the home visitation of expectant mothers who are attended at intervals both before and after confinement At St Thomas s Hospital all women applying for maternity aid are seen by a medical officer, who decides whether a case shall receive hospital or home treatment at her confinement Home visits are undertaken by voluntary agencies, at these visits, which are highly appreciated, efforts are made to induce the expectant mother to provide suitably for the infant s arrival The confinements at home are attended from the hospital the supervision of mother and infant being continued for at least a year Many of the children are kept under observation up to school age At Leeds the maternity hospital furnishes a list of women applying for such aid, and these are visited by municipal health visitors at intervals up to their confinement and in most cases subsequently also The Leeds Babies Welcome Association have several centres at which expectant mothers are received and midwives are asked to refer expectant mothers to these centres Similar arrangements obtain at Newcastle-on Tyne, Warrington, and St Helens

Organisation of Maternity Centres

Under this heading the medical officer gives helpful suggestions concerning the establishment and management of maternity centres in respect of which the Board are desirous to afford financial assistance These institutions are believed to constitute the best practicable means of providing medical care for expectant mothers as well as for mothers during confinement and for these and their offspring until the latter arrive at school age It will be remembered that in addition to these centres the salaries of health visitors and officers of infant consultations are among the subjects for Parliamentary grants In order that the necessary information may be obtained regarding expectant mothers for whom medical assistance is required the close coöperation of the local midwives is indispensable In all cases it is essential to aim at securing adequate medical aid and guidance for both mother and child, from the birth of the latter onwards, both by means of home visitation and by attendance at a maternity centre for medical advice and treatment if necessary The overlapping of duties with those of other voluntary agencies must of course be avoided

Mortality in Connexion with Maternity

The national death returns furnish conclusive evidence of the need of additional maternity work whether the figures for infantile or for maternal mortality are compared Nearly all the deaths in the first week, and most of those in the first month of life, are due to natal or antenatal causes Of the total deaths in the first year about one fifth occur in the first week, and one third in the first month after birth That this sacrifice of life is largely avoidable is proved by the great variations in incidence shown by the tables in various parts of the country With respect to adult loss of life in connexion with maternity we learn that the deaths assigned to pregnancy and childbirth in 1912 amounted to 3473, or 3 98 per 1000 births, of which number 1216 were caused by puerperal septicæmia. Of late years there has been a reduction in the death toll from these diseases, but it remains an unsatisfactory fact that even so recently as 1912 septic conditions in childbirth accounted for the loss of 1216 English mothers Moreover it is common knowledge that a vast amount of suffering of indefinite yet disabling character is caused by unskilled attendance in labour, and by failure to recognise septic and other conditions complicating pregnancy and childbirth

(To be concluded)

ROYAL COLLEGE OF SURGEONS OF ENGLAND

MEETING OF COUNCIL

AN ordinary meeting of the Council was held on Feb 11th Sir W WATSON CHEYNE the President, being in the chair

It was resolved to issue Diplomas of Membership to 112 successful candidates

It was also resolved to issue jointly with the Royal College of Physicians Diplomas in Public Health to six successful candidates

In accordance with the recommendations of the Anatomical Committee, which was appointed last December to consider what steps should be taken to increase the present inadequate supply of subjects for dissection it was resolved to write to the Secretary of State for the Home Department pointing out the importance of the matter and expressing the hope that steps might be taken to remedy the deficiency

Mr John Murray surgeon to and lecturer on surgery at Middlesex Hospital, was elected a member of the Court of Examiners

Mr Charles Alfred Ballance was elected from the members of the Court of Examiners a member of the Board of Examiners in Dental Surgery

A letter was read from Mr T Egerton Bryant thanking the Council for their resolution of sympathy on the death of his father Mr Thomas Bryant

The PRESIDENT reported that in pursuance of the provisions of the Bradshaw Bequest he had chosen Sir Anthony A Bowlby as Bradshaw Lecturer for the ensuing year

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DUBLIN LECTURESHIP IN *OPHTHALMOLOGY* —The late Robert John Montgomery, M A, M B Dub F R C S Irel bequeathed to the Board of Trinity College and to the President Vice president and Council of the Royal College of Surgeons in Ireland a sum of money for the establishment of a lectureship in ophthalmology in Dublin. He desired that the lectureship should be known as the Mary Louisa Prentice Montgomery Lectureship in Ophthalmology and that the appointment to it should rest each alternate five years with the Board of Trinity College and with the president vice president and Council of the Royal College of Surgeons in Ireland Joint regulations have been drawn up by these two bodies and the first election to the position will take place at the beginning of next summer session The salary amounts to about £160 per annum.

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[3] Registrar-General's Annual Report for 1912, p 22. THE LANCET Sept. 12th 1914, p 727

THE LANCET.

LONDON SATURDAY, FEBRUARY 20, 1915

Antityphoid Inoculation in the Army

THE reopening of Parliament has enabled responsible Ministers to indicate the general attitude at present adopted with regard to antityphoid inoculation in the army, and from their answers to questions asked in the House it is easy to realise the trend of thought for the future. For the present Lord KITCHENER commends to the careful attention of every soldier a statement to which he attaches great importance in the interests of the health of the army. The probable development in the future may be gathered from the remark of Mr TENNANT, Under Secretary of State for War, that evidence is accumulating in favour of making inoculation compulsory, and it is clearly indicated that the House of Commons will be afforded an opportunity of expressing an opinion on this matter. It is perhaps unfortunate that discussion should be deemed necessary, and still more unfortunate that the term "compulsory" must be employed. Discussion is not likely to convince those who approach the debate with a mental kink against what has been termed the arrogance of science, still the outcome of debate must be a foregone conclusion since the evidence in favour of inoculation is overwhelming. Public discussion is not likely to serve any useful purpose, for remarks made in the course of criticism, will assuredly be seized upon, separated from their context and reproduced in distorted form by those who are actuated by objects far removed from the immediate subject—namely the advisability of compulsory antityphoid inoculation in the army as a prophylactic measure. It is often assumed by honest critics that some occurrence of typhoid amongst those protected by inoculation is sufficient to discredit this form of treatment. Further study of the great diminution in frequency, severity and mortality should convince those who are open to conviction. Omnipotence has never been claimed by any scientific man for any form of treatment. It would be equally unsound to question the general advisability of operations for appendicitis or of the adoption of Listerian methods because certain fatalities have occurred when treatment has been unduly delayed or when there has been some lack of [illegible] precautions.

Under ordinary circumstances the mere suggestion of compulsion is sufficient to raise a storm of invective in this country. The average man is accustomed to believe that he is a free agent living in a free country, resents any interference with this belief, and yet, on consideration, he has to admit that the conditions of civilised life leave very little room for the exercise of irresponsible freedom. In times of peace any threatened interference with liberty of action affords a healthy stimulus for discussion and fosters party feeling. The language of the battlefield is used with complacency, the nation is said to be divided into hostile camps, and the guns and losses of the parties are recorded daily. With the declaration of war the national spirit asserted itself, and opponents stood shoulder to shoulder to meet the common foe, and all the minor interests of the past were overshadowed by the urgent needs of the present. Criticism was respectfully hushed and all combined to support the authority of the executive officers of the Crown. Circumstances now are affording an opportunity for the troublesome activities of a minority opposed to scientific progress. The comparative pause which has accompanied the deadlock in the trenches has naturally been utilised by the authorities in fitting the new army for active service and in endeavouring to strengthen the powers of resistance of those already engaged. Those who were silent in the early realisation of a common danger have recovered the desire to attack measures advocated by those in authority. With vague ideas that in some way antityphoid inoculation is connected with vivisection a veritable crusade of an unworthy character has been started, and it is urged that inoculation and vaccination have impeded the course of recruiting. Last week we published a leaflet to the troops, which Lord KITCHENER had commended to the careful attention of every soldier, and consideration of the eminence of those who signed the statement should be sufficient evidence of its value. Each individual soldier is told that, "For your own sake, for your country's sake, and for the sake of the Army you should not fail to avail yourself of the protection secured by this simple, safe, and well tested measure." This is the language of persuasion and of reason, expressed in very temperate terms and it assumes that good sense will prevail over prejudice, and that it may not be necessary to resort to compulsion. Had an additional argument been required, it might have been pointed out that the force of example was not wanting that while men of all classes and ages have been enlisting, or undertaking some form of personal sacrifice by which they hope to be able to feel that they have contributed their share in safeguarding the nation officers and medical men have in addition, been inoculated to minimise the risks of exposure to infection.

The leaflet makes the personal appeal to the individual for his 'own sake,' but it would be well for him to realise that the reference to the country and the army is no mere rhetorical flourish. The care of each individual in the field is of intense importance since sickness removes not

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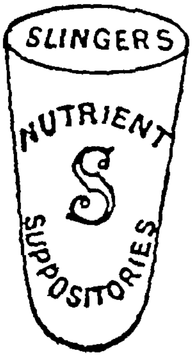

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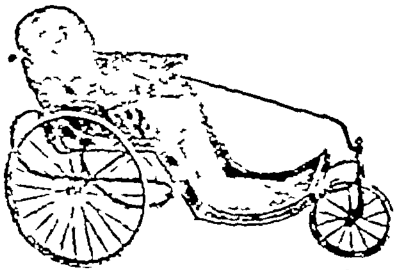

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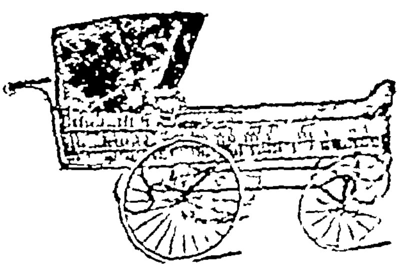

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J. & A. CARTER, 2, 4 & 6, New Cavendish Street, London, W practical importance We trust that the whole subject will, at some short interval, be again discussed by representative surgeons in order that this kind of practical suggestion may be widely forthcoming from different experts, while the sad circumstances in which we live render material for debate available

Annotations.

"Ne quid nimis."

THE FOOD-SUPPLY OF THE GERMAN PEOPLE

WE publish this week a detailed review of Dr Paul Eltzbacher s remarkable pamphlet on the food supply of the German people This work is a complete and authoritative exposition of the situation which he and his collaborators foresaw might arise when the British Fleet began to exercise serious pressure upon the German resources The figures are as striking as the arguments, and sufficiently show how enormous the task of the Allies has been

THE BACTERIOLOGY OF CONDENSED MILK AND MILK POWDERS

A REPORT concerning the effects of certain condensing and drying processes used in the preservation of milk upon its bacterial contents was issued last week by the Local Government Board The investigation was undertaken by Dr Sheridan Delepine The three methods of preservation examined were (1) the manufacture of sweetened condensed milk, (2) the drying of milk over heated revolving cylinders, and (3) the drying of milk by spraying it into a current of hot air The experiments now reported were made with the view of ascertaining whether tuberculous cows milk was still capable of conveying tuberculosis after being treated according to methods 1 and 2 Further experiments have been made on the general effects upon the bacterial contents of milk following the use of methods 2 and 3, but the results await further inquiries In feeding experiments Dr Delepine reports the superiority of dry milk over fresh milk and points out the advantages of dry milk from the hygienic as well as from the commercial point of view It is therefore regrettable, he adds, that the process of drying should not always yield an article entirely free from pathogenic bacteria He concludes that if clean milk obtained from healthy cows were dried in a factory where suitable precautions were taken to prevent recontamination dry milk almost free from bacteria could be produced No experiments appear to have been made on the question of how long in a practically dry powder the organisms remain viable The activity of bacteria is necessarily diminished in the absence of moisture and milk powders do not as a rule contain more than 3 or at the most 5 per cent of water which can be expelled by heat In [illegible] his work Dr Delepine states that the total number of bacteria present in mixed cows milk was found to be considerably reduced by treatment according to each of the three methods investigated The reduction was greatest in the case of sweetened condensed milk, least in the powder obtained by spraying milk into hot air while milk dried over hot cylinders occupied an intermediate position. In each of the three methods of treatment there was a stage at which the reduction in the total number of bacteria was much greater than that observed in the finished article ready for sale This increase is attributed to recontamination The interesting observation is made that the tubercle bacilli which had survived pasteurisation in method 1 and drying by heat in method 2 were still capable of producing progressive tuberculosis in guinea pigs inoculated subcutaneously with milk containing these bacilli, but the course of the disease produced by these organisms was very much slower than that of the disease produced in guinea pigs inoculated with the same amount of untreated tuberculous milk The tuberculosis produced by the heated bacilli was "latent" or "occult" for some four weeks, while young rabbits fed with milk containing these modified bacilli did not contract tuberculosis The report forms a valuable addition to the series of food reports issued from time to time by the Local Government Board, and it appears clear that if precautions were taken to guard the condensed or dried milk products from recontamination they would, generally speaking, be safer to use than raw milk

EPILEPSY AND OPERATION UPON THE FEMALE PELVIC ORGANS

IT is stated by some writers that the development and commencing activity of the female sexual organs are in some way concerned with the onset of epileptic convulsions It has also been said that the time at which the menses cease to appear is again apt to be attended with the occurrence of epilepsy, but Nothnagel denies that this is the case It would not be difficult to find a number of cases recorded in medical literature in which the onset of epileptic fits coincided with great accuracy with the occurrence of the menstrual period Cases, too are to be found in which the fits have ceased during a pregnancy, only to recommence with the return of the monthly periods When we bear in mind the increased nervous excitability of the woman at the menstrual period, and further when we remember the tendency to periodic recurrence of epileptic attacks and the periodicity of the monthly periods it is not surprising to find that in a certain number of women the two conditions coincide so frequently as almost to lead to the conclusion that there is some definite relationship between them There is, however, no certain proof of any etiological relationship between uterine and ovarian disease and epilepsy Sir William Gowers said "Of epilepsy due to disease of the uterus or ovaries nothing is seen except by gynæcologists and from the point of view of a judge demanding evidence the statement stands In spite of this opinion from so high an authority a number of cases have been recorded in which various operations have been carried out upon the pelvic organs of the woman for the purpose of curing epileptic fits Dilatation of the cervix the treatment of erosions the amputation of the cervix, and even the removal of the healthy ovaries have been advocated, and indeed practised from time to time with reputed benefit to the patients That the fits have ceased and in some cases have never returned has been adduced as proof of the value of the particular procedure only one and the many who have to care for him, but it also serves to demoralise others, who may doubt the efficacy of the sanitary measures adopted to check the spread of an epidemic Doubtless it is hoped that the leaflet will facilitate future measures by preparing the mind of the individual soldier for a general order It will serve a good purpose if it shakes the belief in the truth of the ' literature " circulated by opponents of vivisection, against whom, as indicated in the House of Commons, action conceivably might be taken for an attempt to impede recruiting and to stir up discontent amongst those actually on service in the field So far as recruits are concerned, the term "compulsory" is not strictly applicable Inoculation might be made one of the conditions of service, and these conditions, like those of height, weight, or chest measurement, can be altered at will It might be inserted among the requirements for all likely to go on foreign service, since it is amongst those who serve at the front the risk of an epidemic is greatest, and that its occurrence tends to dislocate the most carefully prepared organisations The difficulty that has to be faced is the enforcement of a new regulation which would affect those already in the field So long as there is any room for the exercise of individual option, so that a single "conscientious objector ' may by himself serve as a source of danger to the whole expedition, all efforts to influence by the force of reason are likely to be nugatory In the light of our experience in South Africa, and in view of the evidence collected in America, it is sincerely to be hoped that, if Lord KITCHENER desires, Parliament will strengthen his hands in sanctioning any new regulation which will give effect to the representations he has received from his scientific advisers

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Gunshot Wounds of the Head

MODERN small arm projectiles are in some respects less injurious than those which were used 50 years ago, for if a modern bullet passes through a limb without encountering a bone, or a large vessel, or an important nerve, little harm may result, and recovery may be complete in a short space of time With wounds of the skull, however, it is far otherwise The modern bullet, though much smaller than its predecessors, travels with a velocity far beyond anything known until recent years, and when it reaches the skull it produces results which surprise us by their severity Even now, though several wars have been fought with these modern weapons—and in the present war we have had some six months experience of the effects of rifle bullets—yet it cannot be said with certainty that we are fully acquainted either with the mechanism of the bullets action or with the most suitable method of treatment

It was practically useful and scientifically interesting that the Medical Society of London held last week a debate on the subject of gunshot wounds of the head As to the mechanism of the action of the bullet we had the results given us of some interesting experiments which Sir VICTOR HORSLEY had performed, a full description of which will be found in our issue this week He chose a modelling clay as not very dissimilar in consistence from the tissues under consideration, and into a mass of this he fired bullets resembling those used in modern war, and he obtained some surprising results The most striking point brought out by his researches was the fact that much of the harm done to the tissues by the bullet is due to its rotation rather than to its onward movement Further, he attributes the varying effects of different bullets solely to the difference in sectional area, and not at all to the shape The so called explosive effect which is so striking a result of the modern bullet has been shown to be due to the fact that the brain has somewhat of a fluid nature, containing indeed a large proportion of liquid in its composition Therefore, when the entrance of a bullet into the skull suddenly increases the intracranial pressure, this increase of pressure is transmitted with hardly any diminution in all directions, and the explosive action is brought about Though much of all this is theoretical, the practical point as to what is the best treatment of a gunshot wound of the brain ought to be decided upon an understanding of the mechanical factors

Treatment of bullet wounds of the head is at present regulated upon general lines, with due regard especially in the matter of prognosis to the special conditions Sepsis in any part of the body is serious, but nowhere is it more serious than in the cavity of the skull, and it was generally agreed by speakers at the discussion at the Medical Society that a thorough attempt should be made at the earliest possible moment to cleanse the track of the bullet and to remove fragments of bone What antiseptics are to be used must depend on the surgeon, but the cleansing must be thorough, and if this be done the chance of recovery is greatly increased The other main harmful factor in the production of symptoms from cranial injury is the rise of intracranial pressure, this comes partly from the effusion of blood and partly from exudation, and when this rise of pressure is excessive it is essential that decompression should be practised at the earliest possible moment Sometimes it is sufficient to clear the openings in the skull caused by the bullet, sometimes trephining must be done An important suggestion in the treatment was brought forward by Mr W H H. Jessop at the debate at the Medical Society, when he pointed out that in cases of fracture of the vault by bullet or shrapnel there was an early papilloedema, pointing to increased pressure but that this papilloedema rapidly disappeared when decompression had been practised In such cases even when the oedema is well marked no symptoms may be present, a point of the first the urine passed during the second, third, and fourth hours The normal colour of the urine does not usually affect the colorimetric estimation even in cases when the samples only contain 10–20 per cent of the substance and satisfactory practical results can be obtained In cases of abnormal colouration, however, from jaundice or blood, it is better to decolourise the urine with animal charcoal or precipitate the pigments by acetate of lead The results of the author s researches in cases of nephritis show that neither in the acute nor chronic forms does the kidney ever become impermeable to phenolsulphonphthalein, but there is a marked delay in its elimination, and a still more marked diminution in the total amount eliminated By applying the test in cardiac affections, with and without perfect compensation, an important fact was elicited In both these classes of case the elimination was good, although the total quantity was slightly below normal, and whereas in the latter class clinical methods showed renal stasis in a marked degree the test proved that the functional capacity of the kidney was very much greater than in cases of nephritis, even where examination of the urine did not disclose any serious changes This fact shows the value of the test in those cases where great diagnostic difficulty occurs as to whether renal changes are secondary to stasis, and therefore to the cardiac condition, or whether the latter condition is not on the contrary secondary to the nephritis

THE MEDICAL SCHOOL OF MELBOURNE UNIVERSITY

IN 1852 Dr Anthony Colling Brownless, a distinguished student of St Bartholomew s Hospital, settled in Melbourne, and in 1855 he became a member of the council of the recently founded University of Melbourne which had been established two years previously, and at once devoted his energies to bring about the establishment of a medical school On his motion it was ordered in 1856 that lectures in medicine should be delivered in the ensuing year Dr Brownless in 1857 submitted a scheme providing for professors of anatomy, physiology and pathology, materia medica, therapeutics and dietetics and a staff of lecturers, but when an application was made to the Government for a grant of £21 000 for the erection and equipment of the necessary buildings it was objected that the time was not yet ripe so the grant was not forthcoming In 1858 Dr Brownless became Vice Chancellor of the University and efforts to obtain Government assistance were repeated but without success In 1861 the Medical Society of Victoria took the matter up and after discussion with the medical school committee now organised as a definite body, it was determined to start the school at once though on a modest scale the cost of the buildings not to exceed £4000 and the scheme submitted by Dr Brownless in 1857 was accepted on this basis On account of a falling off in the revenue it was stated again that funds for the buildings could not be provided The Vice Chancellor suggested a general retrenchment of expenditure and the university lecturers on law and [illegible] generously gave up a portion of their salaries to assist in the formation of the medical school In 1862 a five years curriculum was laid down with the examinations for the degree in medicine Dr John Macadam was appointed lecturer in chemistry, and on the nomination of Sir James Paget and Sir Richard Owen Dr George Britton Halford was appointed professor of physiology From this time onward progress was rapid In 1863 the medical school buildings were begun, and in 1864 the Melbourne Hospital opened its arms, though without any excess of enthusiasm, to the first batch of third year students In that year the medical school buildings were completed, and this was the date chosen by the Medical Faculty of the University as the point from which its jubilee, celebrated last year, should be computed An interesting account of the jubilee has been published in book form [1] Sir Harry Brookes Allen, M D, Dean of the Faculty of Medicine, traces the history of the school in detail, with many interesting pictures of the buildings in earlier and more recent times and many portraits of those to whose devoted services the progressive building up of this school to its present high standard is due An amusing echo of the mid Victorian conflict between religion and science" is related by Professor Allen When Professor Halford in 1869 applied to the council for permission to give a public lecture on "Protoplasm" it was refused on the ground that "matters of politics or religion should be avoided " Melbourne University was early in the field in the encouragement of women medical students, and Mr Grice, the president of the Melbourne Hospital, pays a high tribute to the great credit its women graduates had brought to the school and to the high average place they had attained in the class lists

MASTITIS DURING PREGNANCY

FEW cases have been recorded of mastitis during pregnancy In the *Boston Medical and Surgical Journal* of Dec 24th Dr B R Whitcher has reported the following case A rather poorly nourished woman was seen on Feb 2nd, 1913 She was of nervous temperament and subject to dyspepsia and constipation She had been married in the previous November, and had a fall in which she struck her right arm against her breast Ever since a spot, which was sore and tender, especially at the time of menstruation, remained On examination a hard nodular lump was felt to the inner side of the nipple Under ichthyol and belladonna ointment the symptoms were greatly relieved In October, 1913, she became pregnant In April, 1914, she was again seen for a tense, brawny, and very tender lump on the inner side of the right breast Ichthyol and belladonna ointment were again used, but the lump became more painful As it was thought that the pain might be due to early lactation aggravating the old injury, the breast pump was applied and half an ounce of milky fluid was drawn off with considerable relief After a few days the lump began to enlarge and became redder and more brawny On May 10th an incision was made under ether and nearly 3 oz of pus escaped A counter opening was made for free drainage and gauze wicks were introduced Healing was complete by June 5th Two other abscesses formed —one outside the nipple, the other in the upper and outer quadrant It was arranged to operate on them on June 14th, but labour came on and was perfectly normal On the following day there was so much pain that the abscesses were opened and drained The infection was of the adopted It is, however, important to remember that the same may be said for many different operations, and it has been shown that any surgical procedure on any part of the body may influence favourably, for a time at any rate, the course of epilepsy Osler quotes White as having collected a series of cases in which such diverse operations as ligation of the internal carotid, circumcision, castration, tracheotomy, excision of the superior cervical ganglion, and incision of the scalp have all been practised, often with good results The extraction of a carious tooth has not infrequently had an equally good effect, or a treatment for worms Fagge mentions the case of an American who had been castrated and treated with nitrate of silver in the hope of curing his epilepsy His skin looked as if it had been polished with blacklead, but the result of the combined treatment was negative so far as the disease was concerned A recollection of these and many similar facts concerning the operative treatment of epilepsy should prevent any gynæcologist who is careful to take a broad minded view of his patients, and who has freed himself from the old and utterly erroneous belief, "mulier tota in utero," from practising the operation of removal of the healthy ovaries for the cure of epilepsy The old fashioned term "spaying" has rather dropped out of use at the present day, but if the enterprising surgeon who contemplates this operation will recollect that he is in reality spaying his patients he may think twice before carrying out such treatment Naturally, if the pelvic organs are diseased and require removal this should be done, and if the patient also suffers from epilepsy she will no doubt derive benefit from the operation, and may even be cured for a time or completely of her convulsions This is, however, no argument for the removal of healthy ovaries, and we should not have believed that such an operation was practised at the present day had not a correspondent written to ask our opinion of this procedure If the pelvic organs are diseased in a case of epilepsy any necessary medical or surgical treatment should be carried out coincidently with the appropriate medical treatment for the disease In a very few rare cases in which the genital tract is so malformed that the patient can never marry, as for example, with absence of the vagina, and where at the same time she suffers from epileptic attacks recurring at monthly intervals, oöphorectomy might be justifiable The removal, however, of the healthy ovaries, when a normal genital tract is present in an otherwise healthy woman, in the hope of curing epilepsy, is not likely to be successful and is never, in our opinion, necessary or justifiable

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[1] [illegible] Medical School [illegible] 1914 Melbourne

GRADUATED EXERCISES AT OUR HOME HEALTH RESORTS

THE observation that so many of our home health resorts present ample facilities for a course of graduated exercises in functional disorders of the heart is opportune and should receive careful consideration In an interesting paper which Mr J S Kellett Smith has sent us he refers, for example, to the extreme suitability of Eastbourne for the treatment of favourable cases and there can be little doubt that other seaside health resorts present similar opportunities when their environment comes to be carefully studied As Mr Kellett Smith points out, even under normal circumstances it is not every patient who can visit a continental health resort, and it is not every case that can stand the journey. But a preparatory course—resisted exercises, massage, carbonated baths, or Bergonié treatment—can be given locally if necessary, and in addition to a favourable situation—near the sea level and sheltered from the prevailing winds—and a mild winter climate, the disposition of the ground in many of our seaside places probably offers an excellent arena for carrying out the exercises for the terrain cure With this object in view he has mapped out a course at Eastbourne, giving the various gradients on the parades and sea front, beginning with gentle exercises and ending with a more rigorous treatment by gradually bringing the patient to accomplish a stiff climb on the Downs and to Beachy Head The principle throughout is to strengthen the heart by making it work with a lightened load, this being obtained by restriction of fluids when necessary and by the dilatation of the peripheral vessels in the big muscle groups and skin produced by exercise Exercise is given by walking along roads of graduated steepness, commencing at level and progressing to hill climbing, the activity and distance being increased as the case improves The suggestion seems to us to be an admirable one, and should set other seaside authorities thinking

THE FUNCTIONAL CAPACITY OF THE KIDNEY

THE problem of investigating the functional activity of the kidney is admittedly a difficult one in view of the uncertainty which still dominates the definition of the renal function, which some consider to be under the influence of simple physical or physico chemical laws, while others contend that it is controlled by laws, mysterious and unknown in their essence, like those which are attributed to the so called vital energy Dr L Pezzana[1] has studied the application of the phenolsulphonphthalein test to this question, and considers it markedly superior to all others for estimating the functional capacity of the kidney from the point of view of its facility and of rapidity of elimination Phenolsulphonphthalein, discovered by the American Ira Ramsen, was first proposed for the study of the renal function by Rowntree and Geraghty, who proved its harmlessness and exclusive elimination by the kidney It is administered by subcutaneous, intramuscular or intravenous injection in doses of 6 mg, and in normal conditions is completely eliminated in from two to four hours In the urine phenolsulphonphthalein is discoverable by simple alkalinisation, and the quantity also may be easily estimated by means of a suitable colorimeter The patient is made to drink 200 to 300 c c of water and then to micturate so as completely to empty the bladder, prior to the injection being made, preferably into the gluteal muscles The urine passed after 6-10-15 minutes is received into vessels containing a few drops of solution of caustic soda and the moment when elimination begins is shown by the red colour imparted to the urine as soon as it comes into contact with the alkali For the estimation the urine passed in the first hour is collected 10-15 c c of a 15 per cent solution of sodic hydrate added and diluted with water to a litre a portion of this is then placed in the colorimeter, which gives the actual percentage eliminated. The same is done with

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[1] Il Policlinico vol. xxi. 1 [illegible] Medical Section [illegible], 1914

THE FOOD-SUPPLY OF THE GERMAN PEOPLE

(FROM A SPECIAL CORRESPONDENT IN A NEUTRAL COUNTRY.)

IN a pamphlet[1] of nearly 200 pages published at the end of the year 1914 Dr. Paul Eltzbacher, acting Rector of the Berlin High School, has edited an authoritative statement on the food supply of the German people and England's plan to starve them out. In the preface he states that the problem is only to be solved by "combination of the politician, national economist, statistician, physiologist, farmer, geologist—yes, even the experienced housewife," and to this end he has put under contribution members of various faculties, amongst whom the name of Rubner and Zuntz will stand out as well known in the domain of hygiene and physiology. A paper band round the volume states that the book is intended to "show the seriousness of the situation and the means to assure our food supply," and the whole is the result of four months' work in which, "after initial differences" of opinion, all the writers were finally "united on all essential points" and in the common aim that the "success of our weapons should not be spoiled by economic mistakes." The whole forms an exposition of the problems of a nation's food supply with such wealth of information and authority as can hardly ever have been brought to bear before on the topic.

Chapter I. states under three headings

The Problem of an Isolated Political Economy.

1. The first deals with the *starvation plan*. Germany and Austria are completely surrounded by hostile lands except for five small neutral countries on whom no reliance can be placed. Germany in normal times has 21 milliard (£1 050,000 000) and Austria 5 milliard (£250 000 000) marks of external trade, and difficult as it might be to do without exports it might be impossible to exist without imports. The plan originating in England was stated more frankly in France, where the physiologist Charles Richet wrote in the *[illegible]*: "Before nine months are out Germany will be on her knees suing for peace, unless indeed already speechless with hunger."

2. The second section deals with the conception of *Germany as a closed economic area* which must arrange to do the best it can for itself and by itself. Austria is in relatively less danger with its thinner population and larger agriculture, Germany's relation of external trade to population being three times greater. The conquered lands cannot be relied on for food with starvation already setting in. Denmark has already forbidden the export of barley. England states that she can hold out indefinitely, and even though she may have made a miscalculation as regards the loss of German dye stuffs and her business as middleman, yet it would be unsafe to reckon on a short war, and Asquith may have weighed his words before he spoke of a possible 20 years. The best means to shorten the war is to prepare for a long one.

3. *The problem of an isolated political economy* is a new one for economists and statesmen. The modern fashion has been to think of the world as a whole and the personal and [illegible] and its [illegible] have yielded the field to the [illegible] internationalism. Now all this is changed [illegible] produce [illegible] the leading idea and [illegible] imperative [illegible] the [illegible] of [illegible] the [illegible] benefit [illegible] to real a socialist." Export must be prohibited and maximum prices fixed as well as even more drastic measures. In considering how all this may be done no optimism is permissible. "We must reckon not only with bad weather for the harvest, but also with a lack of skilled labour in the fields, of horses, and of manure affecting the yield." The organisation of the people's food must not fail.

Chapter II. deals in greater detail with

The Reduction of the Food-supply.

1. *Reduced import.*—The import of fodder, amounting yearly to 10 000 000 tons, must largely cease, although the Baltic is still available, and at present increasingly so. The conception of conditional contraband keeps back most foodstuffs from direct import, nor can the small neighbouring neutral countries be expected to do much more than cover their own needs during the war. Belgium is the most thickly populated country in the world, and Russian Poland does not stand far behind. Roumania's supply of provisions will be entirely swallowed up by Austria.

2. *The home production of foodstuffs.*—The North Sea fisheries have been reduced to a minimum. Agriculture must also suffer from the lack of skilled labourers, horses, and manure. The farm labourer cannot at first be replaced by other workers, although his place may possibly be taken by prisoners of war from agricultural districts. Half a million horses have been taken by the army, and the usual annual import of 140 000 from Russia cannot be counted on. For manure four products are necessary. Potash and lime we possess in abundance, being, indeed, the chief exporting land of potash salts. On the other hand there is a lack of phosphoric acid and of nitrogen. Phosphoric acid is normally covered by the supply of Thomas slag, a by-product of the iron industry, and to the extent of one-third by the import of foreign phosphate. Some compensation may come from the Belgian iron fields and crude phosphates, but a deficit will probably remain. Nitrogen has so far come about equally as a by-product in the manufacture of coke and in the form of imported Chile saltpetre, and the latter will no longer be available, although the former may be increased and supplemented to some extent by means of calcium nitrite. In addition to these causes the agricultural production of East Prussia and Alsace Lorraine has suffered, whilst it is not safe to reckon on a lasting out of stores in reserve. "We are as a people placed in the position of an individual who has up to now had a considerable income at command and who learns by means of a sudden severe misfortune that with careful husbandry he can get on with much less."

Chapter III. deals with

The Food Requirements of the German People.

Section 1, on the *aim of nutrition*, gives a short sketch of the function of the human organism as a machine, distinguishing between the food supply required to produce the running energy and that to make up for loss of substance. For the latter purpose and only for this is proteid required. Sufficient proteid must be supplied to make up for the regular loss, but not more than this, as fat and carbohydrate are precisely of the same value as producers of energy. 1 gramme of fat produces 9.3 calories, 1 gramme carbohydrate or proteid produces 4.1 calories, and Rubner's work makes it certain that from the point of view of energy production it is quite immaterial whether the body uses one or other of these sources of supply. If, therefore, there are public grounds for reducing the consumption of proteid this can be done without concern so long as the hygienic proteid-minimum is retained. This quantity is a relatively constant one, whereas the requirement in energy producers varies largely according to the mechanical energy of the subject.

2. The requirement in calories of the German people for a year must be determined. This should be expressed in net calories, allowing for the fact that proteid is excreted incompletely metabolised, whereas fats and carbohydrates burn without waste, and allowing further for the incomplete utilisation of substances of difficult digestion. The energy requirement of the organism depends on the work which it has to perform, [illegible] must produce, further to some extent on the temperament of each subject. Carl von Voit's figure for a man of 70 kilogrammes weight on a mixed diet gave [illegible] calories for moderate work and 3575 calories for heavy work. Rubner's figures vary from [illegible] to 6109 calories, and the average figure of 3000 may be taken as net

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[1] [illegible]

diffuse interstitial type Dr Whitcher refers to the few recorded cases of abscess of the breast *during pregnancy*—all in American or German literature In one case an abscess developed in the ninth month after an attack of facial erysipelas In another double mastitis followed eczema of the nipples in the sixth month Incision of the right breast yielded pus, of the left turbid fluid A primipara developed an abscess after being scalded with hot coffee In all the cases hand feeding of the child had to be adopted The etiology of abscess of the breast during pregnancy appears to be as follows In the majority of women pyogenic organisms are present on the nipples and in the milk ducts in greater or less number, according to the habits of cleanliness In some cases organisms may be present in the blood stream As a rule, these organisms are innocuous, especially when there is a general condition of good bodily resistance But when engorgement of the breast occurs conditions favourable to their growth are developed, and when the breast is injured before or during pregnancy the resistance is still further lowered In the case reported by Dr Whitcher the underlying cause was the injury to the tissues of the breast, which never regained their normal condition Possibly the ill-nourished patient had pyogenic organisms in her blood, for she had also an abscess of the finger In the first case quoted, with such an infection as erysipelas the blood may have contained organisms In the second case infection probably took place through the eczematous nipples In the third case there was no visible solution of continuity at the site of the burn Probably the organisms were already present in the milk ducts and attacked tissues the resistance of which was lowered by the burn

CONGENITAL HEART-BLOCK

MORE than ordinary interest attaches to the report by Dr T R Whipham[1] of two cases of congenital heart block We believe that the first case, aged 2 years 2 months, is the youngest on record in which the definite proof of heart block has been established In this case, a well nourished and full time female, the pulse was slow, full, and regular The heart rate varied between 48 and 80 at different times Over the præcordium a loud systolic murmur was audible with maximum intensity near the left sternal border, between the apex and the pulmonary area Admitted into hospital with whooping cough and some bronchitis, the pulse still remained at only 64 per minute Fits of coughing did not quicken the rate, no cardiac symptoms were ever noted There was a polycythæmia of 8,400,000 red corpuscles and hæmoglobin was 110 per cent The electrocardiogram showed definite 2 1 heart block, that is to say, the auricular rate was twice that of the ventricular The cause of the block was attributed to a congenital defect, possibly a patent interventricular septum involving the auriculo-ventricular bundle in that vicinity The murmurs would depend on this and not of course, upon the incidental heart block The interest of the second case, of a girl aged 12 years in whom a complete heart block was proven by galvanometric methods was that there was reason to believe that such a block had existed for six years, yet it was only at the age of 11½ that any cardiac symptoms occurred These showed themselves as pain around the heart on exertion The pulse rate lay between 50 and 60 per minute and was slightly irregular whilst in this case, as in the other, there was a loud systolic murmur of maximum intensity in the fourth interspace near the sternum The same pathological cause is suggested for this case—namely, a congenital defect

THE Council of the Royal College of Surgeons of England has granted permission to the Fellows of the Royal Anthropological Institute and to the Members of the Prehistoric Society of East Anglia to hold a combined meeting in the museum and theatre of the College on Feb 23rd Many recently discovered specimens will be shown and discussed The meeting commences at 2 30 P M On the evening of the same day the combined societies will meet at 8 15 in the rooms of the Royal Anthropological Institute, 50, Great Russell street, W C, when Mr Charles Dawson will give an account of the various types of implements and cultures met with in the deposits along the valley of the Sussex Ouse—including what may be described as the "Piltdown" culture

Lord Lamington has been elected a trustee of the Museum of the Royal College of Surgeons of England in the place of Sir Edward Fry, resigned

HISTORY OF PUBLIC HEALTH IN DUBLIN

IN an appendix to the annual report on the health of Dublin, noticed in THE LANCET of Jan 9th, Sir Charles Cameron gives some interesting information on the history of public health administration in Dublin The first trustworthy information on the state of health of Dublin dates from 1798 when the Rev James Whitelaw made a careful survey of the city and in his report drew attention to the shockingly insanitary condition of the tenements occupied by the working classes Matters appear to have changed little in the next half century for in 1845 Dr Thomas Willis, in a book on the "Social and Sanitary Condition of the Working Classes in the City of Dublin" spoke of the working classes as "sunk into that state of abject misery for which there is no parallel in any country in Europe" Within the next 20 years the municipal authorities began to show some sporadic interest in the health of the city, and in 1864 Edward Dillon Mapother was elected the first medical officer of health and ten years later Sir Charles Cameron succeeded him It was not, however, until 1879 that the statistics of mortality could be regarded as accurate In that year the death rate from all causes was 37 5 per 1000 and from the nine specified infective diseases 6 2 per 1000 In the following year both rates reached their maximum—37 7 and 7 9 Thereafter they gradually sank and in 1913 the general death rate reached its lowest point—20 3 per 1000 and the zymotic death rate was 2 4 The lowest zymotic rate was in 1905—viz 1 5 It is noteworthy that within the past few weeks the general death rate has approached [illegible] per 1000 Sir Charles Cameron furnishes an account of various activities of the Dublin corporation which have had an important effect on the sanitary condition of the city Of these the chief are the supply of the excellent Vartry water brought to Dublin in the late sixties, the substitution of a water-carried sewage system for the old system of privies and ashpits, and the recent introduction of a system of main drainage by which the sewage is discharged after precipitation into the bay instead of directly and untreated into the Liffey in its course through the city Sir Charles Cameron also details the various steps taken by the corporation since [illegible] to improve housing conditions in Dublin proportion of this consumption due to the foreigner is obtained by the excess of imports in (1) meat, (2) live cattle and (3) fodder used for feeding home cattle, all three expressed in terms of meat. The chapter ends with two tables, one giving the total consumption of foodstuffs for the average of the years 1912-13 and the same worked out in terms of daily consumption per head. These tables appear on the opposite page.

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[1] Proceedings of the Royal Society of Medicine Section for the Study of Disease in Children December, [illegible]

Under each heading a wealth of interesting detail is given. Thus of [illegible] million tons of home-grown rye 1.1 million tons are reserved for seed corn and 2.7 million used for feeding cattle and for industrial purposes, leaving 8.1 million for human food, while half a million is exported. Of the 4.5 million tons of home-grown wheat, on the other hand, only 0.2 million is used for fodder and 0.3 for seed corn, while 3.3 remain for human use, and in addition 2 millions are imported. Other enormous items in the import list are 2.9 million tons of barley and 1 million tons of maize. On the whole group 14 per cent. of the protein and 10 per cent. of the total calories represented were imported. Fruit trees in the German Empire amount to 51 million apples, 29 million pears, 81 million plums and 25 million cherries, of which the yield is estimated at 25, 16, 8 and 8 kilogrammes per tree respectively. Of sugar the home production amounts to 2.9 million tons, while 1.2 million is exported, so that something like 50 per cent. more sugar is produced in the country than is required. Under the heading of meat the number of beasts slaughtered amounts to: of swine 23.5 millions, calves 4.5, sheep 2.7, and cows 3.7, the amount of pork being therefore nearly five times that of any other meat. Of other creatures one notes 171,000 horses, 8000 dogs, 5 million tame rabbits, 15 million geese, and 80 million fowls, ducks and pigeons. Reckoning imported barley in terms of pig flesh it is estimated that 0.5 out of 2.5 million tons of pork are owing abroad, as well as a very large quantity of imported animals. Of fish as large a proportion as 84 per cent. of the total protein and 71 per cent. of the total calories is imported. Of milk products 135,000 tons more are imported than are exported, largely in the form of butter and cream, also to a smaller extent cheese and milk. Enormous quantities also of cattle fodder are imported, including 2 million tons of bran and half a million tons of oil cake. For calculating the protein amount of this as utilised in the milk produced from them, 88,000 tons of raw protein are estimated to account for 2.5 million tons of milk, and the final result gives 13 per cent. of protein and 12 per cent. of total calories of milk products are imported. In eggs a census of hens and ducks is available, and the assumption made that a hen lays on an average 70 eggs in the year weighing 50 grammes each, giving a total production of 257,000 tons of eggs. In spite of this 42 per cent. of the protein of eggs comes from abroad.

Chapter V. considers the question of

The Deficit and How to Cover It.

1. It is first necessary to determine the size of the deficit during the war, allowing on the one hand for the exclusion of foreign produce, and on the other for some diminution of home production during the war. In a double sense must the deficit be considered, in comparison with previous consumption as well as with actual physiological necessity. On the basis of the consumption of the years 1912-13, and allowing for the increase of population, the consumption during the war on present lines would amount to 90.42 billion calories with 2307 million tons of protein. On the other hand the actual physiological requirements for 68 million Germans work out at 56.75 billion calories and 1685 thousand tons of protein. This means that our consumption exceeds our requirements by 59 per cent. in nutritive value and 44 per cent. in actual protein. These figures are at first sight surprising, especially in view of the careful statistics on which they are based. But the causes of the discrepancy are discoverable. To a certain extent the difference is inevitable even with efficient economy, as losses are unavoidable, especially when foodstuffs pass through many hands. But far greater than this is the unnecessary increase in the consumption beyond actual need, occurring in the homes of well-to-do people and due to actual waste in the kitchen. The actual consumption exceeds the physiological requirement more in total calories than in proteids, and it may therefore be guessed that fats and carbohydrates are wasted more than protein. These are in part more liable to rot, especially on account of their chemistry, and less care is bestowed on them. Potatoes, vegetables, fruit and fat are lost in enormous quantities on the way to the consumer, whereas grains are more permanent and more care is taken to keep meat and milk fresh. In order to reckon our deficit we must determine what amount of foodstuffs we should be in a position to consume on the basis of our own production without importing from abroad, and of course without export. On the average of the years 1912-13 we have produced at home 71.24 billion calories and 1536 thousand tons of protein. Home produce is likely to have increased since then up to the commencement of the war, but in order to be on the safe side we have reckoned with a diminution rather than an increase, bearing in mind that the next harvest will probably diminish on account of lack of trained labour, horses and manures. Other sources may also be shut off during the war, as for instance the North Sea fishery, and in East Prussia and Alsace-Lorraine stores have been destroyed and removed and production lessened. Full account is taken of this by assuming a diminution of 5 per cent., when the figures stand as follows:—

Nutritive values	Calories in billions.	Protein in thousand tons.
Requirement	56.75	1685
Actual Consumption	90.42	2307
Available on continuance of existing conditions	67.68	[illegible]

From this we see that if continued on present lines our economy will show a deficit of 25 per cent. of total foodstuffs and of 37 per cent. of protein on what we have hitherto consumed. The position is more favourable if we consider actual physiological requirements, when we have 19 per cent. more total food than we required and 3 per cent. too little protein. The cause of the less favourable character of the second item is the complete falling out of imported fodder for the production of such protein-rich foods as meat or milk, whereas home-grown sugar is available in its entirety. With every day of continuance on present lines our deficit is increasing, and if no change is made for six months the deficit of available protein for the following six months will be increased to 50 per cent. "This is the seriousness of the position." To cover the deficit in calories is a relatively simple task. To cover the deficit in protein is a much more difficult one. Effort must be made to supply the lacking 3 per cent., and with an additional margin for the losses occurring between producer and consumer. We can cover our deficiency, but certainly not in the sense of being in a position to consume the same quantities as before the war, but to more than cover the physiological need.

"The means to do this is an alteration of our economical life in accordance with the situation created by the war." We have had success in limiting our travelling requirements to that of our forefathers, and can certainly do the same for our food requirements, becoming also in so doing more healthy. Any personal interest must be subservient to the good of the community, and the plea of the sugar industry for special treatment is not valid, as at such a time no money need be earned, but the nation must be fed. The problem requires treatment as a whole and on broad principles.

2. *Stores.*—Before the outbreak of the war Ballod had proposed the formation of State grain stores in which large quantities of corn were to be stored up against the outbreak of war. This was unfortunately not done, but at all events the quantities of grain and pulses required for spring sowing must be saved, and at the same time pork must be preserved in large quantities, as the slaughtering of pigs is now inevitable and the present glut would otherwise be followed by a later scarcity. At the same time the largest possible amount of foodstuffs should be obtained from neutral countries, as well as seed, manure, and fuel for motors. The guiding principles should be high nutritive value and small storage room. The prohibition of export of foodstuffs must be made absolute and sugar no longer exported, even though it should not reach England. No consideration for friendly relations with neutral countries should interfere with this most necessary condition.

3. *Alteration of Production.*—The essential point is the nutritive and especially protein value of what is produced, and farmers must subordinate their personal interests to that of the community. Ground must be reserved for those vegetables which afford a large quantity of nutriment, such as beans and potatoes. The necessary space for producing summer crops of grain and fodder must be provided, and the

too low The influence of age and sex must also be considered The requirements of the adult woman can be based on the lower male standard of work Engel, Rubner, Atwater, and Zuntz have given tables for each year of life, the simplest being the new table of Zuntz, in which 40 per cent is reckoned for age 2-4 50 per cent. for age 5 9, 75 per cent for age 10-14 years, from then on 100 per cent for a male and 80 per cent for a female, with a drop to 90 per cent for the male after 60 years Worked out on the basis of the German census of Jan 1st, 1911, with a total population of 64 992 238 persons, an average of the various scales gives 49 543 889 units, which must be increased by 4 6 per cent on account of the increase of population to the present year, giving 51,822 908 units The calculation, 3000 calories × 365 × 51,822,908 = 56 75 billion calories, gives the total requirement of the German people for a whole year of the war

3 The *proteid requirement* must be separately estimated, as it forms the building material of the body and cannot be replaced by any other foodstuff Its complicated molecule contains not only carbon, hydrogen, and oxygen, but also invariably nitrogen and sulphur, in many cases phosphorus, and often iron and other elements As the nitrogen content varies only within narrow limits, this can be used as a guide and the nitrogen balance of the body worked out With an excessive intake of proteid nitrogen is at first stored up, but soon excretion again equals intake The smallest intake of proteid with which the nitrogen balance can be maintained is known as the physiological proteid minimum This may be as low as 17 grammes, but probably the organism comes thereby to harm in the long run The hygienic proteid minimum is the quantity necessary to maintain the body in perfect condition and energy This quantity varies within fairly wide limits with the kind of proteid and the composition of the rest of the food The chief influence is exerted by the body weight Voit held that for a body weight of 70 kilos 105 grammes of proteid were necessary daily This value was intentionally chosen high to allow of a certain margin, and, as Rubner pointed out was taken from the statistical material of Munich, in which the consumption of meat is very large Neumann in 1902 arrived at a value of 71 grammes, Schumburg in 1893 at an average value of 60 grammes, but as average values for all ranks of society on the usual mixed diet are being considered, it will be wise to allow for 70 grammes of proteid for an active man requiring 3000 calories of total energy 70 grammes of proteid have a value of 287 calories and therefore amount to 9 6 per cent of the total food On a vegetable diet this is easily possible for potatoes contain only 7 1 per cent, rice, 7 3 per cent, rye bread 8 7 per cent of proteid But for foods of animal origin a higher percentage of 15 per cent to 16 per cent of proteid must generally be reckoned Hence for the basis of this calculation it is assumed that the adult man takes 11 per cent. of his total calories in the form of proteid For an average man of 3000 calories this gives 330 calories in the form of proteid, and therewith a daily requirement of 80 grammes of proteid, and in view of the fact of the varied diet of the population of town and country this is not too high a figure to take The requirement of the adult woman may be put at 15 per cent less or 68 grammes, that of the child is 40 grammes for the first to the sixth year, 50 grammes for the seventh to the twelfth year, and 65 grammes for the thirteenth to the eighteenth year Calculating now on the basis of the total population from the census of Jan 1st, 1911, the total daily requirement of proteid is 4203 tons, and allowing as before for an increase of population by 4 6 per cent up to the outbreak of the war, the yearly requirement of the German people works out at 4396 tons × 365 = 1 605 000 tons of proteid

Chapter IV treats of

The Actual Consumption of Food by the German People before the War

In order to do this (1) the foodstuffs produced in Germany and used by man, and (2) the excess of import over export in such foodstuffs are determined In order to determine further what part of the consumption is directly or indirectly from abroad it is necessary to add to the excess of imports in foodstuffs, the excess also in the importation of materials used in the raising of home produce The consumption of meat for instance is given by the sum of beasts slaughtered in the country and the excess of import over export But the

Total Consumption of Foodstuffs Average of Years 1912-1

Foodstuffs	Total available foodstuffs. Proteid (in thousands of tons)	Fat (in thousands of tons)	Carbohydrate (in thousands of tons)	Milliards of calories	Proportion of these foodstuffs coming from abroad. Proteid (in thousands of tons)	Fat (in thousands of tons)	Carbohydrate (in thousands of tons)	Milliards of calories
I Vegetable foods—								
Cereals pulses and potatoes	1123 7	121·0	10005 5	46 653	160·7	10·1	922 7	47
Vegetables	75 3	12·5	375 3	1 944	3 3	0·5	16 3	[illegible]
Fruits and nuts	23 2	36 0	411 5	2 117	6 2	8·5	131 4	[illegible]
Sugar and honey	0 1	-	1187 5	4 745	0 0	—	-535	[illegible]
Vegetable fats	—	184 4	—	1 715	—	158·9	—	[illegible]
Cocoa	3 0	25 7	10·3	273	3·0	25 7	[illegible]	[illegible]
Alcoholic drinks ..	27 0	—	344 1	4,219[1]	3 4	—	[illegible]	[illegible]
Total	1252·3	377·6	12335·2	61 666	176 6	201 7	[illegible]	[illegible]

[1] Of this 2716 milliards from alcohol
[2] Of this 273 milliards from alcohol.

Foodstuffs	Proteid	Fat	Carbohydrate	Milliards of calories	Proteid	Fat	Carbohydrate	Milliards of calories
II Animal foods—								
Meat and fats	431·9	1339 6	1 4	14,242	85·0	462 7	0·2	[illegible]
Fish	52·4	28 7	2·0	490	33 7	21·5	1·5	[illegible]
Milk products	478 5	790 6	571 7	11 635	311·2	372 1	457 3	[illegible]
Eggs	46·8	44 5	2 7	618	19 1	18 6	1 2	[illegible]
Total	1009 6	2203 4	677 8	26 933	449·0	[illegible]	460 2	12,021
III Foods in general	2261·9	2531·0	12913·0	[illegible]	625·6	[illegible]	1061·6	[illegible]

Average Daily Consumption of Foodstuffs in 1912-1

Foodstuffs	Total available foodstuffs Gm	Gm	Gm	Cal	Proportion of these foodstuffs coming from abroad Gm	Gm	Gm	Cal
I Vegetable foods—								
Cereals pulses and potatoes	46 2	5·0	411 0	1916	6 6	0 4	[illegible]	[illegible]
Vegetables	3 9	0 5	25 5	80	0 1	0·0	[illegible]	3
Fruit and nuts	0·8	1 4	16·9	87	0·2	[illegible]	5 4	2
Sugar and honey	0 0	—	48 3	195	0·0	—	-21·0	[illegible]
Vegetable fats	—	7 6	—	71	—	6·5	—	61
Cocoa	0 1	1 0	0 4	11	0·1	1 0	0	11
Alcoholic drinks	1 1	—	[illegible]	173[1]	0 2	—	[illegible]	[illegible]
Total	51 4	15 5	[illegible]	2533	7 2	8 3	[illegible]	[illegible]
II Animal foods—								
Meat and fats	17 7	55 0	[illegible]	[illegible]	3 5	19·0	0 0	[illegible]
Fish ..	2 2	1 2	0 1	[illegible]	1 4	[illegible]	0 1	[illegible]
Milk products	19 7	32 5	23 5	[illegible]	12·8	[illegible]	[illegible]	[illegible]
Eggs ..	1·9	1 8	0 1	[illegible]	0 8	0·7	0 0	1
Total	41·5	[illegible]	23 8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
III—Foods in general—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	-

[1] Of this 112 from alcohol

[2] O[illegible] this 11 [illegible]

steam and electrically-driven ploughs there will be no lack of power, for the motors the supply of petrol may be replaced by benzol which is a by product in the manufacture of coke The latter should be used as fuel, not only in the household economy but also in the locomotive, and the price reduced to this end Spirit was used extensively for motors during the first months of the war and may continue to be so used with the addition of a moderate quantity of benzol. Comparing the consumption of foodstuffs required to produce the alcohol for motors with that of oxen for traction the figures work out as 391 kilogrammes of starch for 28 oxen per day and 300 kilogrammes of spirit for a motor plough per day The advantage rests, therefore with the plough which further only requires two hands whereas 28 oxen necessitate at least seven labourers The motor plough is essential in places where there is a lack of beasts

4 *Manures* —In order to produce a good yield sufficient manure is essential Much more attention should be given to the storing of manure in order that the available nitrogen should not be lost Various calculations have been made that the usual loss is some 30 per cent. or a yearly waste of at least 600 million marks (= £30,000,000) for the whole of Germany The money value of this loss is some five or six times as great as that of imported saltpetre, and is about equal to the sum which German agriculture pays altogether for artificial manures Little or nothing can be done with the various chemical preservatives but since the loss is due to the activity of micro-organisms and most of these require atmospheric oxygen, it can be prevented by avoiding access of air and keeping the dung firm and moist Even so a loss of some 13 per cent occurs By covering with peat it can be still further reduced to 7 per cent, and a similar saving is effected by keeping the solid and fluid parts of the dung separate according to Soxhlet s method. Not less importance is due to the artificial manures To them is largely owing the rise of our agriculture In the last 30 years our harvests of grain and potatoes have kept pace with the increase of population This has, in the first place been due to the introduction and use of artificial manures, secondly, to the better results of plant breeding, the better working up of the soil with manure, the keeping down of plant disease, &c. It has been estimated that of these various factors the artificial manure is responsible for 50 per cent more fruitful kinds of seed for 30 per cent, and other measures for 20 per cent. of the advantages gained Four substances have to be considered nitrogen, phosphoric acid, potash and chalk, of which only the first three offer any difficulties to produce Amongst them nitrogen is vastly the most important A series of important experiments in various parts of the country by Hansen, Schultze, and Lemmermann have shown that without the nitrogenous element all other manure is of very little avail. In Germany potash is present in abundance and only the difficulty of freight may hinder its sufficient use The State must come to our aid by reduction of freight rates, and will be later on compensated by the increased freights for the crops themselves The supply of phosphoric acid depends on the Thomas-slag, which is itself dependent on the iron industry and the needs of the army To produce the superphosphates the supply of crude phosphate may be supplemented from Belgium where such beds are present in the provinces of Liege and Hennegau. The necessary sulphuric acid to work up the crude phosphate into superphosphate has been much reduced by the loss of the imported pyrites There are beds of sulphur containing rock in Germany —for instance, at Goslar—the working of which would supply the necessary sulphur In spite of everything that can be done there will still be a certain diminution in the supply of phosphoric acid, which should however, not make itself perceptibly felt at present in view of excess of supply in the last few years Immensely more important is the obtaining of sufficient nitrogen It has been calculated that 8 000 000 double centners (a double centner = 100 kilos) of nitrogenous salts less than usual are available and that for each nitrogen unit lacking 3½ to 4 units less of grain will be produced by the fields Thus an amount of 28–32 million double centners less corn will be produced—i e about one fifth of the total harvest In 1913 more than half a million tons of Chile saltpetre were used as manure The place of this can be taken by applying the nitrogen of the air with the aid of arc lamps but the quantity so far has been minimal—38,000 tons in 1913 Next to saltpetre the most important manure is ammonium sulphate occurring in large quantities as a by product in the distillation of coal Its nitrogen content exceeded that of Chile saltpetre in the year 1913, and the quantity has increased since Lastly, calcium nitride is produced by the action of nitrogen on calcium carbide, and this production increases from year to year As along with the Chile saltpetre about one half the available nitrogen has fallen out the other sources must be stimulated to the utmost extent The great electrical works of Germany possessed in 1913 some two million horse power, of which on the average only 18 8 per cent were used Technically it would be possible to produce enough calcium nitride by means of this power without interfering with the ordinary supply of electricity The State must take this important matter in hand.

5 *Culture of moors* —According to Fleischer we possess in Germany about 20,000 square kilometres of unused moor land which can easily be brought to useful cultivation by the addition of suitable manures Half of this area probably requires only a supply of potash and phosphoric acid, possessing already sufficient nitrogen Especially the Russian prisoners of war are agricultural labourers and could carry out this useful work to great advantage. When one considers that the hektar (1 hektar = 2½ acres) of improved moor yields a certain harvest of some 20–30 double centners of rye or oats, or 180–220 double-centners of potatoes, or 50–60 double centners of valuable hay, or on grazing on 3–4 double-centners of living cattle, the value of this work may well be seen. The latest experiments have shown that vegetables especially flourish on such a soil, especially with hand spadework which is available in sufficient quantity with the help of the prisoners of war and the out-of works The stretch of country on each side of the Hamburg Bremen Railway is particularly suitable. Further increase of harvests could be attained by extending the area of sewage works in the neighbourhood of large towns These are mostly far too small and suffer from excess of effluents Finally, an increase in agricultural production could be attained by dividing up large tracts amongst peasant proprietors, who would then carry out more intensive culture of the smaller areas In this direction also, when the war has carried off so many owners of large properties, or made it impossible for them to conduct them further, the State must intervene

Chapter VIII deals with questions relating to

Live Stock

1. *The reduction in the number of pigs and milch cows* —"One thing must under all circumstances be done—reduce the number of beasts" A great quantity of imported fodder is lacking especially barley, maize, bran, and oil cake So far these have partly been used for feeding pigs, partly for increasing the yield of cows' milk beyond what could be attained with home fodder We should only add to our deficit if we were to replace this fodder with material such as corn which could be used directly for human food for, passed through an animal, more than half the nutritive value is lost In addition we are obliged to deprive the cattle of some of the foodstuffs suitable for human food with which they have hitherto been fed. The Government has therefore forbidden under penalty the use of bread corn as fodder, amounting in rye alone to 2,000 000 tons yearly We must in future divide the available fodder among a smaller number of beasts, for it is in general more advantageous to feed a small number abundantly than a larger number sparingly The mere limitation of the number amongst which a given amount of fodder is divided makes it possible to produce more human food for the same consumption of fodder, and therewith further limiting our deficit The necessary reduction of the number of beasts demands, on the one hand, a slaughtering of a certain proportion and on the other a limitation in the production and breeding It will be readily understood that the thought of such a reduction will be very sore to the heart of many of the farmers who have attained a large stock with years of hard labour, but there is no place for sentiment in the present fight for existence Only we must see to it that the diminution does not damage the future of the industry and that on the return of peace the breeding can be resumed in the necessary intensity These questions are not simple of solution the first being in what kind of animal the diminution shall be made Here two points must be considered, the first concerning the kind of fodder In general the reduction should be made among the

difficulties owing to lack of labour and of manure surmounted in every possible way, whilst the culture of moors and of areas not at present available for agriculture must be taken in hand Cattle must be fed with fodder at present too little considered, such as beech nuts, acorns, and green stuff, and every waste of fodder must be carefully avoided The cost is a secondary matter, and the State must see that the necessary steam and motor ploughs are manufactured as well as the needful nitrogenous manures Garden and wild fruits must be carefully stored Foodstuffs must no longer be used for technical purposes—e.g , starch and spirit from grain and potatoes, soap from fats—except in so far as this cannot be avoided. The grain and potatoes used for feeding cattle have a far higher value if employed directly for the nourishment of man. "With the milk, corn grain, and potatoes which a pig consumes double as many human beings can be nourished as with the resulting pork." The experiments of Zuntz Kellner, and other have shown that more than 50 per cent. of the calories are always lost by passage of foodstuffs through an animal For the same reason the production of butter is to be restricted and finally, careful attention paid to storage and preservation, especially of vegetables in the winter and of fruit in the form of jams and preserves

4 *Adaptation of habits of life* —The third and last method of covering the deficit is alteration of habits of life and this need by no means be a radical one Small alterations will suffice Less meat and fat must be used than in the last few decades, but an exclusively vegetable diet is not necessary, and even vegetable foods may be limited without harm. Just at present an excess of pork is available, but as we have seen this should be preserved and not immediately consumed In individual households the avoidance of loss and waste is imperative Rubner calculated in Berlin that daily 20 grammes of fat are wasted in the effluent for each head of the population. Apart from economical use of food other points have to be considered Starch should not be used for clothing and coke is to be employed in preference to coal in order to make available the necessary ammonia for manure

5 *The carrying out of the necessary measures* —Three methods will be required new laws careful administration and instruction of the people The edict of August 4th, 1914, empowered the Bundesrat to enact all necessary economic measures Maximum prices may be fixed where as in the case of sugar, it is desirable to encourage a large consumption , minimum prices where as in the case of meat storage is preferable to immediate use Regulation of prices is especially desirable where the use of one article is preferable to that of another—e g the abundant rye in preference to the limited wheat Local authorities can buy up and store the present glut of pork , ensure a sufficiency of seed grain for the spring , and erect installations for drying potatoes and producing nitrogenous manure from the air The most important measure remains—the instruction of the populace which can be done through the agricultural societies, the trades unions, the national service of women as well as through the press If all these means are employed the English starvation plan will certainly be brought to naught.

Chapter VI deals with

The Prohibition of Exports

Three Royal edicts were already enacted on July 31st, 1914 dealing with foodstuffs animals animal products and certain raw materials the carrying out being left to the Chancellor Certain exceptions have since been made which are not without importance.

1 *Grain* —It is much to be regretted that our Government in friendly consideration for Switzerland allowed 2500 wagons of grain to be exported , but if this is done for Switzerland it may be a cause of complaint that similar consideration is not shown to other neighbouring neutral States Switzerland as a small neutral country is also in the position to obtain its supply of grain through Italy Denmark has not hesitated to prohibit the export of barley to Germany and no political consideration can justify any relaxation with regard to our vital interests

2. *Sugar* —It is especially important that no sugar should be exported The sugar industry obtained from the Government a relaxation of the prohibition in the sense that export should be permitted deciding from case to case up to the amount exported in the year 1913—viz , 1 1 million tons But no consideration for the financial circumstances of a particular industry should result in our sending useful food out of the country Rather the people should be encouraged to increase their consumption which would use up the available supply if it reached the American count of 36 kilos per head of population and this is less than the English figure of 40 kilos In 1904, when the price of syrup sank 29 per cent , the consumption of sugar increased rather more than correspondingly—by 34 per cent , in fact This increased consumption of sugar can then partly make up for the shortage of fat This consideration alone should suffice but as a matter of fact of the 1 1 million tons 0 8 went to England, whether directly or indirectly through neutral countries The keeping up of the level of German exchange in neutral markets is a matter of entirely subsidiary importance In consideration of all this the Government has already agreed to withdraw part of the concession from the sugar industry

Chapter VII is concerned with matters relating to

Agriculture

1. *The crops to be chosen* —The necessity is clear, we must not allow the deficit due to failing imports to be increased by lack of production On the contrary, we must increase the home crops, and as far as possible such crops as yield a high proportion of proteid food In this respect the pulses are almost equal to meat On the average of the years 1912–13 we imported 251,000 tons peas, 31,000 tons beans, and 28,000 tons lentils, and the farmer should attempt to produce these at home, naturally with some care as these crops are more dependent on local conditions than others It has further been proposed to let the place of potatoes and beet to some extent be taken by the culture of corn Imported wheat to the extent of 2,000 000 tons has fallen out, and although this may to some extent be replaced by the 600,000 tons of rye which we no longer export a deficit still remains which might be made good with the 1,100 000 tons of beet sugar which have been hitherto exported But the suggestion is inadvisable on two grounds firstly, the beet and potatoes yield far more per unit of area than corn, both in value and in foodstuffs and they deplete the soil far less in respect of nitrogenous constituents They afford, too fodder for more and better cattle, which in their turn yield more and better manure for the land And secondly, the intensive culture of these crops exerts a much healthier influence on the agricultural industry in general, on the breeding of heavier horses and stronger oxen, on the manufacture of agricultural implements, and has produced an enormous increase in freight on canals and railways, thereby assisting in high degree the finances of the State

2. *Seed corn* —It is of the utmost importance that sufficient seed corn should be available for the spring owing First of all for summer grain The limitation of available labour has in many places hindered the sowing of the winter crop, especially in East Prussia and Alsace Lorraine and consequently the summer crop must be largely increased Where an oat crop is doubtful barley can be used to take the place of the imported barley for fodder In all cases the right sort of grain must be carefully chosen in advance Of pulses there is a risk that the available stock may all be used up by the spring Similarly clover and grass seed must be obtained and all this can only be done by the organisation of the State itself

3 *Labour and traction* —The lack of labour for the harvest has made itself less felt in the autumn than was feared The superfluous industrial workers will gradually filter into agricultural channels, and the great number of prisoners of war—now much over half a million—will provide many well trained agricultural labourers The lack of beasts for traction is not so great as might appear at first sight Some half a million horses have been claimed by the army and the import of some 130 000 horses has stopped Since the total number is somewhat more than four and a half millions this means a reduction of some 13 per cent But the earlier breaking in of the foals has already almost compensated for this and not only oxen and bulls but also cows can be trained for ploughing without harm if their diet is increased by so much beet and potatoes [illegible] motor ploughs can be used more than is the case at present and the greater landowners must lend them to the smaller ones in their neighbourhood The hundreds of motor ploughs stored in the manufactories must also be put into use. For

quantities are preserved from rotting. Beet parings can also be used. These substitutes can gradually take the place of the usual rye.

Considerable quantities of grain and potatoes are lost for human food by their use in trade. Even if the substitutes produced are used for food a certain loss is inevitable—in the processes of starch making and brewing—apart from the starch and spirit which are used for trade purposes. These uses must be carefully inspected. Starch is partly used in the kitchen for baking, partly for technical purposes and is produced both from grain and potatoes. In the year 1911, 34,000 tons of rice, 25,000 tons of maize and 23,000 tons of wheat flour were used. The two former are no longer available, hence there is a risk of wheat flour being used in their place. In preparing starch from corn the proteid content is lost, or has at all events not yet found adequate employment (so-called aleuronat has had no great success). For all purposes whether of food or industry wheat starch may be replaced by potato starch, which has the great advantage of not wasting any large proteid content. In 1910–11, 1.3 million tons of potatoes were used for starch, with the obvious advantage of producing a foodstuff capable of indefinite keeping, bearing in mind that the best form of preserving potatoes—viz., drying—is not possible for the whole quantity. The production of potato starch if it is used for human food, is therefore free from drawback. If used for bread the proteid content of the latter will be diminished, and its place must be taken by adding skim milk. Zuntz and Magnus Levy have shown that such bread is well digested. Technical application of starch on the other hand must be limited. The employment for linen has no real use, and some ingenious person should discover a substitute for paperhanger's paste.

For the production of alcohol both grain and potatoes are used. In the years 1912–13 3,000,000 tons of alcohol were manufactured. About half is drunk, the other half is used for various technical purposes. 89,000 tons of rye were used in the production of malt spirit. This employment is highly questionable, and the production of spirit from corn should be entirely forbidden. Of potatoes in the years 1912–13 2.7 million tons were used in the distilleries. Against the use of potato spirit as a beverage the reduction of food value is not as great as might be supposed. 60 per cent. of the energy remains in the form of alcohol, 3 per cent. is lost in the vital process of the yeast and the remaining 37 per cent. forms a useful fodder of which in its turn one-third is later available in the form of meat and fat. Potatoes used directly for cooking as a rule lose 15 per cent. in peeling and 2 per cent. in imperfect digestion. Hence *quâ* food value there is not much against the distillery. But in spite of this the use of alcohol should be limited as much as possible as it is a poison and a danger to the health of the individual as well as to that of the community. Other considerations affect the part of the alcohol used for technical purposes. It is entirely lost as food, with the exception of the small residue for fodder. The use of alcohol for motor driving is an evil which cannot be altogether avoided, although it should be limited as far as possible. As an illuminant gas, acetylene, or electricity must take its place. Its use to replace benzine and petroleum is to some extent unavoidable and any reduction in the production of alcohol from potatoes can hardly be expected. For brewing grain alone is employed and in the form of beer our population enjoys more alcohol than in the form of spirit. In the years 1912–13 3.5 kilos of alcohol yearly per head of population were consumed in the form of beer, and 2.2 kilos in the form of spirit. Some 1.7 million tons of barley served for this purpose and the question whether limitation is desirable is affected by the fact that barley ordinarily is very little used for human food. In brewing the nutritive value is fairly well maintained and an average loss of 12 per cent. may be reckoned with in malting and a further loss of 25 per cent. in extracting from the malt is compensated by the value of the remainder as fodder. A further 2 per cent. is lost in the vital process of the yeast which itself however serves a useful purpose in baking. Hence some 60 per cent. of the energy of the barley is retained for man in beer. Even in the production of pearl barley some 40 per cent. of food value is also lost.

The most important employment of grain is naturally the production of bread and since the import of wheat and the export of rye both have ceased it is necessary to mix rye flour with wheat, and an edict on Oct. 28th made an admixture of at least 10 per cent. of rye flour obligatory. To raise the price of wheat flour as a further inducement to saving would have the undesirable result of limiting the use of wheat flour to the well-to-do. The necessary regulation is gradually coming about and bakers should be encouraged to make the small rolls out of rye flour. The question is, further, of great importance whether the quantity of bread can be increased by a large addition of bran, bran being the part of the outer husk of corn separated in the grinding, and containing much proteid but in an indigestible cellulose envelope. Wholemeal contains the whole of the bran, the finest wheat flour about 60 per cent. of the total weight. Between these two extremes it is possible to manufacture a bread containing 70, 80, or 90 per cent. of the total weight. The separated bran, if employed for human consumption through an animal loses at least 50 per cent. of its total value. On the other hand, if the whole of the bran is employed the resulting bread is not so perfectly digested—as for instance, in the well known pumpernickel. These considerations influenced the edict of Oct. 28th, according to which rye flour must contain at least 72 per cent. and wheat flour at least 75 per cent. of the total weight. The much-discussed question whether potato bread—i.e., bread with addition of potato flour—is advisable or not was settled also by the same edict, which prescribed an obligatory addition of 5 per cent. of potato flour to rye bread. A larger addition is permissible but the bread must then bear the letter K (Kartoffel), if more than 20 per cent. the percentage must be stated on the bread. The production of potato bread is not necessitated by the lack of corn but because grain is more easily stored than potatoes. On principle, however, it is doubtful whether the composition of a staple article of diet like bread should be altered after centuries of constant use, and when many people cover the whole of their proteid requirement in the form of bread. Potatoes contain less than one-fifth part of the proteid of rye flour. The addition of 5 per cent. is free from objection, more than 20 per cent. is inadvisable, especially as, according to Hellsten's experiments digestion is then less perfect. Moderate saving of food value might be attained by dispensing with yeast. The alcohol and carbonic acid lost in the fermenting of the dough amounts to some 2 per cent. of the food value. But the employment of baking powder or of mechanical means is technically very difficult.

The complete utilisation of potatoes is endangered by the fact that a part of their food value is lost by rotting during long storage. In a year some 4 million tons are wasted in this way. Much may be done by correct storage and latterly the practice of drying has helped considerably. In one form whole potatoes are cut into slices and dried in an oven, the resulting material being used for fodder. In a second, potatoes are steamed, freed of their peel, and pressed between rollers into thin discs. Although mostly used for pigs they are then quite suitable as human food. A special advantage is the reduction in weight for transport to about one-quarter. Unfortunately the existing apparatus working continuously can only dry some 2½ million tons during the present winter.

2. *Vegetables, fruit.*—A not inconsiderable increase in our food supply can be reached by better utilisation of vegetables and fruit. The edible fungi should not be wasted, and for vegetables four methods of keeping come into question: storage, pickling, drying, and preserving. Cabbages especially instead of being sold almost for nothing in the autumn, should be stored in frost-free rooms which the local authorities and coöperative unions should provide. There is a larger field for the production of sauerkraut and the pickling of beetroot. The drying of vegetables is more complicated, but more might be done in this way as well as by sterilising in tins and glasses, which is however, both expensive and complicated. Especially in individual households much can be done. The same applies to fruit. Home-grown garden fruits have by no means been used to full advantage and there has specially been a lack of an organised market for windfalls and the cheaper kinds of fruit which have generally been given to pigs. The wild fruits—bilberries, blackberries, hips, elderberries, &c.—should not be imported but diligently collected in our own country, and a market organised for this purpose

beasts who consume fodder which could directly serve for the food of man The pig is the greatest food competitor of man The second point concerns the best employment of the fodder We should rather destroy such beasts as do not put the fodder to an economical use In this respect the varying production of meat and milk is of special interest The experiments of Kellner and König have led to the following results In the feeding of a pig of 15 kilos up to a weight of 120 kilos 24 per cent of proteid and 44 per cent of total food value is retained for the nutrition of man On the other hand, in rearing a calf from 30 kilos up to a weight of 360 kilos only 20 per cent of proteid and 14 per cent of total food value is available A milch cow weighing 500 kilos and giving in the year 2200 litres of milk gives back to man 36 per cent of the proteid and 24 per cent of the total food value with which it is supplied. The different value of the products must also be considered With milk at 20 pf (= nearly 2½*d*) the litre and pork at 2 marks (or shillings) a kilo , we pay for 100 grammes of proteid 57 pf in the case of milk and 1 mark in the case of pork , and apart from proteid the milk contains far more nutriment than the pork. In proteid economy, therefore the milch cow is far to be preferred to the pig or the calf Hence the cow should be retained as far as possible and only the wasteful feeders destroyed If the question of the economical employment of fodder were the only one, then the bullocks should principally be destroyed But since the kind of fodder is of still greater importance the limitation of pigs is the first to be undertaken

2 *The degree of the limitation of the number of beasts* —The reasons making the limitation necessary are the lack of imported fodder and the prohibition of the employment of bread corn Both necessitate a diminution, since it would be indefensible to maintain the present number with insufficient and therefore unproductive feeding Two methods are available to determine the necessary reduction In considering the measures for the whole country the calculation can best be made from the quantity of fodder which is no longer available, whereas for any particular district or farm the calculation must of necessity be made on the actual figures of fodder still available First, then, let us consider in what degree in general the number of cattle must be reduced The missing fodder was principally used for two purposes for the feeding of pigs and the keeping of milch cows Roughly, we may assume that barley and maize were given to the pigs and the other fodder to the cows On this basis we may reckon that pigs were fattened on the excess of imported barley and maize as far as this served for fodder at all On the average of 1912-13 2 9 million tons were available with a proteid content of 240,000 tons To see how many pigs this amount could have fattened it is not possible to calculate simply from the physiological fact that a pig in order to increase from 15 to 120 kilos in nine months requires fodder of 1 4 million calories equivalent to 493 kilos of barley or 411 kilos of maize , for this calculation does not allow for loss on transport and storing, for waste in feeding for digestive disturbances and disease, and death during fattening It is better to reckon as the practical farmer does that a pig puts on a kilo of weight for 5 kilos of corn (5½ kilos of barley and correspondingly less of maize) If the fattening of a pig is expressed in this way in corn value, 525 kilos (or 575 kilos of barley) would be necessary, giving roughly 5½ millions of fattened pigs, or somewhat more than a fifth of the last census The reduction should specially be made in the pig fattening establishments of the province of Hanover For milk production we should have—on our basis of calculation —to allow for the lack of import of fodder as well as the home rye which is no longer available for animals The import reckoned in proteid value amounted in 1912-13 to 654,000 tons the home-grown rye to 192,000 of which only the bran (some 50 000) is now available The total deficit for milk production is therefore 806 000 tons of proteid Now a cow gives on an average 2200 litres of milk in the year, and requires as fodder for its own needs on the usual calculation 350 grammes daily or 128 kilos yearly of proteid, and in addition as fodder for the production of milk 70 grammes for each litre or 154 kilos in the year Adding these together each cow requires 282 kilos proteid per year 805 000 tons of proteid content in the rye no longer available would have served to feed 2 85 millions of milch cows, or some 27 per cent of the whole head of cattle This calculation, however, gives only a provisional picture for the entirely incorrect assumption has been made that farming methods would continue as heretofore This must not be allowed to occur Fodder must be economised and new sources utilised , suitable additional fodder plants are to be cultivated useless cattle got rid of, the waste of raw fodder avoided, and the cattle treated according to their individual needs It has been calculated that with economy of the use of fodder in every possible direction a saving might be effected so that only 2 million cows need be got rid of But this is without allowing for a limitation in the keeping of pigs and, as we have seen, the proteid of fodder is obtained in almost twice the quantity in milk that it is in the production of pork. For every three and a half pigs destroyed one cow may be retained, and we may accordingly compromise by reducing the number of pigs by 9 millions, the milch cows by only 1 million, respectively 35 per cent and 10 per cent of the whole

3 *The carrying out of the reduction* —In different parts of the country different conditions as regards fodder prevail In any case those cows should be slaughtered in which the milk production is less advantageous, and even then not all at the same time, to avoid a temporary excess of meat at a low price and an eventual meat famine The State should here again step in to buy and preserve the surplus meat and a minimum price should also be fixed As regards the production of pigs so long as the skim and butter milk cannot be otherwise employed they should be retained, and for the present the potato harvest cannot be otherwise utilised especially since the slaughter will be a successive one and the feeding of young pigs must in any case not be too scanty in order that they may remain capable of adequate fattening

4 *Small livestock* —The proposal has been made to extend as far as possible the keeping of fowls and rabbits thereby producing a more varied and agreeable diet, which would be of practical importance with foreign production entirely cut off But although for years fowl keeping has been encouraged in the first half of the present year over 105 million marks worth of eggs were imported into Germany, and this condition is hardly likely to alter rapidly The rearing of chickens also involves foodstuffs which might serve directly for human consumption and the question is in fact only a practical one where the fowls can run free in the farm and on the fields and feed on insects, worms plants &c., which otherwise would remain unused The amount of care and attention required would often be prohibitive especially when so large a proportion of the population is on military service But wherever possible the keeping of fowls should be borne in mind

5 *Increased production of fodder* —The leaves of beet and potatoes if carefully harvested and preserved afford useful fodder and a great part of the green stuff which is usually ploughed in may also be used as well as crops grown in the between time of the principal crops such as Chinese radish, white mustard, peas &c These measures were already recommended at the beginning of the war by the Agricultural Society and by experienced farmers

Chapter IX deals with

The Proper Utilisation of Agricultural Products

1 *Corn and potatoes* —Much can be done to cover our deficit by employing grain and potatoes to proper advantage They belong together because they are commonly employed for the same purpose whether for human nourishment fodder, preparation of starch, or brewing At present both are largely employed for feeding domestic animals, and this is not so questionable in the case of potatoes of which we have a large excess Of grain hitherto not merely the residual grain—i e , the part cast aside with the impurities on sifting—has been employed, but also some proportion impossible to estimate even of good grain among the smaller farmers Such grain employed indirectly for human nourishment through an animal loses at least 50 per cent of its food value 1 4 million tons of corn are lacking and in these circumstances the use for fodder must be limited to a minimum The Government indeed on Oct 28th 1914 forbade its use on principle For every farmer it must be a matter of honour to observe this prohibition in the interest of the protection of his country Fortunately a substitute can be found More potatoes can be used, especially when by means of potato-drying large

Rubner's observation that 100 grammes a day are thrown away in Berlin per family We must therefore use less fat and more carbohydrate, and since the animal foodstuffs contain more of the former and vegetable more of the latter the necessity arises of living more on vegetable substances This is not a recommendation to pure vegetarianism To give up animal food altogether would be economically a mistake, as the beasts consume stuffs unsuited for human food—e g , hay straw, greenstuff, acorns beet parings &c — and these can only be made suitable for human food by being employed as fodder We should only return to the habit of former times in which vegetarianism had no meaning because the employment of meat and fat had not then reached such a high level In a large part of South Germany the carbohydrates still form the principal part of the diet, and the necessary alteration for North and Central Germany consists in introducing South German dishes The alteration should not be made too suddenly, and the State and local authorities should see to it that the prices of animal foodstuffs gradually rise, and so assist the gradual taking place of the change

2 *Meat fish, milk cheese, skim milk, pulses* —The body s need in building material—i e , in proteid—will also be in part covered by the proteid content of bread and in smaller degree of potatoes , and since these foods are taken for their carbohydrates in large quantities no inconsiderable amount of proteid is also taken But to cover the whole proteid need excessive quantities of these would be required and hence we do well to cover a part of our proteid requirement by foodstuffs containing a high proportion of proteid There are three groups of these (1) meat and fish , (2) milk and milk products , and (3) in the vegetable kingdom only the pulses

The consumption of meat is very various in different parts of Germany In some, especially in South Germany, little meat is taken — in the country for the most part only on Sundays, but in cities, and especially in the hotels and restaurants the consumption is excessive Excessive also is the so-called English breakfast beginning the day with abundant quantities of meat &c , and the employment of meat at the mid morning lunch to which even town children are accustomed. Wherever the employment has hitherto been within moderate limits it may be so continued Meat remains to us permanently in various forms In addition to beef, pork, and mutton, there is also available horse game, poultry, rabbits and, as fish may also be included under meat, both fresh water and salt fish especially herrings haddock, and cod One of the cheapest sources of proteid is dried fish and fortunately the herring catch of last year was a good one Fish is especially useful in bringing variety into the diet of the poor In hotels and restaurants part of the meat should be exchanged for fish and for children meat is better replaced by milk and milk foods up to school years

By far the most important substitutes for meat are milk, cheese, butter milk, and *skim milk* Milk plays a special role among all foodstuffs since, as the natural food of the young, it covers all that the body requires in each category of foodstuff The consumption of butter should be limited since it leads to a waste of skim milk used as fodder and so to a large proteid loss The consumption of full milk can hardly be increased but should not be reduced , a certain redistribution should take place , employment for children instead of meat skim milk taking the place of full milk for cooking The consumption of cheese should be increased Full cheese is, so to speak, concentrated milk, containing in convenient form practically all its valuable constitutents and it is more nourishing than moderately fat meat It has the advantage over milk of appetising flavour and for many people of greater digestibility Milk costs in food value only about one half of meat, and full cheese such as Tilsit is cheaper even than milk on account of its convenient transport and keeping property More important still is the production in future of skim cheese in larger quantities As soon as the knowledge is general that with its proteid content and appetising flavour it is a cheap substitute for meat, bread and cheese will often take the place of bread and sausage Unfortunately the use of curd cheese is limited In contrast to full cheese curd cheese has little flavour but is on this account the more suitable for the preparation of breakfast and supper dishes even for children It is especially suitable for use in cakes and puddings, and already figures extensively in the South German and Austrian menu Of great importance, too is the use of skim milk to replace meat. As a beverage it has little vogue, but can often take the place of full milk in cooking and baking In preparation of foods the taste is indistinguishable from that of full milk, and puddings are an excellent food for children and also for adults on days when meat is not taken The greater employment of puddings, which by their content in skim milk, sugar, and flour replace fat, is not only a resource in time of urgent need, but a means of permanent importance for the nutrition of the people

Lastly, as meat substitutes we have the vegetable products which are rich in proteid Amongst these, far the most important are the pulses—peas, beans, and lentils Their proteid content is equal to that of meat, but in consequence of the hard husk is much less digestible than that of meat or milk But cooking can largely remedy this, especially in the case of peas, and they are therefore a cheap substitute for meat and should continue in use even with a rise of price Nuts, chestnuts, and fungi, although rich in proteid, are of much less importance on account of their hard envelope.

3 *Bread porridge, puddings, potatoes, vegetables* —The body s need in energy producers can just as well be covered by proteid and fat as by carbohydrate, but since we have to reckon in the future with a certain lack of the former, we must largely cover our need with the latter, and here starch containing foodstuffs have the chief place—bread and other products of flour, potatoes, and vegetables Taking bread first the important matter is to add more rye and less wheat Two million tons of foreign wheat have fallen out, and home grown rye is available to take its place. This is an easy adaptation since there is no good ground for preferring wheat bread to rye bread The latter has hitherto been baked chiefly in large loaves but is equally suitable for rolls Fine rye flour without bran is also available The Government has already ordained that flour must contain a certain proportion of bran (rye flour 72 per cent of the whole, wheat flour 75 per cent of the total weight of the grain) and this can be increased somewhat with advantage If rolls of rye flour are demanded the baker will undoubtedly make them Rye flour may also be used with advantage in the form of macaroni, groats, semolina, porridge, &c These do not lead to the addition of fat to the same extent as bread does, and are therefore specially useful under present conditions, and the addition of skim milk and sugar greatly increases their nutritive value Especially for children they have great application and can in this way spare for adults the meat and fat rations to which they have been accustomed, although for the latter also reduced meat consumption is advisable In South German and Austrian menus they already play a large rôle at breakfast and supper, with the addition or not of a little egg Of potatoes we now consume some 14 million tons in the whole of Germany yearly, and employ about double the quantity for other purposes In South Germany the consumption of potatoes can be greatly increased with advantage The great loss on peeling, amounting to some 15 per cent , or yearly to 2 million tons should be avoided To avoid this potatoes should be boiled first and peeled afterwards The taste of peel so resulting can be avoided by dropping the peeled potatoes into boiling salt water for three minutes. When peeled raw the patent peeler should be used and dried potato chips have considerable application Potatoes should be employed in greater variety not merely boiled or as salad but in the form of dishes with the addition of a little meat or fish, or with cabbage fruit, &c. A special place is occupied by vegetables The chief value of bread, puddings &c , lies in their starch content Vegetables also contain a certain quantity of starch some also a little proteid, but their value in nutrition is chiefly due to other constituents The mineral stuffs especially chalk and iron, are of some value, but their chief use is as appetisers on account of their varied and agreeable taste thus making more change possible in the diet, especially when this contains a large quantity of potatoes and in so doing they further limit employment of fat.

4 *Fruits sugar* —The second kind of carbohydrates which must help us to cover the supply of energy producers we find in the sugar containing foods, especially in fruits and in the sugar which is obtained from beets Fruits play a similar role to that of vegetables, although the sugar

Preserving with sugar is most desirable, as in this way an increased employment of home grown sugar would result As an addition to a dish of cereals and potatoes they will serve greatly to limit the consumption of meat

3 *Sugar* —An attempt must be made to utilise properly the million or so tons of sugar which will no longer be exported First and foremost is its employment to preserve fruit, and the transport tariff to the manufactories should be correspondingly reduced It is clear that even after the war English markets for our sugar are by no means assured The *surplus may* be employed as fodder, and especially to make palatable to the beasts forms of fodder which would not otherwise be so, especially the beet parings, and also straw, chaff, &c The sugar would mostly be in the form of molasses, the residual non crystallisable remains from the manufactory Whole beetroot cannot in large quantity be given safely as fodder, and for 1000 kilos of milch cow it is only advisable to feed *some* 10 *kilos of* beet, for cattle 15 kilos, for horses 8 kilos, and for sheep 25 kilos Their employment is safest for pigs, but their use should not then exceed 25 kilos for 1000 kilos of living weight, and it must be borne in mind that extra proteid must also be given As beets are heavy they can only be given within short distances of where grown, and in any case the economy of the 300 odd *sugar manufactories* which employ a large number of workmen should not be seriously interfered with In some factories already some 20 per cent of the sugar is left in the peeling, which then forms a simple and economical fodder.

4 *Milk* —Milk is a product which if carefully utilised will form a considerable gain in our food supply Before the war annually some 20 milliard litres of cows milk were produced, not allowing for what the calves themselves took A reduction of 10 per cent in the head of stock has been contemplated, with a corresponding reduction of about 18 milliard litres At the present time two-fifths are used directly as full milk, a small part made into cheese and more than half into butter A considerable loss of food value occurs in the latter process The whole content of carbohydrates and proteid goes into the skim and butter milk and the whole of the fat into butter The figures for milk are roughly 3 5 per cent fat, 3 2 per cent proteid, 4 8 per cent carbohydrate, and since the fat is double as rich in calories as the other constituents, the larger part of the energy content is found in the butter Nearly the whole of the body building material is found in the skim milk On present lines 8 or 9 milliard litres of skim milk are produced and it is clear that this may have an enormous application in covering our proteid requirements Unfortunately at present skim milk is only used in small proportion for home consumption Its only large employment is to make skim cheese, whether curd or in more permanent form A further proportion is used in margarine fabrication, where only a portion of its food value remains in the margarine the rest going for pig fodder As a drink both skim milk and butter milk are used very little, and in the raw state it is especially prone to carry tubercle bacilli and should only be used in a pasteurised or sterilised condition But in cooking where it might be largely employed it is at present little in vogue This is partly owing to the excessive consumption of meat and to ignorance on the part of the housewife of the use of skim milk, and also to its relatively high price In consequence of this at present the skim milk is yearly to the extent of 5 milliard litres given to pigs entailing, as we have seen a reduction of at least 50 per cent in its nutritive value Careful instruction in its use should be given to housewives the railway must assist by low tariff, and the price fixed at less than one half of that of full milk Further propaganda should be made for the larger employment of cheese both taken alone and as an addition to other foods, thereby saving the consumption of meat But the third and most efficient means for preventing the loss of nutritive value at present due to skim milk is the limiting of the production of cream and butter corresponding at least to the reduction of 10 per cent of the total quantity of milk. On the other hand the proportion of full cheese should be if possible extended Its value as an article of food is considerably higher than that of butter, and it has the advantage of greater permanence and easier transit As the desirable consumption of full milk can hardly be increased it must be reserved as far as possible for the children The matter may be summarised as follows "Full milk is to be retained in its present quantity, a production of cream and butter is to be limited cheese is to be produced where possible in increased quantity From the skim milk remaining after making butter cheese (curds and skim) is to be made as far as possible, and the direct use of skim milk is also to be encouraged by propaganda and by cheap prices"

5 *Meat, fat* —We must reckon with the fact that in the immediate future the number of pigs must be reduced by one third and that of milch cows by one tenth In consequence of this the amount of meat on the market will immediately be increased, and if this is not to be followed by a subsequent meat famine immediate measures must be taken The slaughtering must not be done all at the same time and full advantage must be taken of the use of cold storage, smoking, pickling, and the production of dauerwurst It would be especially advisable for the farmers themselves to prepare, as in old time, their own hams and bacons If necessary the local authorities and the State must step in and buy up and preserve all the superfluous meat The use of fat for technical purposes must be limited as far as possible The employment for soap manufacture of fats, which could be used for human consumption, must be forbidden by the State The soap manufactories can use the effluents of towns, as is already to some extent being done and a house to house collection of waste fat is also possible The addition to soap of substances which clean mechanically is also to be considered Apart from soap, other industries must forego entirely the use of such fats

Chapter X considers

The Necessary Alteration in Habits of Life

1 *More vegetable food* —Even an isolated Germany can cover its requirements in foodstuffs, but to do so without too much limitation various adaptations must occur both in our agricultural production and in the proper utilisation thereof Production and trade doing their part a moral duty rests with the consumer to do his, and to demand those food stuffs such as rye flour, sugar, and skim milk, which are at present in excess *The consumer, therefore is entrusted* with the great task of defeating the English starvation plan The most pressing alteration demanded is to diminish the consumption of proteid and fat in comparison with that of carbohydrates approaching more the habit of the country dweller, especially in South Germany In wide circles, especially in towns proteid has been consumed in excess in the form of meat, and we must reckon with the meat supply becoming short after an initial glut This reduction in itself is not an evil The consumption of meat has increased enormously during the nineteenth century as the following table giving the relative consumption per head of population, shows —

Year	Kilos	Year	Kilos	Year	Kilos	Year	Kilos
1816	13 6	1861	23 2	1833	29 3	1900	43 4
1840	21 6	1873	29 5	1892	32 5	1907	46 2

In the last ten years the consumption of meat has remained about the same although it doubled during the previous 50 years We can return to the habits of our forefathers in this matter without concern, and in so doing become healthier and live more cheaply Fat also in the large towns has been used very abundantly in the form of bacon, lard dripping margarine butter and cream Since in the rôle of nutrition it differs only from carbohydrates in a larger heating value—40 grammes of fat corresponding to 90 grs of carbohydrate—we have only to replace this use of fat by more carbohydrates, such as bread puddings soups of various kinds potatoes sugar &c, and this can and must be done Fat will soon fail The foreign animal fats—e g American lard and Siberian butter—are wanting and also the fodder with which we have heretofore produced the home animal fats especially oilcake barley and maize We also lack the foreign vegetable fats which serve for artificial butter An increased production of linseed oil and new sources, for instance beech nuts and sunflower seeds may help a little but not seriously affect the problem Such a high consumption of fat is however as unhealthy as [illegible] In contrast to most carbohydrates the pure fats are [illegible] in other materials especially in salts, and [illegible] difficult digestion and [illegible] of [illegible] consumption of alcohol and are therefore [illegible] able Economically they are wasteful [illegible] plates and dishes after becoming cold, as is known by of pulses, the extended keeping of small animals—and for the remainder the smallest amount has always been worked out and stated

"The whole favourable result naturally assumes that what is here demanded will actually happen, that the Government permit no export of foodstuffs that the local authorities carry out strictly the prohibition of corn as fodder, and that the farmer sees that the head of swine are reduced by 9 millions, the head of milch cows by 1 million, that the waste of fodder as well as of foodstuffs shall cease in our households, that a sufficient number of prisoners of war can be had for the culture of moors, and so on But this assumption will be fulfilled

"We shall come through That we can do so we owe to our agriculture, under the mighty protection of our rulers, who with *clear sight recognised the danger of a one-sided* development of Germany into an industrial state, and with the *able coöperation of prominent men it has* in the last decades undergone a tremendous increase, to its own benefit, and with the gratifying result that we are in a position, in case of need, to nourish on an area of little more than half a million square kilometres 68 millions of human beings without import from abroad To the healthy adaptability of our economical life we are also greatly indebted As the individual *adapts himself the more easily* to a change in outside circumstances the better his nervous system reacts, so also the national economy shows a greater adaptive power, the more nervous force works in it in the form of strong, intelligent thoroughly sound personalities The richness of Germany in such personalities has shown itself since the outbreak of the war in surprising manner But before all must we be thankful for two qualities of our national character, which perhaps we have not always sufficiently prized—viz, clearness and persistence On these the authors of this work build, when they cherish the conviction that spite of closed frontiers and suppression of sea trade, the English starvation plan will founder on the free working together of our millions"

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE following appointments have been notified —Temporary Surgeons A. McMillan to the *Egmont* A E Iles to the *Victory*, additional, for Haslar Hospital H. P Margetts to the *Victory*, additional, for disposal, and W E Fox to the *Laurentic*

ROYAL NAVAL RESERVE

The undermentioned have been granted temporary Commissions as Surgeons in His Majesty's *Fleet* Frederick Harold Rees and Stanley Worthington.

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Charles Samuel Brewer to be Honorary Staff Surgeon (dated Feb 11th)

Staff Surgeon A. R Brailey has been appointed to the *Victory*, additional for Haslar Hospital

ARMY MEDICAL SERVICE

Colonel James M Irwin is retained on the Active List under Article 120 Royal Warrant for Pay and Promotion, and to be supernumerary (dated Feb 13th)

Major Henry M W Gray Royal Army Medical Corps, Territorial Force, to be temporary Colonel (dated Feb 1st)

ROYAL ARMY MEDICAL CORPS

Major John M Buist is *placed* temporarily on the Half Pay List on account of ill health (dated Feb 6th)

Temporary Captain George E Miles to be temporary Major (dated Feb 17th)

Temporary Lieutenant William Anderson having ceased to serve with the British Red Cross Hospital, Netley, relinquishes his commission (dated Feb 2nd)

The undermentioned to be temporary Captains —Dated Jan 21st John Curtis Webb Dated Jan 23rd John Joseph Esmonde

Lieutenant Cecil Corbin relinquishes his temporary commission (dated Feb 7th)

Lieutenant Charles E Reckitt relinquishes his temporary commission (dated Feb 1st)

Mervyn Henry Gordon is granted temporarily the honorary rank of Major (dated Feb 2nd)

Supernumerary Captain Travis C Lucas is restored to the establishment (dated Jan 5th)

Lieutenant Arthur A Martin relinquishes his temporary commission (dated Feb 2nd)

Temporary Lieutenant Kenneth William Mackenzie, late Captain, Indian Medical Service, *to be temporary* Captain (dated Feb 16th)

Temporary Lieutenant Norman W Anderson reliquishes his commission (dated Feb 16th)

The undermentioned to be temporary Lieutenants —Dated Jan 21st Ulick Joseph Bourke and Horace Nathaniel Everard. *Dated Jan* 22nd Bertram Henry Barton and George Flett Barr Dated Jan 24th Peter Hay MacDonald *Dated Jan 25th* Thomas Henry Brown John Ellison, Charles Leslie Wigan, John Charles Robb, William Samuel *Heron, George McCallum, Roger* MacGrath Cedric Norman Vaisey, and Leslie Alexander Drake Dated Jan 26th *Thomas Reginald* Trounce, *Martin Phillips* Thomas, George Michael De Vines, Henry Joseph Cotter, and Thomas Small *Goodwin Dated Jan 27th John* Stuart Prentice and William John Alexander Bruce Wishart

SPECIAL RESERVE OF OFFICERS

Supplementary to Regular Units or Corps Royal Army Medical Corps

Lieutenant James F Quigley resigns his commission.

TERRITORIAL FORCE

Royal Army Medical Corps

The undermentioned to be Lieutenants (on probation), Stanley Burrough King and Second Lieutenant Owen Parry-Jones from General Reserve of Officers

1st East Anglian Field Ambulance Hugh Frederick Gethin Hall *to be Lieutenant*

3rd London General Hospital Alfred Hope Gosse to be Lieutenant

4th Scottish General Hospital William Archibald Campbell to be Captain, whose services will be available on mobilisation

3rd Southern General Hospital Frank Gower Gardner to be Lieutenant

Sanitary Service Major Alfred Greenwood to be Lieutenant-Colonel (temporary), Major Francis E Fremantle to be Lieutenant-Colonel (temporary), and George Henry Weston (late Lieutenant 2nd Volunteer Battalion, Hampshire Regiment) to be Captain, whose services will be available on mobilisation

1st South Midland Field Ambulance Major William M Sturrock *to be Lieutenant Colonel* (temporary)

3rd North Midland Field Ambulance James Ernest Sutcliffe Smith to be Lieutenant

1st Northern General Hospital Captain William T Harkness, from the Northumbrian Casualty Clearing Station, to be Captain

Eastern Mounted Brigade Field Ambulance Kenneth Bleckly Clarke to be Lieutenant

1st East Anglian Field Ambulance Ambrose Cyril Wilson *to be Lieutenant*

2nd Home Counties Field Ambulance George Mortimer McGilivray *to be Lieutenant*

1st East Lancashire Field Ambulance Gilbert Bailey to *be Lieutenant*

1st West Lancashire Field Ambulance Captain John E W McFall *to be Major (temporary)*

1st Northumbrian Field Ambulance Home Alexander Playfair Robertson *to be Lieutenant*

1st Welsh Field Ambulance Major John Howard-Jones to be Lieutenant Colonel (*temporary*) Captain John O'Sullivan to be Major (temporary)

2nd Welsh Field Ambulance To be Lieutenants David Thomas Lewis and Thomas Peters Edwards

1st Southern General Hospital Ernest Cordley Bradford *to be Lieutenant*

West Lancashire Casualty Clearing Station Harry Driffield Levick *to be Lieutenant*

Attached to Units other than Medical Units —Lieutenant-Colonel and Honorary Surgeon Colonel George Hollies resigns his commission on account of ill health To be Majors Major Peverell S Hichens, from 1st Eastern General Hospital and Captain James Aitken (temporary) To be Captains Robert William Meikle (late Captain, Royal Army Medical Corps Territorial Force) and Charles Stewart Young (late Surgeon Captain 3rd Volunteer Battalion, Royal Highlanders) Lieutenant Herbert W Joyce resigns his commission on account of ill health To be Lieutenants Gerald Francis Carr Frederick William Arthur Stott, Arthur Henry Fullerton (late Lieutenant 1st Volunteer Battalion, East Yorkshire Regiment), and Walter Smartt.

ADMINISTRATIVE MEDICAL APPOINTMENTS IN INDIA —Colonel C E Nicol, D S O, British Service, has been appointed to officiate as Assistant Director of Medical Services 5th (Mhow) Division, and Lieutenant Colonel G G Adams, R A M C, has been appointed to officiate as Assistant Director of Medical Services, Jubbulpore and Jhansi Brigades

Lieutenant-Colonel T A. Granger, I.M S, has been appointed Honorary Surgeon to H.E the Viceroy of India content is 15 per cent in grapes, 8 per cent in apples, but only 2 per cent in whortleberries Fresh fruits have the objection of not keeping, and preserving makes it possible to utilise the less valuable kinds and to store and transport them The use of sugar must be largely increased, bearing in mind that in England and America it is twice as much per head of population as with us In those countries preserves are largely used where we use butter Exact investigations have shown that taking of some 12 to 15 grammes of sugar in half hourly intervals can remove the sense of fatigue in very large measure Hence, sugar in various forms should be part of the consignments to the troops in the field The frequent assumption that the use of dry sugar produces thirst is incorrect, on the contrary, it produces increased salivation, and thereby moistens the mouth The production of thirst is unthinkable, because in the oxidation of sugar in the body almost two thirds of its weight of water is formed No large amount of raw sugar can be taken, but it can be made up into cheap fruit preserves and various forms of cakes and sweet dishes and as an addition to soured milk Sugar added to tea and coffee is no luxury, but makes these drinks nutritious It must be borne in mind that sugar is not merely a sweetmeat but weight for weight equivalent as a foodstuff to fine flour

5 *Household economy* —"Much should be otherwise in our nutrition Vegetable food must take a larger place At the midday meal the meat dishes should be placed in the background and various valuable puddings take their place But it is a question not only of an alteration of the chief meals, but also of much else Rolls should be confined to breakfast, at dinner and supper large loaves of rye flour or rye and wheat flour The widespread but senseless luxury of eating bread between meals with a layer of fat should be given up Bread alone is sufficient, or bread with fruit or marmalade With fat dishes such as cheese or ham, buttered bread is entirely unnecessary" With the alterations recommended, our diet will not be monotonous but more varied In many circles the present menu is poor in variety and it is only to be wished that particular dishes at present not enough valued should be introduced The housewife must take care that the alteration of the diet should not produce disgust Newly introduced sweet dishes should alternate with the more usual salt or acid ones and excessive zeal may do great harm and only produce the effect of a hurried return to the old unsatisfactory diet. An important item is the home production of articles of diet Even a small piece of garden can cover part of the requirements in potatoes and vegetables, and the keeping of animals must be considered Pigs, goats rabbits, and hens make it possible to use all the kitchen refuse, such as potatoes and withered vegetables In most cases it will be possible to pickle and smoke meat and to preserve vegetables and fruit Correct marketing must be practised everywhere Where necessary articles such as skim milk, fruit cheese, and rye rolls are not offered in sufficient quantity, they should be repeatedly demanded, so that demand may call forth supply In general it is not advisable to store food apart from some pickles and smoked meat, as well as preserved fruits and vegetables

Finally, care must be taken that no waste occurs, as has been too much the case in all classes of society Among the well to-do too much has been eaten Superfluous nourishment is partially undigested and floods the body to the detriment of health But apart from this much goes bad both in the kitchen and on the table, and the value of refuse has been little recognised All meat and fish scraps should be carefully utilised They can be boiled and employed to flavour soups and vegetables The remains of fats and sauces especially should be kept as well as those of bread and potatoes Waste of food may also occur in the use of spirit starch and soap for the two former are made from grain and potatoes while the latter is chiefly produced from useful fat The spirit producers have recently pointed out that with the shortage of petroleum spirit is a useful substitute This is correct but we should make as little use as possible of the substitute since as spirit is produced from potatoes the burning of spirit is equal to the burning of potatoes Wherever other illumination is available spirit should not be used The same applies to starch which is produced from potatoes for although in the case of linen its use can hardly be avoided for other articles of dress it should be given up entirely as it is not only uncomfortable, but prevents the passage of air and is actually unhealthy In a time in which it is necessary to economise our food supply it is stupid to persist in so doubtful a fashion Finally, in the washing of clothes soap should be sparingly used, especially as hard water wastes it in large measure For one degree of hardness—i e, 10 milligrammes of chalk in the litre of water—denotes for a hectolitre of water a loss of 10 grammes of the usual commercial soap In a hard water such as that of the Jura the loss may amount to 350 grammes or more of soap for a hectolitre In these regions it is advisable to use rain water, or if this is impossible, to soften the water previously with soda chlorine compounds, or perborates Some saving of nutritive value is possible by the preparation of food in quantity but, in general, cooking at home is both better and more economical The self cooker may render additional assistance Where the housewife has to work outside the house a people s kitchen may then serve a useful purpose

The Covering of the Deficit

Chapter XI treats of *results*, and contains the following interesting summary —

Nutritive values		Proteid in thousands of tons	Calories in milliards.
Physiological requirement		1605·0	56750·0
Actual use before the war		2307·0	90120·0
Available if the present conditions remain unaltered		1543·0	67700·0
To add	Alteration of cattle-keeping	217·3	2276·0
	Avoidance of waste	80·0	[illegible]
	Prohibition of corn as fodder	73·3	2741·0
	Increased use of skim milk and skim cheese ..	48·8	[illegible]
	Potato-drying	18·9	1112·3
	Limitation of butter production	14·8	1104
	Cultivation of moors ..	10·4	892·0
	Prohibition of the production of alcohol from corn ...	4·7	66·5
	Preserving of vegetables ..	3·6	93·0
	Preserving of fruit ..	1·7	147·5
	Prohibition of the production of wheat starch ..	1·3	5·2
To subtract: Sugar used as fodder..		—	− 233·1
Available if the means recommended are carried out		2022·8	81200·3

"We see that the efficacy of the means recommended is great The available amount of foodstuffs rises very considerably, the number of calories by 20 per cent the proteid by 30 per cent Our needs are covered also in regard to proteid, and in so large a degree that the losses involved in transit are covered The available calories exceed our needs by 44 per cent the available proteid by 26 per cent Naturally it is inconceivable that without imports the same amount of nutritive value should be available as before the war but an approach to this amount is obtained in calories wanting instead of 25 per cent only 11 per cent, in proteid instead of 33 per cent only 13 per cent of what was available before

"This favourable result applies not only for the moment but permanently even if the war should last for years It has intentionally been left out of consideration what might cover our immediate needs but is not assured for longer—both our reserve stores and our imports from neutral States Indeed the possibility has been reckoned with that during the war our production in food values may be still further diminished by bad harvests and other causes

"The favourable result has not been assumed with thoughtless optimism but has been worked out with gravity and foresight In reckoning our requirement and [illegible] sources of help they have been assumed in general to be too low rather than too high The requirement of the individual has been fixed as if the whole population [illegible] whereas we have numerous sick people with [illegible] For the needs of the whole people a census of 68 millions has been assumed although the greater part of the army is on hostile land Of the means for producing [illegible] there are many which cannot be expressed in figures, for instance, the internal colonisation, the increased cultivation [illegible]

Correspondence.

"Audi alteram partem."

MILD SMALL-POX.

To the Editor of THE LANCET

SIR,—In connexion with an annotation in THE LANCET of Feb 13th, may I add a word on the subject, as I was unavoidably absent from the meeting of the Section of Epidemiology of the Royal Society of Medicine at which Dr J B Cleland and Dr E W Ferguson reported on the outbreaks of small pox in Australia?

Studying the disease during successive years, I came to the conclusion that it was not safe to make any statement about it without consulting Sydenham, and students of these present mild outbreaks would have done well, as Dr McPhail reminded them in the discussion, to look up the history of prevaccination outbreaks. The extraordinary difference in their virulence was not only recognised by Sydenham, but by Van Swieten, Mason Good, Jenner, and others. Mason Good mentions that in his own case (1770) he had not more than 20 scattered pustules, and Jenner describes an epidemic as mild and light as the inoculated variety. All the same, it is not a pleasant experience, as happened in my wards, to have an outbreak arise and not reach a diagnosis until the seventh or eighth case proves to be one of confluent small pox! One unvaccinated child had not more than half a dozen superficial pustules, and Welch and Schamberg report an instance with a single pox. Apart from the low virulence, an interesting feature of many of the recent American outbreaks has been the high percentage of unvaccinated attacked—96 out of 97 cases in the outbreak at Carbondale, Pennsylvania (1912).

With this history one cannot agree with the conclusion of Dr Cleland and Dr Ferguson that in Australia or elsewhere small pox is unlikely to recover again its general intense virulence.

I am, Sir, yours faithfully,

Oxford Feb 13th 1915. WILLIAM OSLER

FROST-BITE

To the Editor of THE LANCET

SIR,—The paper by Mr A W Mayo Robson on Frost bite, which appears in THE LANCET of Jan 16th, is timely. The subject is certainly one of the most interesting, and is among the most novel of those which have come under our consideration since the beginning of this war. The severity of the cases which we have had in Rouen has varied within the widest limits. There are cases in which no appreciable changes have taken place in the appearance of the limbs, yet the whole of the skin especially that on the inner side of the foot and on the dorsum of the toes, is acutely hypersensitive even to the lightest touch. There are, at the other extreme, cases in which to all appearance the whole foot is doomed to gangrene.

I am not, however at this moment so much concerned with the various grades of injury with the means by which the condition is produced, nor with the absolute necessity in all cases of conservative treatment. I wish more particularly to give a hint with regard to the care of these patients. A great variety of methods of local treatment have been tried turpentine and lanoline applications, thorough cleansing and drying, followed by the swathing of the foot in boracic acid powder and wool, painting with tincture of iodine, and so forth. I really think that, apart from the pain inflicted, there is no appreciable difference in the results of these or other methods. At one time all cases were treated by local applications, over which was a covering of wool with a bandage. It is usual to hear the statement made that great pain is suffered by many, indeed by almost all, of the patients. The pain at times may be so severe as to call for morphine or opium for its relief. The pain, however, is due, not so much to the damage inflicted upon the parts, but to the fact that the feet are kept warm.

During the last few weeks here the majority of the patients have had little or no dressing applied. The parts affected are smeared with some ointment, covered with a thin layer of gauze, and left without wool or bandage. The feet are often raised a few inches from the bed upon a hard pillow. The lower part of the legs and the feet are covered in bed only by a sheet. It has been our experience with few exceptions to find that the pain is very considerably lessened or abolished by keeping the parts cold. A patient whose feet have been well wrapped up and bandaged and who has suffered nights of torture will experience relief in a few hours when the bandages are removed and the bedclothes are turned back.

Pain, it may truthfully be said, is almost exactly proportioned to the degree of warmth of the foot. Seeing that, whatever the local treatment, the progress towards recovery in the foot appears to be equally rapid, it is the relief of pain during the time of healing that should be our chief consideration.

I am, Sir, yours faithfully,

Feb 13th 1915 BERKELEY MOYNIHAN.

THE POSITION OF THE FRENCH RED CROSS IN ENGLAND

To the Editor of THE LANCET

SIR,—The attention of our committee has been called to an appeal in your issue of Feb 6th, p 303, on behalf of the Wounded Allies Relief Committee for £100,000 for the purpose of establishing or maintaining certain Anglo French hospitals in France. The admirable work done by THE LANCET since the war began in aid of the wounded of all nationalities makes one hesitate to offer anything that may even savour of criticism. At the same time, in the best interests of at any rate the French wounded, it seems well to call attention to certain facts.

There is no doubt that in some of the distant fields of strife—Serbia, for instance—there is ample scope for new societies and fresh individual effort. In the case of the French, however, these considerations do not apply, and the advocacy of new societies established through the enthusiasm of doubtless sincerely well meaning people can result only in loss of coördination, overlapping, and not infrequently inevitable friction with thoroughly established and fully recognised organisations. France has had for many years three excellent organisations for rendering assistance to the injured in any public calamity. These are La Société Française de Secours aux Blessés, l'Union des Femmes de France, and l'Association des Dames Françaises. As regards the organisation of help from this country, the French Government,

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last census, 8971 births and 6558 deaths were registered during the week ended Saturday, Feb 13th The annual rate of mortality in these towns, which had been 18 0, 19 2 and 20 1 per 1000 in the three preceding weeks, fell in the week under notice to 18·9 per 1000 of their aggregate population, estimated at 18,134,239 persons at the middle of 1914 During the first six weeks of the current quarter the mean annual death rate in these towns averaged 19 1, against 19·9 per 1000 in London The annual death rate last week ranged from 8 7 in Wimbledon, 10 9 in Bournemouth and in Smethwick, 11 3 in Bolton, 12·0 in Enfield and in Ilford, and 12 3 in Bury, to 29 1 in Gillingham, 29 2 in Northampton 29 6 in Carlisle and 32 5 in Cambridge and in Merthyr Tydfil

The 6558 deaths from all causes were 437 fewer than the number in the previous week, and included 511 which were referred to the principal epidemic diseases, against numbers rising from 454 to 513 in the four preceding weeks Of these 511 deaths, 207 resulted from measles 125 from whooping cough, 70 from infantile diarrhœal diseases, 66 from diphtheria, 27 from scarlet fever, and 16 from enteric fever, but not one from small pox The mean annual death rate from these diseases was equal to 1 5, against 1·4 and 1 5 per 1000 in the two preceding weeks The deaths attributed to measles, which had been 206, 191 and 210 in the three preceding weeks, slightly fell to 207 last week, and caused the highest annual death rates of 1 7 in Tottenham and in Enfield, 1 8 in Stockton-on Tees, 1 9 in Barnsley, 2 0 in Grimsby, 2 4 in Rotherham, 3 1 in St Helens, 4 9 in Merthyr Tydfil, 5 2 in Gateshead and 5 3 in Darlington The deaths referred to whooping cough, which had increased from 76 to 123 in the four preceding weeks, further rose to 125 last week the highest rates from this cause were 1 6 in Bristol, 1 7 in Reading, 1 9 in Willesden and in Dewsbury, 2 0 in Carlisle, and 3 1 in Merthyr Tydfil The fatal cases of diarrhœa and enteritis (among infants under 2 years of age) which had been 62, 73, and 68 in the three preceding weeks, rose to 70 last week, and included 17 deaths in London, 9 in Liverpool and 4 each in Stoke-on Trent and Birmingham The deaths attributed to diphtheria which had been 83, 77, and 72 in the three preceding weeks, further declined to 66 last week, of which 16 occurred in London, 6 in Manchester 5 in Birmingham and 4 in Sheffield The deaths referred to scarlet fever, which had been 23 31, and 22 in the three preceding weeks, rose to 27 last week, and included 13 in London and 2 in Leeds The fatal cases of enteric fever, which had been 12, 12, and 17 in the three preceding weeks, were 16 last week, of which 4 belonged to London and 2 each to Brighton Blackburn, and Gateshead

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily declined from 5035 to 3395 in the 11 preceding weeks had further fallen to 3299 on Saturday last, 368 new cases were admitted during the week against 308, 326 and 365 in the three preceding weeks These hospitals also contained 1676 cases of diphtheria, 219 of measles 58 of enteric fever, 16 of whooping-cough, and 3 of small pox The 1696 deaths from all causes in London were 163 below the number in the previous week and corresponded to an annual death rate of 19 6 per 1000 The deaths referred to diseases of the respiratory system, which had been 417 450 and 497 in the three preceding weeks, declined to 455 in the week under notice but were 193 in excess of the number recorded in the corresponding week of last year

Of the 6558 deaths from all causes in the 96 towns 175 resulted from different forms of violence and 456 were the subject of coroners inquests while 1805 occurred in public institutions The causes of 45 or 0 7 per cent. of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Sheffield Leeds Bristol West Ham Bradford Hull and in 70 other smaller towns. Of the 45 uncertified causes of death 9 were registered in Liverpool 8 in Birmingham, 4 in Gateshead 3 each in London and Preston and 2 each in Stoke-on Trent Blackpool, and Carlisle

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2,345 500 persons at the middle of this year 1152 births and 1037 deaths were registered during the week ended Saturday Feb 13th The annual rate of mortality in these towns, which had been 21 7, 22 4, and 24 1 per 1000 in the three preceding weeks, declined to 23·1 per 1000 in the week under notice During the first six weeks of the current quarter the mean annual death rate in these towns averaged 23 1, against 19 1 per 1000 in the large English towns Among the several towns the death rate last week ranged from 13 5 in Hamilton 15 1 in Motherwell, and 16·0 in Paisley, to 28 9 in Falkirk, 36 8 in Perth, and 37 [illegible] in Dundee

The 1037 deaths from all causes were 49 fewer than the number recorded in the previous week and included 122 which were referred to the principal epidemic diseases against numbers rising from 92 to 147 in the four preceding weeks Of these 122 deaths, 81 resulted from whooping cough, 14 from infantile diarrhœal diseases, 11 from measles 8 from scarlet fever, 6 from diphtheria, and 2 from enteric fever, but not one from small pox The mean annual death rate from these diseases was equal to 2 7 against 1 5 per 1000 in the large English towns The deaths attributed to whooping cough, which had steadily increased from 28 to 86 in the seven preceding weeks, fell to 81 last week, of which 42 occurred in Glasgow, 20 in Dundee, 5 in Greenock, and 4 in Edinburgh The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had increased from 7 to 16 in the four preceding weeks fell to 14 last week, and included 5 deaths in Glasgow and 2 each in Dundee, Leith, and Clydebank The fatal cases of measles which had been 7, 6, and 13 in the three preceding weeks fell to 11 last week of which 9 were registered in Dundee The deaths attributed to scarlet fever, which had been 15 12, and 17 in the three preceding weeks declined to 8 last week, and included 4 in Glasgow and 2 in Falkirk The deaths referred to diphtheria, which had been 8 10 and 1[illegible] in the three preceding weeks, fell to 6 last week of which 2 were recorded in Glasgow The 2 fatal cases of enteric fever belonged to Glasgow and Coatbridge respectively

The deaths referred to diseases of the respiratory system, which had been 238, 272, and 302 in the three preceding weeks, fell to 278 in the week under notice but were 131 in excess of the number recorded in the corresponding week of last year, 35 deaths resulted from different forms of violence, against 30 and 35 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland with an aggregate population estimated at 1 212 380 persons at the middle of this year, 680 births and 615 deaths were registered during the week ended Saturday, Feb 13th The annual rate of mortality in these towns, which had been 21·0, 24 7 and 26 2 per 1000 in the three preceding weeks further rose to 26 5 per 1000 in the week under notice During the first six weeks of the current quarter the mean annual death rate in these towns averaged 25 5 against corresponding rates of 19 1 and 23 1 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 28 0 in Dublin (against 19 9 in London and 21 6 in Glasgow), 24 6 in Belfast, 39 4 in Cork 27 8 in Londonderry, 23·0 in Limerick and 13 3 in Waterford while in the 21 smaller towns the mean death rate was 21 3 per 1000

The 615 deaths from all causes were 6 in excess of the number recorded in the previous week and included 44 which were referred to the principal epidemic diseases against 32 and 38 in the two preceding weeks Of these 44 deaths, 17 resulted from whooping-cough 13 from infantile diarrhœal diseases 5 from measles 4 each from scarlet fever and diphtheria and 1 from enteric fever but not one from small pox The mean annual death rate from these diseases was equal to 1·9 against 1 5 and 2 7 per 1000 in the English and Scotch towns respectively The deaths attributed to whooping-cough which had been 9 11, and 13 in the three preceding weeks further rose to 17 last week of which 1[illegible] were recorded in Dublin and 3 in Cork The deaths of infants (under 2 years) referred to diarrhœa and enteritis which had been 4 8 and 10 in the three preceding weeks further rose to 13 last week and included 8 in Dublin and 2 in Belfast The 5 fatal cases of measles of which 3 occurred in Belfast were 3 in excess of the average in the earlier weeks of the year Of the 4 deaths attributed to scarlet fever 3 occurred in Belfast Two of the 4 deaths from diphtheria and the fatal case of enteric fever were registered in Dublin In addition to the above deaths a fatal case of typhus occurred in Galway

The deaths referred to diseases of the respiratory system which had been 137 169 and 172 in the three preceding weeks further rose to 182 in the week under notice Of the 615 deaths from all causes 175 or 28 per cent occurred in public institutions and 6 resulted from different forms of violence The causes of 25 or 4 1 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest in the large English towns the proportion of uncertified causes did not exceed 0 7 per cent

Jane in spite of the small strawberry mark on her arm, and so on, and so on. Extremists, of course, have their place in the sun and do some good They tend to develop the antibodies of moderation and make us challenge and prove all things, holding fast to that which is true, which, in the long run, is invariably found to be moderate But, Sir, even in the length of one s epistles to the Editor of THE LANCET one must study the science and practise the art of moderation, and to escape the opposite soft impeachment I will at once subscribe myself

Yours faithfully,

Norwich Feb 13th 1915 S JOHNSON TAYLOR.

THE SUPPLY OF LOCUM TENENTS

To the Editor of THE LANCET

SIR,—May I trespass on your space for a few remarks on this very vital question? When war broke out necessarily a large number of medical men who belonged to the Royal Army Medical Corps were immediately obliged to take up their duties, and many others have in ever increasing numbers since loyally and patriotically in obedience to their country s call voluntarily thrown up lucrative practices and applied for commissions, and by no means a small number have enlisted in the fighting ranks

Necessarily, therefore, a largely increased demand has arisen for locum tenents to safeguard the practices at home of those who have nobly offered their services and lives for England's honour Owing to many of those who had hitherto been available as locum tenents also responding to the call it has become increasingly difficult to find enough reliable substitutes, and I regret to have to say that there is a tendency on the part of a few to take advantage of the shortage to demand fees quite incompatible with the services rendered May I through your columns implore all who are in any way able to take up duty again to offer their services in the present crisis?

I am glad to say that many retired practitioners up to 70 years of age have loyally come forward and most satisfactorily filled some of the gaps, and some of our Belgian Allies who can speak English a little have been of great assistance for temporary work, but more are urgently needed if we are to ensure that the practices of those who have so nobly rallied round the flag shall not suffer There is plenty of work for every available qualified man, especially if prepared to show his patriotism and loyalty to his profession by accepting fees in some measure proportionate to the size of the practice he is taking charge of.

I am, Sir, yours faithfully,

Adam street Adelphi Feb 8th 1915. PERCIVAL TURNER

SULPHUR AND RHEUMATISM

To the Editor of THE LANCET

SIR,—In reference to what Sir Lauder Brunton says about sulphur and rheumatism in your issue of Feb 6th I think the following case is to the point A patient, aged 55 years, had suffered from joint pains called rheumatism, since he was 19 fairly continuously and no treatment did him any good It happened that he took sulphur for the relief of an attack of lumbago and continued it for some four months as a prophylactic His rheumatism was completely cured and has remained so for some six years during which he has continued to take two or three troch sulph. two days a week The essence of the treatment as a cure is that it should go on some months before the cure is likely to obtain

I am, Sir, yours faithfully,

Harley-street, W Feb 13th 1915 SHEFFIELD NEAVE

THE SHORTAGE OF RESIDENT MEDICAL OFFICERS

To the Editor of THE LANCET

SIR,—Dr R R Rentoul's letter in your last issue, which somewhat severely comments on mine of Feb 6th, has been the means of my discovering that in my letter the word "*voluntary*" is inserted before the word "residence," thereby giving the impression that we wished to get the doctors' services for nothing Such is far from the case, we are quite ready to pay such doctors even more than the "lost dog's wage," which Dr Rentoul mentioned as the ordinary rate of pay If we cannot pay the princely salaries that Dr Rentoul states obtain in Government services, it is our misfortune and not our fault At the present time the difficulty we are experiencing is being felt by almost every hospital in London. To use a colloquialism, residents are hardly to be obtained for love or money

I am, Sir, yours faithfully,

W M. WILCOX, Secretary

East London Hospital for Children Shadwell E., Feb 16th 1915.

*** We regret the mistake Voluntary help is being accorded to some hospitals in a similar dilemma, we understand, and medical men who are able to assist charitable work in this way are discharging a most valuable duty —ED L

TYPHOID AND PARATYPHOID INFECTION IN RELATION TO ANTITYPHOID INOCULATION

To the Editor of THE LANCET

SIR,—Owing to an error in the delivery of the "proof" of the paper which you so kindly published for us last week at very short notice, two small errors remained uncorrected On p 325, col 1, the second line from the bottom should read "In *non* inoculated persons," &c As it stands the statement is obviously nonsense On the *same* page, col 2, line 35 (about the middle of the page), the figure 700 should be 900, as can be seen from the chart on the following page

We are, Sir, yours faithfully,

GEORGES DREYER,
E W AINLEY WALKER,
ALEX G GIBSON

Department of Pathology University of Oxford
Feb 16th 1915

"WOOLNER'S TIP" AND FAMILY RESEMBLANCES

To the Editor of THE LANCET

SIR,—Apropos of the informing annotation on this subject in THE LANCET of Feb 13th it may interest your readers to know that Thomas Woolner was probably careful to reproduce the "tip," named after him, in his well known bust of Darwin now at Cambridge At least, one may infer that he did so, as it may be felt, when searched for *ad unguem*, to use the old Roman sculptors' phrase, in the left ear of the plaster replica of this bust recently acting through the Ambassador, has officially appointed the London Committee of the French Red Cross, under the presidency of the Vicomtesse de la Panouse, to represent these three societies, which have in their charge practically the whole of the voluntary care of the wounded French It provides surgeons, nurses, orderlies, and stores of all kinds for the French voluntary hospitals It assists in a great many similar ways the British hospital units which have been established by private generosity in France Most of these, unless actually under the control of the British Red Cross Society, have found it to their advantage to become affiliated to the above London Committee of these three great French societies and to work through it

This committee has also elaborated a system whereby British surgeons who are good enough to volunteer their services for a month or more can be found suitable posts Further, the London Committee of the French Red Cross being in *intimate official relations with the French Government* will be able to make the best arrangements for hospitals and new centres when the movement of the armies we all hope for takes place It is therefore evident that as far as the French wounded are concerned there is absolutely no need for further societies, and it is certainly inadvisable to distribute subscriptions amongst new organisations for hospitals which may or may not continue, or be allowed to continue, to exist Such a course, in addition to the inconveniences already mentioned, can only lead to waste of time, energy, and money

I therefore venture to appeal to intending subscribers wishful to help in the most certain and efficient manner the wounded of the French armies, who have so gallantly held more than 250 miles of the Western battle line, to concentrate their efforts and contributions in favour of the London Committee of the French Red Cross (of which the honorary secretary is Mr P A Wilkins, 25, Knightsbridge, London, S W), which is in a position to send the help to the points where it is most needed

I am, Sir, yours faithfully,
JAMES DONELAN,
Medical Referee to the Committee

Manchester-square, W Feb 15th 1915.

THE ETIOLOGY OF POLIOMYELITIS

To the Editor of THE LANCET

SIR,—Dr J T C Nash in THE LANCET of Jan 16th asks for further information regarding the cases of poliomyelitis at West Kirby In the first place, he wishes to know the distance of each infected house from the nearest stable I am sorry I am not in a position now to give the exact distance, but in no case, I believe, was a stable situated near, or what one usually considers near With regard to the second point, I understand the same horse and cart took round the milk so that there is nothing here incompatible with Dr Nash's theory that stomoxys calcitrans may be carried considerable distances, following or resting on a horse When investigating the cases, however, I was more impressed by the possibilities and probabilities of human carriers being concerned and even that one of the distributors of milk was the likely source of infection

The first case in the last outbreak at West Kirby was the son of a medical man who had attended cases of the previous year It is interesting to recall that when the late Dr R Burnet of Cornwall, was investigating the outbreak of poliomyelitis in that country four years ago his only son fell a victim to the disease, probably being infected by his father There is, I think, a growing body of evidence in favour of the theory of poliomyelitis being spread by the agency of human carriers

I am, Sir, yours faithfully,

Hartlepool Feb 15th 1915 GEORGE JUBB, M D , D P H

FAITH AND ASTIGMATISM

To the Editor of THE LANCET

SIR,—If it should ever be my misfortune to be tried for my life at the Old Bailey or elsewhere I shall not attempt to obtain the services of Mr Reginald Evershed as my advocate, for if I did there can be *little doubt* my state of suspense would very soon end in one of suspension

Mr Evershed, in THE LANCET of Feb 6th, is particularly unfortunate in the case he quotes to support the views of the refraction extremists Which idea does he hold that the discovery of the extra 1/4 diopter of astigmatism in the one eye cured the patient? or the mysticism of Prev s letters, &c, and the probable reassurance given him that the glasses would do so? Is not Mr Evershed between two horns of a dilemma? A dignified silence is *a useful thing to maintain* when you cannot maintain anything else, and the attitude shown by the two original contributors to the subject may well be commended to Mr Evershed, at least until he is on surer ground

Now, Sir, I did not write my first letter with a view to depreciating the shares of the Langham Hotel or of the railways converging upon Harrogate Far from it My intention was to disclaim—for myself at any rate—the extreme views held by some members of my specialty in this country which *tend to bring* the holders and the specialty into *ridicule at the hands of the more* moderate members of the profession who, fortunately, are in a great majority *Extremists* are deficient in the sense of proportion, and specialists are apt to suffer from the same disorder, especially if they specialise too early My own opinion is that no one should take up any specialty until he or she has had ten years experience of general practice Such a practitioner gets out of the way of looking at things and people through the same pair of spectacles Refraction extremists are by no means confined to this country, and across the herring pond is one of their archpriests, who is so extreme that I quite look forward to his asserting some day that St Paul's thorn in the flesh was really a refraction error, and that if only the German Emperor had paid a visit to his "office' this horrible war would certainly have been prevented And though prevention is better than cure, yet since *it is claimed* by some that a tendency to insanity can *be cured* by suitable correcting lenses, would it not be well to appoint one of these gentlemen ophthalmic surgeon to Bedlam? Who knows how many of the unfortunate inmates thereof might be cured or relieved by a pair of spectacles? *Quis dubitat!*

We see extremes and extremists everywhere—e g, in politics the advanced Radical thinks *nothing good can come from* the opposite party and *vice versa* in the Church, the extreme High Church cleric who plays croquet on Sunday afternoon would shrink *from* burying a Dissenter in his churchyard, whilst another would be only too pleased to bury the whole of them there or the eugenist crank who insists *upon* our marrying Mary when we feel we can only be happy with payment for 450 boxes of food purchased from Austin, Nichols and Co at $2.20 per box. Dr F F Simpson, Jenkins Arcade Building, Pittsburgh Pennsylvania, is acting as treasurer to the committee, and has issued a circular stating that all contributions will immediately be converted into supplies and that these will be transmitted to Belgium and distributed among the Belgian doctors The circular issued by Dr Simpson and Dr Howard C Taylor, the secretary of the committee, says "Every cent of every dollar contributed will be available for the purchase of supplies as the carrying charges are provided for by the American Commission for Relief in Belgium The first one thousand dollars contributed have been expended by the Executive Committee for food and supplies, and the packages properly labeled_have been started for their destination."

The personnel of the committee as now constituted is as follows Victor C Vaughan, President, American Medical Association, William L Rodman (Vice chairman), President elect, American Medical Association, John B Murphy, President, Clinical Congress of Surgeons of North America, Charles H. Mayo, President elect, Clinical Congress of Surgeons of North America, J M T Finney, President, American College of Surgeons, J Riddle Goffe, President, Seventh International Congress for Obstetrics and Gynæcology, Stuart McGuire, President, Southern Medical Association, Samuel J Meltzer, President, Association of American Physicians, Hugh Cabot, President, Mississippi Valley Medical Association, William C Woodward, President, American Public Health Association, Theodore C Janeway, Johns Hopkins Medical School, Baltimore, Frank Billings, Chicago, George H. Simmons, Editor, *Journal of the American Medical Association*, Franklin H Martin (Chairman), Editor, *Surgery, Gynæcology, and Obstetrics*, Thomas L Stedman, Editor, the *Medical Record*, E W Taylor, Editor, the *Boston Medical and Surgical Journal*, Claude L Wheeler, Editor, the *New York Medical Journal*, Howard Canning Taylor (Secretary), New York and Frank F Simpson (Treasurer), Pittsburgh, Pennsylvania

THE WEEK'S SUBSCRIPTIONS

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, and not including money collected by certain local funds, and the Scottish and Irish Funds, are as follows —

	£	s	d
Dr Sheila M Ross ...	1	1	0
Mr G Grahame H.M Consul General	1	1	0
Dr Edgar F Cyriax ..	3	3	0
Tower Hamlets Division B M.A. (per Dr W H F Oxley (Hon. Sec.) first list—			
Dr Lowe Hall	2	2	0
Dr G R Young ..	2	0	0
Dr D Spillane ..	1	1	0
Dr A. Harvey ...	1	1	0
Dr J A. Milne ..	1	1	0
Dr D Hume	1	1	0
Dr T J S Suffell	1	1	0
Dr J Paxton	1	1	0
Dr C K. Toland ...	1	1	0
Dr B Byrne ..	1	1	0
Dr H Richardson ..	1	1	0
Dr F Spurr	1	1	0
Dr Bertie Hogan ...	1	1	0
Dr J H Arthur ..	1	1	0
Dr L A. Campbell	1	1	0
Dr W H F Oxley	1	4	6
Dr L. Turiansky ..	0	10	6
Dr D I Rablin ..	0	5	0
Dr G Hessenauer ...	0	5	0
Dr Frank Stevenson ...	2	2	0
Mr W Pray	0	5	0
Dr A Bowe	1	1	0
Brussels Medical Graduates Association (per Dr Major Greenwood Treas.) further donation	6	6	0
Miss C M Lace ..	1	1	0
Jersey Medical Society (per Mr E O B Voisin Treas.) ..	5	5	0
Medical Committee Royal Free Hospital Gray's Inn road (per Hon Sec.)	3	15	0
Dr Edward Scott	2	2	0
Dr T E Walker ...	1	1	0
Nurses General Hospital Rangoon...	100	0	0
Staff Branch South Staff Division B.M.A. (per Dr H C Mactier Hon Sec.) second list—			
Dr J A. Lycett. ...	1	1	0
Dr Lila Greer... ..	1	1	0
Mr A. H W Hunt	1	1	0
Dr E Weatherhead	0	10	0
Dr W S Edge	0	10	6
Messrs William Ranson and Son Ltd. ...	5	5	0
Stourbridge Medical Society (per Dr G J Dudley Hon. Sec.) ..	2	2	0
Mr T J Webster ..	2	2	0
Lt Col R Davis I.M S	1	0	0
Lt.-Col. F Marsh R.A.M C (T) ..	5	5	0
Mr A. Ll. Vaughan	2	2	0
Sir Felix Semon K.C V O ..	2	2	0
Dr H N Keeling.. ..	1	0	0
Dr J R. Preston	1	1	0
Dr Mabyn Read	2	2	0
Mr V S Hodson ..	1	1	0
Woolwich Division B M A. (per Dr B W Lacey Hon Sec)—			
Dr A. S St John	1	1	0
Oldham Medical Society (per Dr F F Pochin Hon. Sec.) second list—			
Dr A. Wharton ..	2	2	0
Dr Wilson	2	2	0
Dr Clegg	1	11	6
Dr Low	1	11	6
Dr Ferguson ..	1	1	0
Dr Lendrum ..	1	1	0
Dr Wilkinson (second donation)	0	10	6
Birmingham Local Committee (per Dr Robert Saundby Hon Sec.) seventh donation—			
Mr J Furneaux Jordan (from Members Fund Birmingham Branch B M A.)	10	10	0
Dr and Mrs. A R Forrest Hay (proceeds of Whist Party) ..	9	5	0
Dr A. Vaughan Bernays...	2	2	0
Mr T H Smith ...	1	1	0
Dr. A. Douglas Heath	2	2	0
Dr E L. Bunting (per Dr C Pollard)	1	1	0
Dr S W Haynes	1	0	0
Middlesex Division Tottenham Ward B M.A. (per Dr G R Plaister Hon. Sec.)—			
Dr B B Marjoribanks ..	1	1	0
Dr C Gurney Thompson	0	10	6
Dr L P Scott	0	10	6
Dr J L. Sykes	0	10	6
Dr Kingdon ..	0	10	6
Dr A. V Craig ...	0	10	6
Dr I F Broughton	0	10	6
Dr W H. Plaister	0	10	6
Dr G R. Plaister ..	0	10	6
Dr Wm. Hern ..	2	2	0
Mr T W Townley ..	0	10	6
Mr G Weston	0	10	6
Messrs M. H Stiles and Son	0	10	6
Mr B J Millard	2	2	0
Mr E H. Farr ..	2	2	0
Mr L. Cooper..	1	1	0
Mr H. O Thomas.	0	10	6
Norwich and District Pharmacists Association (per Mr P Robinson) first list—			
Mr G O Maynard	1	1	0
Mr H J Heyhoe...	1	1	0
Mr J Staton	1	1	0
Mr P Robinson ..	1	1	0
Mr W H Hurn	1	1	0
Mr Houlton ...	1	1	0
Mr T N Eastland	1	0	0
Mr F G E Plumstead	0	10	6
Mr F Smith ..	0	10	6
Mr F T Alpe. ..	0	5	0
Mr Robinson (Dereham) ...	0	5	0
Mr A. E Beeston	1	1	0
Mr F S Cullen ..	2	2	0
Mr H E. DeCarle ..	1	1	0
Mr C H Ripperson	0	10	6
Mr W J Lacey ..	1	1	0
Mr W H. Lenton...	1	1	0
Mr H G Maddison.	0	5	0
Mr J M. Weller	1	0	0
Messrs. Smith and Sons	1	1	0
Western Pharmacists Association (per Mr H. R. Procter)	120	0	0
Thames Valley Pharmacists Association (per Mr A. Higgs) ..	11	11	0
Mr G H. Toy (per Mr F Smith Hon. Sec. Birmingham Pharmaceutical Association)...	0	10	0
Mr A. Pellew..	1	1	0

The Western Pharmacists' Association head the list with the handsome donation of £120, and £100 have been received from the Nurses' General Hospital, Rangoon

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A. Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund and crossed Lloyds Bank, Limited These will be acknowledged by post direct, and a list will appear in THE LANCET weekly

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A WATER SCARE IN LONDON —Water consumers in the west-end district of London were somewhat alarmed early in the week to find that their service supply was offensive both to the taste and smell. We understand that an official assurance has been issued to the effect that the unpleasant condition of the water was due to harmless algæ—water organisms of no pathogenic significance whatever Two years ago the same thing happened in the Hampstead district without any harm accruing The alarm was intensified in the recent instance by a suggestion that possibly the reservoirs had been tampered with by our enemies We wonder whether this departure from the normal condition of our water supply was possibly connected with the flooding of the Thames a month or so ago We then remarked that it will be interesting to watch the future official reports upon the purity of the supply based upon the examination of samples synchronising with the flooding period. Consumers are perfectly justified in refusing to use an offensive water until the circumstances are cleared up but in the meantime they would be safeguarded by adopting the simple precaution of boiling the water, when its disagreeableness would disappear and all questions of its possible pathogenicity dispersed placed between Huxley and Owen in the museum vestibule of the Royal College of Surgeons of England The plaster bust, presented to the College by Sir Lauder Brunton, Bart, was executed in or after 1869, in which year Woolner sculptured the likeness of Darwin's head It is not a very good likeness of the great naturalist, a better having probably been caught by Sir Lauder Brunton himself, whose model in clay after the engraving by Jeens in *Nature*, elicited the remark from Darwin, "Well! one never knows what one is like" The pose of this was absolutely correct Woolner's was not, though Woolner has reproduced the Cro Magnan brows of the great authority on earliest man Darwin refers to the "celebrated sculptor, Mr Woolner," in an early chapter of the "Descent of Man," which was published in 1871 Woolner became aware of the "little blunt point projecting from the inwardly folded margin or helix" when engaged on a bust of Puck He sent a drawing showing the "tip" to Darwin, which the latter has reproduced in his text In Woolner's marble bust of Sir John Simon, K C B, also at the College, the tip is plainly distinguishable, but it does not reappear in the plaster cast of the same The older sculptors, such as Chantrey, executed the ear conventionally, if, indeed, they did not hide it under a fringe of hair This appears on examination

It is a question how far a sculptor should be a minute anatomist The Greeks, as Professor Mahaffy points out, were eclectic, and sculptured "combination" limbs or organs, choosing the most shapely points from many models and thus combining an idealised type This appears in their reproductions of the genital organs of man M Rodin, on the other hand, was so intent on reproducing the exact proportions and outlines of limbs, muscles, veins, &c, that he made of his Saint John a sort of squat anatomical model, suggestive of a man divested of underclothing The statue when sent in competition to the Académie des Beaux Arts was rejected by the judges on the ground that it was a cast from nature—at least, so the legend runs

With regard to family likenesses, I may mention that an ancestral type sometimes reappears in a surprising manner The late Paul Fordyce Maitland, a landscape painter familiar some years ago to habitués of Kensington Gardens, might have been Maitland of Lethington returned to life, so strikingly did his fine face resemble that of his ancestor The same may be said of a living descendant now in London of Mallet du Pan and of Juan Bonaparte And I trust I am not guilty of impertinence when I say that Miss Hunter Baillie, when standing in front of G Home's portrait of her illustrious collateral ancestor John Hunter, wearing a brown coat, appeared to interested observers as if she had stepped out of the frame

Others besides myself may have observed that for one moment just after death a face seems sometimes to change back to the exact resemblance of some familiar family portrait or miniature

I am, Sir, yours faithfully,

P V

Feb 17th 1915

ON Feb 15th, at Bow-street police-court, Mr Hopkins committed for trial at the Central Criminal Court Arthur Alfred Henry Bennett described as a surgeon of no fixed abode on the charge of committing perjury in the High Court of Justice in July last during the hearing of the action for libel unsuccessfully brought by Mr C H Stevens against the British Medical Association

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE CENTRAL EXECUTIVE COMMITTEE

A MEETING of the Central Executive Committee was held on Feb 11th at the office of the British Medical Association, when Mr J Y W MacAlister, librarian and secretary of the Royal Society of Medicine, joined the meeting as a coöpted member of the committee Correspondence between the chairman, Sir Rickman Godlee, and the President of the General Medical Council was read, showing the difficulty that there would be in securing any remission of, or reduction in the registration fees payable by Belgian graduates now admitted to the British Register under certain conditions The committee therefore decided to act in accordance with the course of conduct previously decided upon, and the registration fees will be advanced by the Fund in cases where such action appears necessary and suitable, and where the Belgian graduates have received offers of employment

Dr Des Vœux took the occasion of the first meeting held since the money which had passed through the treasurer's hands exceeded £5000 to make a short financial statement He said that £5297 had been received by him and acknowledged in THE LANCET, the *British Medical Journal*, and the pharmaceutical journals More money than this had been subscribed, as certain local funds remained in the hands of the local treasurers, as did the Scottish and Irish Funds Mentioning the principal subscriptions in detail, he said that so far money had only been received from 1500 people, allowing for the fact that certain large subscriptions had been sent to him with no epitomised details He had placed £4000 on deposit at the bank, and showed that a sum of about £470 had been spent already, or was arranged to be immediately spent upon pecuniary relief in urgent cases, upon purchase of clothes, upon advances for registration fees, and upon boxes of medical material shipped to Brussels through the Commission for Relief in Belgium The committee decided to carry on their work for the present upon the same lines, on the one hand helping immediately in necessary cases, and on the other husbanding the money as much as possible, after the relief of urgent distress, so that it may be available as the nucleus of a future international subscription for the rehabilitation of the medical profession in Belgium

The committee, through the eleemosynary subcommittee has made grants to certain urgent cases, either for the purchase of necessities like food and clothes, or to facilitate the taking up of paid appointments The registration fees have also been paid of Belgian medical men who are joining the British Register preparatory to accepting salaried posts

THE AMERICAN COMMITTEE FOR THE AID OF BELGIAN PHYSICIANS

The treasurer of the committee of American physicians constituted for the aid of the Belgian medical profession has made a report of all contributions received up to and including Jan 16th 1915 A total of $1414 had been received by that date including subscriptions of $100 from Dr Franklin H Martin, Chicago Dr F F Simpson Pittsburg Mrs John B Murphy, Chicago Dr Abraham Jacobi New York, and the Academy of Medicine Cincinnati The expenditure so far includes the

Major P Evans, Royal Army Medical Corps Two of these convoys composed entirely of Red Cross Society personnel, have done excellent work under the superintendence of regular medical officers Twelve hospital trains ply between the front and the various bases I have visited several of the trains when halted in stations, and have found them conducted with great comfort and efficiency During the more recent phase of the campaign the creation of rest depôts at the front has materially reduced the wastage of men to the line of communications

Since the latter part of October, 1914, the whole of the medical arrangements have been in the hands of Surgeon General Sir A. T Sloggett, C M G , K.H.S , under whom Surgeon General T P Woodhouse and Surgeon General T J O Donnell have been responsible for the organisation on the line of communications and at the front respectively

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The British Red Cross Society — The summary of the work for the week ending Feb 13th states that since the last report ambulances have been despatched to Dunkirk, Boulogne (2) and Havre (3) A touring car has been sent to Calais The number of hospitals accepted by the War Office to date is 759, containing beds for 20,771, including 210 beds accepted during the past week.

The Health of the Naval Division —The following announcement was made this week by the Secretary of the Admiralty Rumours in circulation that the general health of the Naval Division in training at the Crystal Palace is unsatisfactory are quite inaccurate Cases of serious illness of every kind are bound to occur in any large body of men like that of the Naval Division, but on the whole the health of the men has been and is excellent, and there is no reason to anticipate any deterioration in this respect Out of 8000 men the average sick list is under 150, or less than 2 per cent

Soldiers' and Sailors' Dental Aid Fund — The objects of this fund are the conservation of the teeth of soldiers and sailors who are already in the Services, and the provision of dental treatment for recruits with defective teeth Reports both here and from the front testify to the good work which has been done An appeal for subscriptions which has been issued by the committee should therefore meet with a ready response, and Queen Alexandra has shown her appreciation of the work by heading the subscription list All the work is voluntary, the Fund pays for artificial teeth, and the dental departments of hospitals and dental surgeons do the filling, extraction, fitting, and so forth It may be pointed out that at one dental hospital alone 4000 patients were treated from September to December last year, and it is estimated that quite 6000 require to be dealt with immediately Lady Frederick Conyngham is the honorary secretary, and the address of the Fund is 36, Leicester square, London, W C

Scottish Ambulances for the Front —Our Edinburgh correspondent writes ' In order to meet the needs of the great armies being sent from this country to France, and so that the suffering of the sick and wounded may receive the promptest possible care and attention strenuous efforts are being made by the Red Cross Society to place at the disposal of the War Office an adequate supply of ambulance wagons That Red Cross workers in Edinburgh and district have been putting their best foot foremost was shown by the splendid 'turn out' last week of fully equipped motor ambulances destined for the front which paraded the streets and were inspected by Lord Provost Inches The cars on parade numbered nine, and were part of a convoy of 50 ambulances motor cycles, and staff cars which are being handed over to the Scottish Branch of the Red Cross Society to the War Office, and which are to proceed to the front as a Scottish column at an early date "

The Scottish Motor Ambulance Column — Our Edinburgh correspondent refers above to the contribution by the Scottish capital towards the gift of motor ambulances from the people of Scotland to the War Office. On Feb 17th the King inspected the full column of 62 vehicles at Buckingham Palace, and a luncheon was held at the Royal Automobile Club to signalise the event Sir George T Beatson, K C B , M D , chairman of the Scottish Branch of the British Red Cross Society, presided over the gathering, and was supported among others by the Duke of Buccleuch, the Hon A. Stanley (chairman of the executive committee of the British Red Cross Society), Surgeon General M W Russell, A.M S , and Major Fleming (secretary of the Scottish Branch) The record of the Scottish branch during the war is one of which Scotland may well be proud All classes have contributed in money or in kind and the total war fund raised is now over £140,000, of which £80,000 has been devoted to the purchase and upkeep of motor ambulances at the seat of war Out of the funds 91 ambulance cars have already been provided

Aberdeen and the War —Our local medical correspondent writes "Altogether some 2900 wounded soldiers and sailors have been treated in the Aberdeen hospitals, about 380 being Belgian soldiers In addition to this, between 500 and 600 local soldiers have been treated at the hospitals —The Aberdeen Burgh Panel Committee have issued a circular to the medical practitioners in Aberdeen regarding the proposed establishment of a central bureau in connexion with the carrying on of the work of service practitioners The proposed scheme is to have a central bureau to which all calls are to be sent, these calls to be allocated by the bureau amongst civil practitioners who may agree to do the work always keeping in view as far as possible that practitioners should have their calls in the districts in which they reside All fees would be collected by the bureau, and after deducting expenses, half would go to the service practitioner and the remaining half to the practitioner who had done the work If necessary, a central consulting room would be established It is proposed that both panel and private practice should be undertaken by the bureau, and the freedom of choice of a doctor would, as far as possible, be given to patients "

Aberdeen Royal Infirmary and the War — At the annual general meeting of the corporation of the Aberdeen Royal Infirmary and Lunatic Asylum the chairman, Mr Alexander Duffus, in moving the adoption of the report, said that the year s work had been carried out under very exceptional circumstances At one time it looked as if the medical and surgical staff would be reduced to one, all the others being mobilised and either away from Aberdeen on service or not available, owing to the claims on them for duty in military hospitals in town Fortunately, however, an arrangement was come to with the military authorities under which a certain number of the medical and surgical staff were enabled to attend, to a reasonable extent, daily to infirmary work. In August last, in response to a request from the Admiralty, arrangements were made to provide for a certain number of naval casualties As yet that accommodation has not been required, though 69 cases of naval sick have been treated When the pressure upon military hospitals in Aberdeen was very great arrangements were made for 50 beds to be available for the more serious of military wounded and in all 227 soldiers have been admitted and dealt with as infirmary patients While doing what they could to help, the directors made every effort to safeguard the claims of the civil population for whom the infirmary exists Thanks were extended to Mr Scott Riddell, who kindly agreed to act as honorary superintendent when Dr W Sinclair was mobilised, also to Miss Edmondson, the matron, for her valuable services at this time The chairman also congratulated all three senior surgeons of the infirmary, Mr Riddell upon his services as Red Cross Commissioner for the North of Scotland, Professor J Marnoch upon the distinction of C V O conferred upon him by His Majesty the King, and Mr H M W Gray upon his appointment to the post of one of the consulting surgeons at the front

King Manoel and Wounded Officers —King Manoel is generously providing through the British Red Cross Society a home for wounded officers, and for this purpose Admiral the Hon. Sir Hedworth Meux, Naval A.D C to the King and Commander in Chief at Portsmouth has lent his Brighton house The house is situated at Kemp Town, commanding a fine sea view, and arrangements are being carried out with a view of receiving as many convalescent officers as it will accommodate King Manoel and Sir Frederick Treves on the occasion of a recent visit to the town visited the Indian General Hospital at the Royal Pavilion and inspected the premises of the new hospital

The War.

MENTIONED IN DESPATCHES

The following officers connected with the medical profession and occupying the indicated positions with our army are recommended in Sir John French's despatch, dated Jan 14th and issued from the War Office this week, "for gallant and distinguished service in the field" Alas, several of them are no longer with us

General Headquarters and Staff, &c

Brunskill Maj J H
Ensor Maj H D S O
Ferguson Lt Col N C C M G
Geddes Col R J D S O
Irvine Maj F S
Martin Maj J F
Meeks Col J
Morgan Maj C K
O Keefe Col M W
Porter Surg Gen (temp) R
Sawyer Col R H S
Swan Col W T
Treherne Col F H
Sloggett Surg Gen Sir A. T C B C M G
Holt Brevet Col M P C D S O
Moores Lt Col S G

Medical Services

Barbour Maj J H
Bateman Maj H R
Beatty Maj M C
Bewley Lt Col A. W
Black Maj R B Res of Off
Bowlby Col (temp) Sir A. A, Kt C M G
Bradford Col (temp), Sir J R K.C M.G F R S
Brazier Creagh, Lt Col G W C M G
Burtchaell, Lt Col (temp Col) C H
Campbell Capt J H.
Chalk Qrmr and Hon Maj A. J
Dennis Maj B R
Dwyer Capt P
Ellis Maj W F
Evans Maj C R
Evans Maj P
Fell Maj M H G
Glasse Lt (temp) J M
Goodbody Maj C, M., I M S
Hardy Lt -Col F W
Harrison Maj L. W
Huntingford Qrmr and Hon Lt A.
Jones Col F W C
Kiddle Maj F
Lawson Lt Col C B
Leake Maj J W
Leishman Brev Col Sir W B F R S
Luther, Lt Col A J
Macdonald Lt. Col S
McMunn Maj J R
Macpherson, Surg Gen W G C M G
Makins Col (temp) G H., C B
Middleton West Capt S H I M S
Nash Lt Col L T M
Needham Maj R A I M S
Norrington Maj H L. W
O Donnell Col (temp Surg Gen) T J D S O
O Grady Maj S De C
Osborne Qrmr and Hon Lt. J W
Pile G H Esq (British Red Cross Society) (recommended by G O C II Corps)
Power Maj W M
Prescott Maj J J W, D S O
Purser Maj L M
Rahilly Capt. J M B
Ryles Capt C
Scott, Lt Col B H
Shanahan Lt Col D D
Starr Lt Col W H
Stephens Maj P A
Tabuteau Capt G G
Thomson Maj C G
Tyndale Maj W F C M G
Unwin Maj T B
Wall Maj F I M S
Watkins Qrmr and Hon Capt J Res of Off
Watts Maj B

Royal Army Medical Corps

Balfour Lt T H
Bazett Lt H C
Bliss Maj E W
Bowle Capt S C
Taylor Lt (temp) R B
Browne Capt T W
Buckley Qrmr and Hon Lt E J
Bullock Lt (temp) A. E
Carrington Lt (temp) N E
Carruthers Capt N T
Carter Capt H St M
Charles Lt J P
Clements Maj R W
Copeland Lt Col R J
Cowtan, Lt F G
Crawford Maj N J
Crawford Lt -Col G S
Davidson Lt F C
Dunne Capt J S D S O
FitzGerald Maj FitzG G
Forde Lt Col B
Fox Maj A C
Fraser Capt A. D
Freeman Lt F P
Glanvill Capt E M (killed in action)
Greenlees Lt (temp) J P C
Greenwood Maj N I
Griffin Lt (temp) L. H
Grogan Capt. J B
Gwynne Lt J FitzG
Hare Lt J
Helm Lt C
Honeybourne Capt N C
Hooper Maj N W D S O
Huddleston Maj W I
Ingram Lt (temp) W W
Jackson Lt (temp) J L.
James Lt (temp) I W
Kelly Capt C
Lang Lt E. C
Lloyd Jones Capt. P A
Loughnan Capt. W F M
Lyon Lt D M
McCullagh Lt W McK H
MacDougall Maj A. J
McLoughlin Lt Col G S D S O
McQueen Capt C
Martin Lt (temp) A
Martin Leake Lt. (temp) V C
Mathews Lt. (temp) J B
Maurice Maj G T K.
Menden Capt A. A
Milne Lt (temp.) F W
Milne Thomson Lt Col N (T F)
Nickerson Maj B W S V C
O Keefe Capt J J
Ormsby Maj G J A.
Percival Lt. F
Phelan Capt E. C
Phillippo Lt R B
Phillips Capt T McC (died of wounds)
Pickard Lt Col R
Pirrie Lt I M
Pirrie Lt I T (killed in action)
Pott Capt F T
Price Lt R B
Profeit Maj C W
Purdon Capt W B
Rattray Maj M MacG
Richards Maj F G
Richardson Lt M (died of wounds)
Roberts Capt F F
Robertson Capt H G
Rutherford Maj N J C
Sampson Capt P D S O
Scott Capt T H
Silver Maj J P
Slayter Maj E W
Soltau Lt Col A B
Steward Capt S J D S O
Stewart Lt (temp) J S
Thurston Maj H S
Tyrrell Lt W
Waddy Lt (temp) J R
Walker Maj F S
Walshe Capt S J N H
Watson Lt Col A N (Lt -Col R.A M C T F)
Whitehead Lt N T
Williamson Lt (temp) J S
Wilson Capt H T
Winder Maj J H I
Wright Capt W G

Indian Army —Medical Services

Moorhead Lt -Col A H I M S
Sloan Maj J M D S O
Harvey Capt A W M I M S
Jones Capt J B
Braganza 3rd Class Assist Surg F
1st Class Sub Assist Surg Muhammad Umar (57)
1st Class Sub Assist Surg Wahidyar Khan (C 2)

THE CASUALTY LIST

The casualties among officers in the Expeditionary Force reported from General Headquarters since our last issue include the name of Surgeon Major Robert Macnamara Cowie, 1st Life Guards, wounded

THE CONTROL OF ENTERIC FEVER AT HOME

The War Office, after consultation with the Local Government Board, have decided that a special record is to be kept by military sanitary officers concerning each case of enteric fever occurring amongst soldiers in this country The objects in view are (1) to ensure that each case is made the subject of inquiry, (2) to provide material for further inquiry where multiple cases occur, (3) to compare the experience of various military units, and (4) to enable a summary to be prepared of the experience of the army as a whole and in different parts of it

Under the arrangements already made military medical officers are required to inform the medical officer of health of the sanitary district in which troops are stationed of any cases of enteric fever which may occur, and it is important that the medical officer of health should coöperate with these officers and with military sanitary officers in tracing the source of infection and removing any conditions favouring spread of the disease The medical officer of health will be in a position to give information as to the relationship of each case to causes of infection present in his district, or if the infection has been contracted elsewhere, to communicate on the subject with the medical officer of health of the district concerned The War Office and Local Government Board have agreed upon a method of procedure in regard to the forms of record, which can be obtained by medical officers of health of sanitary districts on application to the Local Government Board

THE COMMANDER IN CHIEF ON THE WORK OF THE R.A M C

Field Marshal Sir John French in his latest despatch pays the following tribute to the medical service of the British Expeditionary Force —

Since the commencement of hostilities the work of the Royal Army Medical Corps has been carried out with untiring zeal skill and devotion Whether at the front under conditions such as obtained during the fighting on the Aisne when casualties were heavy and accommodation for their reception had to be improvised or on the line of communications where an average of some 11 000 patients have been daily under treatment the organisation of the medical services has always been equal to the demands made upon it The careful system of sanitation introduced into the army has, with the assistance of other measures, &c, kept the troops free from any epidemic in support of which it is to be noticed that since the commencement of the war some 500 cases only of enteric have occurred

The organisation for the first time in war of motor ambulance convoys is due to the initiative and organising powers of Surgeon General T J O'Donnell D S O, ably assisted

Obituary.

ROBERT BURNET, M Sc , M B , CH.B VICT , M Sc , M.B CH B LIVERP , D P H. BIRM ,

MEDICAL OFFICER OF HEALTH OF CORNWALL LIEUTENANT-COLONEL, ROYAL ARMY MEDICAL CORPS (T)

Lieutenant Colonel Robert Burnet, R A M C (T) was killed in Devonshire recently by being thrown from his horse.

Robert Burnet received his professional education at University College, Liverpool In 1897 he took the B Sc at Victoria University with first class honours and a scholarship, in 1900 the M B , B Ch., and in 1901 the M.Sc In 1902 he was appointed district medical officer of the parish of Birmingham. In 1904 he was admitted to the M Sc , M B , and B Ch of Liverpool University, and in 1908 he took the D P H. at the University of Birmingham Three months later he was appointed medical officer of health of the county borough of Bury, Lancs., and shortly afterwards superintendent of the large combined isolation hospital there He developed the work of inspection instituted by his predecessor, Dr Brindley, and assisted in the establishment of a municipal hospital for tuberculosis In 1910 he was appointed county medical officer of health of Cornwall Dr Burnet took a keen interest in military medical matters In 1908 he joined the R A M C (T) at Handsworth, Staffs , was transferred on going to Bury to the Lancashire Fusiliers, and was again transferred on going to Cornwall, when he was promoted to the rank of lieutenant-colonel.

Dr A. H. Bygott, of Bury St Edmunds, writes "I first met Robert Burnet in 1902, soon after his appointment as district medical officer of the parish of Birmingham, and have been very intimately connected with him ever since The appointment was remarkable, as the result of a determined attempt by an enlightened board of guardians to organise their outdoor medical department on the best possible lines by availing themselves of whole time officers at a substantial salary Dr Burnet took an especially keen interest in this work and did his best to develop it, but that he felt he had undertaken a practically impossible task is shown by his evidence before the Royal Commission on the Poor laws, in 1907, in which he suggested that the medical services controlled by the boards of guardians should be transferred to the public health authorities This policy was adopted in the Minority Report, and he continued to support it on every available occasion During Dr Burnet's first year of office as medical officer of health of Cornwall there was a very serious epidemic of poliomyelitis in the county, in the investigation of which he proved himself indefatigable, but in connexion with which he sustained a very serious blow His only son, a brilliant boy who was destined for the navy, fell a victim to this disease, and though his life was spared after a very serious illness, he was left hopelessly paralysed Dr Burnet's early career was a brilliant one He was a man of varied talents, and possessed no mean gifts as an artist and musician, though the strenuous life that he led in latter years left him scant leisure for them He was singularly alert, and threw himself with ardour into every detail of whatever he undertook He was also one of the most conscientious men that I have ever known A host of friends will mourn their loss, and the deepest sympathy will be felt for his young widow and his children "

PATRICK JOSEPH MACNAMARA, M D R U I, F R C S IREL ,

CHAIRMAN OF THE IRISH MEDICAL COMMITTEE

THE death of Dr Patrick Macnamara, of Kilmallock, co Limerick, occurred on Feb 4th after a few days' illness He was one of the most representative of Irish country doctors, and his unanimous election on two occasions as chairman of the Irish Medical Committee was a striking proof of confidence in his ability and fairness

Dr Macnamara was educated at Cork and Dublin, and became M.D of the Queen's University and Licentiate of the Royal College of Surgeons in 1872 Fifteen years later he proceeded to the Fellowship of the College His entire professional life was spent in his native county of Limerick, where for many years past he was a justice of the peace for the county and medical officer of the Kilmallock workhouse While undertaking all the arduous duties of a country practitioner in Ireland he spared no pains to keep himself abreast of knowledge in medicine, surgery, and midwifery, and in his workhouse hospital he did surgical work of excellent quality He acquired a reputation in many branches of practice which made his opinion much in request as a consultant and helped him to occupy an important place in public esteem in the south of Ireland, an esteem to which his high personal character contributed largely

He was for many years an active member of the council of the Irish Medical Association When, in 1913, the Conjoint Committee, which had up to that time represented Irish medical interests in reference to the National Insurance Act, was dissolved, Macnamara was chosen chairman of the newly constituted Irish Medical Committee. The moment was a critical one for the profession, for the committee contained some very discordant elements, and if a split had occurred all hope of unity in the profession would have vanished But Macnamara, by his forbearance, tolerance, perfect courtesy, and occasional humour, kept in good temper the meetings over which he presided, and thus placed the profession of Ireland under a debt to him

JOHN DEE SHAPLAND, M.R C S ENG , L S A.

BY the recent death of Mr John Dee Shapland Exmouth has lost an old resident who witnessed its growth from a comparatively small size to its present dimensions and who was for many years actively engaged in general practice there, being district medical officer from 1891 to 1905

John Dee Shapland was born at North Molton in North Devon on Nov 30th, 1839, and was educated at South Molton and Axminster On leaving school he was articled to Dr Forrester at Barnstaple, where he remained but a very short time He then went to University College Hospital when the medical staff included Jenner, John Erichsen, Sharpey, Quain, and Ellis After qualifying as M R C S in 1861 he was for a time assistant to a practitioner in Watford and later settled in general practice at Thornton Heath, becoming medical officer for the union of Croydon He left that neighbourhood for North Devon in 1882, settling first at Downrew, near Bishop's Tawton, and removing thence to Burnside, Withycombe, Exmouth, where he resided until his death A keen sportsman and horticulturist, he was also a good practitioner, and to the end of his working life kept himself well abreast of modern scientific developments

The French Red Cross —A letter in another column from Dr James Donelan explains the organisation of the London branch of the French Red Cross On the initiative of the French Ambassador this branch of the French Red Cross Society has now been placed under the presidency of the Vicomtesse de La Panouse, the wife of the French Military Attaché This branch will henceforward be the only representative in London of the union of the three Red Cross societies established in France An honorary and an executive committee have been formed The honorary committee is composed of Queen Alexandra, Monsieur Paul Cambon, the French Ambassador, the Duchess of Norfolk, the Duchess of Somerset, and many other influential people The following constitute the executive committee —President, Vicomtesse de la Panouse, vice president, Madame Brasier de Thuy, treasurer general, Comtesse de Saint Seine (wife of the French naval attaché), secretary general, Madame Phalempin The treasurer is Mrs N Lake, the honorary secretaries are Mr P A Wilkins and Mr O J Baker, and the medical referee is Dr James Donelan The committee's offices are at 25, Knightsbridge, London, S W

An Enteric Hospital for Calais —The joint war committee of the British Red Cross Society and the Order of St John of Jerusalem recently undertook to provide at Calais an enteric hospital of 156 beds for the exclusive use of Belgian soldiers The complete hospital has now been built in this country and transported to Calais in the short period of three weeks, and it is being set up there by 100 workmen sent over from this country The hospital consists of six wards of 26 beds each, and is completely equipped It includes, in addition to the wards, separate nurses accommodation, a dispensary, a disinfector, a destructor, kitchens and orderlies' barracks, steam laundry, dining hall, and other necessary offices Supplies of drugs have been despatched from the Red Cross Stores, 83, Pall Mall, together with sterilisers disinfecting plant, beds and bedding, &c The hospital and its equipment represent 500 tons of material This was sent by rail to Dover by five special goods trains and transferred thence to Calais by special Admiralty transport boat The workmen sent over to erect the hospital were all insured and inoculated, and special housing accommodation and feeding arrangements were made for them before their arrival. The planning and construction in so short a period of this complete hospital reflect much credit upon the stores department of the joint Red Cross committee

The Automobile Association French Ambulance Fund —Early in October last it came to the knowledge of the executive committee of the Automobile Association and Motor Union that while the British military authorities were being well supplied with motor ambulances the French army was sadly lacking in this respect An appeal was accordingly sent out in November asking members for (1) entire ambulances, (2) cars suitable for conversion into ambulances, and (3) subscriptions towards providing the necessary ambulance bodies &c The association then communicated with the Service de Santé de Gouvernement Militaire de Paris, and as a result, on Oct 27th promised as a first instalment a free gift of 50 ambulances The response to this appeal has been generous, 2[illegible] cars having been offered to the committee Thirty eight have already been sent to France, and the second contingent numbers 55 Nearly 1000 members unable to provide cars contributed cash subscriptions totalling over £6000 The cars as offered have been collected by road and rail from all parts of England, Scotland, Ireland and Wales The engineering department of the "A A." has supervised the work of converting and equipping the vehicles for their employment on the battlefield On Feb 11th a luncheon was held at the Savoy Hotel to celebrate the despatch of these motor ambulances to France and subsequently the 55 cars were inspected at Buckingham Palace by the King

Queen's University of Belfast and the War —A roll of honour compiled by authority of the Senate has just been published, giving a list of those connected with the University who have served their country in the war and of those who are still fortunately able to act in this way Among the five killed in action there is one medical officer Captain T M Phillips R A M C, who died from a shell injury received at Ypres

Brighton and Hove Medical Preparations against Air Raids —Referring in our last issue to the medical preparations against possible air raids on London we stated that with the sanction of the military and police authorities the London scheme had now been elaborated and extended to include vulnerable places on the coast We have received a copy of the very complete scheme organised by the borough councils of Brighton and Hove, which will bear the cost thereof In these towns 29 dressing stations having telephonic communication have been established The organised personnel consists of 78 out of 90 civilian doctors who have volunteered their services gratuitously, a staff of nurses stretcher bearers with stretchers from the Home Protection Brigade and 320 boys from various boys' organisations to act as messengers, or cyclists The medical man in charge of each dressing station is given authority to arrange the equipment of his station in accordance with his requirements Each doctor is also supplied with emergency dressing packages The medical men have been assigned to their allotted stations Fourteen nursing homes have agreed to receive the surplus injured should they be in excess of those whom the hospitals can accommodate

Enlargement of the Second Eastern General Hospital, Brighton —At the beginning of the war this hospital was mobilised with its arranged number of beds—namely, 520 Since then it has been gradually extended and now has 1000 beds available There are five blocks composing the hospital, three surgical and two medical The former are as follows The new Brighton and Hove Grammar School in the Dyke road and the Howard Convalescent Home and St Mark's Council School at Kemp Town The medical blocks are at Stanford road Council School and at Lewes-crescent, Kemp Town The staff has been augmented, consisting now of about 30 medical and surgical officers Several thousand patients have already been treated at the different branches both men from the Expeditionary Force and men from the many large camps in the neighbourhood There are four operating theatres at all of which various operations are constantly being performed A great number of these are on men who have not yet been to the front, but who require some operative procedure to fit them for active service

Liverpool Doctors and Antityphoid Inoculation —At a largely attended meeting of medical practitioners at the Liverpool Medical Institution last week the question of antityphoid inoculation in the army was discussed, and a forcible paper on the subject was read by Professor Ernest Glynn, of which an abstract was sent to the local press The following resolution was proposed by Captain W Permewan, R A M C (T) and seconded by Lieutenant Colonel Sir James Barr, R A M C (T) and carried unanimously —

> This meeting of the Liverpool Medical Institution expresses its strong conviction that the time has come to make antityphoid inoculation compulsory in the British Army

A Water-sterilising Outfit —We have received from Messrs Burroughs, Wellcome and Co specimens of tabloids of chlorinated lime and sodium thiosulphate together with soloids of potassium iodide and starch. The whole forms an easily portable outfit for the certain sterilisation of water The procedure is very simple As a starting point 1 tabloid water steriliser (chloride of lime) is dissolved in 10 gallons of water, the mixture being allowed to stand for 15 minutes Then to ensure that enough of the steriliser has been used a test is made in the following way A little of the water is poured in a cup or other vessel in which has been placed one soloid containing potassium iodide and starch If a blue coloration occurs there is an excess of chlorine present and the work of sterilisation is complete Otherwise another tabloid steriliser must be added until the presence of free chlorine is shown by the soloid potassium iodide and starch test The excess of chlorine is then removed by adding one tabloid of sodium thiosulphate for each tabloid of steriliser and the water becomes fit for drinking and palatable This is a very ingenious and simple method and should be of the greatest value in a campaign

It is reported by the Berne correspondent of the *Times* that Dr Philipp Pe[illegible] [illegible] Army Medical Staff, has died from [illegible] dealt with acetylsalicylic acid, which is one of the drugs that were formerly manufactured almost exclusively in Germany, but are now being made in this country by several manufacturers Doubt has been expressed by some medical men and others as to the identity of the various makes of acetylsalicylic acid, and especially as to their identity with aspirin, and statements are sometimes made that one sample or another causes secondary effects such as irritation of the stomach Except that aspirin differs somewhat in appearance from the acetylsalicylic acid manufactured in Great Britain (aspirin crystals occurring in glistening flakes whilst the others appeared needle like in form) most of the samples examined were identical with aspirin—that is to say, their chemical composition was the same The question of the crystalline character is apparently of no particular importance, and Professor Smith's conclusion is that acetyl salicylic acid may be obtained without difficulty, chemically pure, from more than one source, but that, as with other chemicals, indifferent and impure makes are on the market and therefore the same discrimination should be used in buying it as with other drugs

THE Mayor of Sunderland has received from a number of medical practitioners of that borough upwards of £230 towards the local contribution to the Prince of Wales's National Relief Fund. This sum represents fees received for the medical examination of recruits

TYPHUS FEVER IN LONDONDERRY —Eleven cases of typhus fever have been notified, of which six occurred in one family The origin of the outbreak has been traced to a ' wake" held on Dec. 19th, 1914, at which crowds of persons attended, and all those suffering from typhus fever, with the exception of the district nurse, were present Every precaution has been taken to stamp out the epidemic, but in addition to other causes of the disease, the district in which the outbreak occurred is almost uninhabitable in consequence of its bad sewerage.

DONATIONS AND BEQUESTS —The late Miss Jane Osborn has left by will £500 each to the Great Northern Central Hospital and the Central London Ophthalmic Hospital, part of the residue of the estate will go to the Cancer Hospital, Fulham.—By the will of the late Mr George Hepworth, of Castleford, Yorks the Clayton Hospital, Wakefield will receive £500 and the Wakefield City Deaf and Dumb Society £250 —Two donations have been intimated to the Dundee Infirmary, one of £500 from Mr Andrew Scott with the proviso that only the income should be used and that two cots in the infirmary should be named and the other of £1000 North British Railway Stock (Ordinary Preference) from Mr J J Watson, Broughty Ferry, the interest only to be used

UNIVERSITY OF LONDON —At the last meeting of the Senate the titles of professor and reader in the University of London were conferred upon various teachers of the University on the recommendation of the respective boards of advisers Mr J E S Frazer St Mary's Hospital, was made professor of anatomy, Dr T M Lowry Guy's Hospital, professor of chemistry, Dr W J R Simpson King's College professor of hygiene and public health, Mr Major Greenwood, jun, Lister Institute, reader in medical statistics, Dr R. G Hebb Westminster Hospital reader in morbid anatomy, Dr R T Leiper, London School of Tropical Medicine, reader in helminthology, Dr F S Locke King's College, reader in physiology, Dr H E Roaf, St Mary's Hospital, reader in physiology, Dr Otto Rosenheim, King's College, reader in biochemistry, Mr J Henderson Smith, Lister Institute, reader in bacteriology, Dr H M Turnbull London Hospital reader in morbid anatomy and Dr J S Edkins Bedford College reader in physiology Dr E Barclay-Smith was appointed to the University professorship of anatomy at King's College, and Dr E P Cathcart to the University professorship of physiology tenable at the London Hospital Medical College. The report of the professor of protozoology (Professor F A Minchin) for the year ended June 30th 1914, was received and forwarded to the Colonial Office A grant of £50 was made out of the Dixon fund to Mr J A Gardner University of London Physiological Laboratory for researches into lipoid substances The following additions were made to the Faculty of Medicine Mr R C Acland, Professor E Barclay-Smith, Professor E P Cathcart, Mr R W Collum, Mr T J Evans, Mr R A Greeves, Dr P Haas, Dr R C Jewesbury Dr E Macnamara, and Mr C A. Pannett It was announced that the Chancellor had reappointed Sir James Barr, M D, to be his representative upon the Court of Governors of the University of Liverpool University medals in connexion with the M D examination have been awarded to J N Mehta (medicine) and J C Woods (mental diseases), of the London Hospital

Dr Andrew Hunter, a graduate of Edinburgh University, has been recently appointed to the chair of pathological chemistry in the University of Toronto, to succeed Professor J B Leathes, who resigned some months ago to accept an appointment in the University of Sheffield Dr Hunter was associated with Professor E A Schaefer for three years, then went to Cornell University, Ithaca New York as associate professor of biochemistry Subsequently he was appointed biochemist in the United States Public Health Service at Washington, D C, whence he came to Toronto

Dr A. Wood Smith, late physician to the Glasgow Royal Infirmary, has been appointed honorary consulting physician to that institution

MEDICAL MAGISTRATE —Dr Richard Emmett has been placed on the Commission of the Peace for the county borough of Portsmouth.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Naval Medical Compassionate Fund Bill

A BILL to make further and better provision with regard to the Naval Medical Compassionate Fund" has been introduced into the House of Commons by Mr G LAMBERT, Civil Lord of the Admiralty It was read a first time

The text of the Bill has been printed It is in the following terms —

Whereas under an Order in Council dated the thirteenth day of August eighteen hundred and seventeen the Naval Medical Supplemental Fund Society was established for the relief of widows of medical officers in the Royal Navy And whereas it was provided in that Order that if any bequest or donations should be made in favour of the society, the principal amount thereof should be reserved separately as a compassionate fund, and that the interest should be distributed at the discretion of the President and Court of Directors of the society, among the orphans of deceased members thereof, and that each member of the society, on his promotion or on his appointment to any permanent civil situation, should contribute to the compassionate fund a fee equal to one week's pay And whereas in pursuance of the Naval Medical Supplemental Fund Society Winding Up Act, 1861, the society has been wound up, but that Act provided that notwithstanding the winding up of the society the above mentioned compassionate fund should continue, but on a voluntary instead of a compulsory basis and enacted that the interest thereof should be distributed among the orphans of those members of the society who had died and the orphans of those naval medical officers who had theretofore contributed or who should thereafter voluntarily contribute any such fee as aforesaid to the compassionate fund but that no person should thereafter be compelled or liable to pay a fee to the compassionate fund And whereas the said Act made no provision for the future management of the said fund, but the said fund has in fact remained under the management of a body consisting of the Secretary to the Admiralty, the Medical Director General of the Navy, and certain medical naval officers who have contributed to the fund and now consists of the sum of ten thousand six hundred pounds two and a half per centum consolidated stock And whereas it is expedient to make provision for the management of the said fund and to alter the terms of contribution thereto and the nature of the benefits therefrom in manner hereinafter appearing

Be it therefore enacted by the King's most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in this present Parliament assembled, and by the authority of the same, as follows —

1. (1) His Majesty may by Order in Council provide—(a) for constituting new trustees of the said fund and for vesting the fund in such trustees, (b) for filling vacancies

MICHAEL McHUGH, M A, M D DUB, L R C P & S IREL,

PROFESSOR OF MATERIA MEDICA IN THE SCHOOL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND

THE death of Professor McHugh occurred quite unexpectedly on Jan 8th He had been about his work as usual on the 7th, but was found dead in bed next morning, death having apparently taken place some hours previously He was only 58 years of age

Michael McHugh was educated in Trinity College, Dublin, and afterwards at Berlin and Vienna. He was for many years one of the visiting physicians to St Vincent's Hospital and the Cork street Fever Hospital, Dublin, and since the death of Sir George Duffey he had been professor of materia medica and therapeutics in the School of the Royal College of Surgeons He had been an external examiner in medicine at the University of Dublin, and examiner in medical jurisprudence at the Royal University of Ireland He had a high reputation as a scientific physician, and although of a retiring disposition, was held in great regard by his pupils and colleagues

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND —At a meeting of Comitia of the Royal College of Physicians of London on Jan 28th and of the Council of the Royal College of Surgeons of England on Feb 11th diplomas of L R C P and M R C S were conferred respectively upon 114 candidates (including three ladies) who have passed the Final Examination in medicine surgery and midwifery of the Conjoint Board and have complied with the requisite by laws The following are the names and schools of the successful candidates —

Christie Muthuswamy Anthony Guy's Hospital Mary Elizabeth Ashton Calcutta Manchester University and Royal Free Hospital Errington Atkinson London Hospital Geoffrey Lewis Attwater Cambridge University and Guy's Hospital James Dorrington Bangay St Bartholomew's Hospital Percy William Barnden London Hospital *Burgess Barnett* St Bartholomew's Hospital Kanshi Ram Batra University College Hospital, Owen Albert Beaumont, Cambridge University and London Hospital Arthur Leslie Blunt St Thomas's Hospital Harold Esmond Arnison Boldero Oxford University and Middlesex Hospital Johannes Willem Bouwer London Hospital Leonard Graham Brown and Charles Milwyn Burrell Oxford University and London Hospital Harold George *Bywater* Liverpool University Rowland Burnell Campion Guy's Hospital Maurice Hereward Cane Cambridge University and St Bartholomew's *Hospital Dorothy* Chick Royal Free Hospital William King Churchouse Charing Cross Hospital Joseph Woods Clayton Adelaide University and London Hospital Philip Cyril Powter Cloake London Hospital William Lonsdale Cockcroft Manchester University Stephen Walter Coffin Guy's Hospital Dora Challis Colebrook Royal Free Hospital Ernest James Cooke Guy's Hospital Edward Charles Cunnington *Cambridge* University and St *Bartholomew's* Hospital Eric David Despard Davies Cambridge University and St Mary's Hospital Alexander Decimus d Array University College Hospital George Stanley Deane and Cedric Roland Denny London Hospital Charles Wilmo Dias Ceylon Medical College and St Mary's Hospital Herman Gerald Dreising Copenhagen University and Guy's Hospital Albert John Kingman *Drew* Guy's Hospital Sidney Ernest *Elphick* St Mary's Hospital Ahmed Zaki Elsayed Cairo and London Hospital James Fanstone London Hospital Harry *Hope* Fisk St Mary's Hospital George Muir Foster Bristol University and University College Hospital Lewis Salisbury Fry Cambridge University and Guy's Hospital Alec Terris Gibb Manchester University John Wesley Gilbert Bristol University Edmund *Douglas Granger* St Thomas's Hospital Stanley Willoughby Green Leeds University Norman Crellier Charing Cross Hospital Herbert Stuart *Griffith* St Bartholomew's Hospital Douglas Noel Hardcastle St Mary's Hospital William Theodore Hare Cambridge University and St Thomas's Hospital Frank Cecil Harrison Sheffield University Hugh Granville Horsridge St Bartholomew's Hospital Lancelot Horsley Guy's *Hospital Ifan Sey* [illegible] James University College Hospital William Bal[illegible] Jeje[illegible] St Bartholomew's Hospital Cyril Oscar Howe Jones Middlesex and St Thomas's Hospitals Dadabhai Nowroji Kalvantava Bombay University and University College Hospital Charles George Gordon Keane St Mary's Hospital Felix [illegible] [illegible] La[illegible] and Stephen Abraham Lebon Guy's Hospital Neville H[illegible] Linn[illegible] London Hospital Percy Le[illegible] Lenox University College Hospital William Francis MacVerey St Mary's Hospital Cecil Granville McClymont, Guy's Hospital James McDonnell London Hospital Edmund C[illegible] Malden Cambridge University and King's College Hospital George Allan Malling Oxford University and St Thomas's Hospital Robert Charles Matson Guy's Hospital [illegible] Sp[illegible] Mawe Cambridge University and St. Bartholomew's Hospital Stanley Howard Miles Cambridge University and St Thomas's Hospital Donald Samuel Eccles Milligan and William Hubert Milligan St *Thomas's Hospital* Arthur Daniel Morris University College Cardiff and University College Hospital Herbert Guy Moser St Bartholomew's Hospital Drevor Frederick Acton Neilson Cambridge University and St Thomas's Hospital Kenneth Montague Ne[illegible] St Mary's Hospital Charles Cyril Okell Cambridge University and St Bartholomew's Hospital James Hales Parry Cambridge University and *Guy's Hospital* Owen Guy Parry Jones Oxford University and Guy's Hospital Sachchidananda Hoten Laul Ca[illegible] University and Charing Cross Hospital Hugh Ley Per[illegible] Peregrine King's College and Guy's Hospitals *Danwatege D[illegible]* Philip Perera Ceylon Medical College and University College Hospital Haydn Peters Charing Cross and Middlesex Hospitals George Robinson Pirie Toronto University Kenneth [illegible] Cambridge University and King's College Hospital Guy Al[illegible] Pratt Guy's Hospital Oliver Beakley Pratt Oxford University and St Bartholomew's Hospital Hoel Parry Price Guy's Hospital *Wilfrid Raffle Cambridge University* and *London Hospital* Reginald Thompson Raine Cambridge University and [illegible] Thomas's Hospital William Leonard Eliot Reynolds Guy's Hospital William Kenneth Armstrong Richards [illegible] University James Albert Robinson St Bartholomew's Hospital Alan Filmer Rook Guy's Hospital Harold Arthur Rowell, St Thomas's Hospital Arthur Paul Saint Cambridge University and London *Hospital* Noel *Humphrey* Wykeham Saw and R[illegible] Sells Guy's Hospital Henry Richard Sheppard St Thomas's Hospital William Sowerby University of *New Zealand* and Middlesex Hospital Harold *Douglas* Livingstone Sp[illegible] Queen's University Kingston and St Bartholomew's Hospital Alan Edward Staffurth Cambridge University and [illegible] Thomas's Hospital William Fletcher Stiell St Thomas's Hospital Lionel Frederick Strugnell St Bartholomew's Hospital Charles Putnam Symonds Oxford University and Guy's Hospital Gordon Stuart Terry Bristol University; Edgar William Todd *Cambridge University and St Thomas's Hospital; Myles* Denison Boswell Tonks London Hospital Oscar Lamsay Urge[illegible] University College Hospital Algernon Randolph Upton Birmingham University and St Bartholomew's Hospital Cedric Norman Valsey Bristol University Joseph Stephen Wallace University College Hospital Phillip Pennefather Warren London Hospital Robert Harvey Williams St. Bartholomew's Hospital Samuel Wilson Guy's *Hospital* Frank Hamersley Woods St Bartholomew's *Hospital* and Henry Waniel Snarey Wright University College Hospital

Diplomas in *Public* Health were also conferred upon the following six candidates —

Kishori Lal *Chandry Lahore Medical College* and University College Noormahomed Kasembhai Chohan Bombay and Cambridge Universities Herbert William Frankhauser Melbourne University and Royal Institute of Public Health Thomas Martin Glasgow University and University College Lucy MacBean Ross Glasgow University and University College and Andrew James Shinnie Aberdeen University and University College

UNIVERSITY OF OXFORD —The examination for the Diploma in Ophthalmology will commence on July 19th and for the Diploma in Public Health June 1st *The Board* of the Faculty of Medicine gives notice that the Certificates in Anæsthetics (No 11) Practical Pharmacy (No 12) and Practical Pharmacology (No 13) will be accepted on the old forms (see Examination Statutes p 232 ed 1914) at all examinations held before *Michaelmas Term* 1916 At the examination in Michaelmas Term, 1916 and afterwards only the new forms of certificate will be accepted —The following medical degrees have been conferred —

D.M —H P Newsholme Balliol

B M —G W Carrington Keble (*in absentia*)

PHARMACEUTICAL SOCIETY —At the February *meeting of this society* two useful papers recording the results of experiments conducted in the society's research laboratories were communicated In one of these Professor H G Greenish dealt with *the problem of the* discolouration of sodium salicylate solution by alkalies a subject which with Mr A F Beesley as collaborator he has recently investigated The fact that a solution of sodium salicylate to which sodium bicarbonate *has been added* gradually assumes a *brownish* colour deepening to dark brown or reddish black, is known to most medical practitioners and to all pharmacists but it has never been definitely known to what this is due Mixtures containing these two salts are frequently prescribed and the matter is therefore of [illegible] interest It would seem that the discolouration is due to the oxygen of the air acting on the salicylate in the presence of sodium sesquicarbonate and that the addition of [illegible] sodium sesquicarbonate and that the addition of a grain of sodium sulphite or bisulphite to an [illegible] 8 oz mixture produces a marked preservative effect Apparently there can be no possible objection to the use of this expedient In the other paper Professor H G [illegible] refer the honourable Member to the full answer which I gave on Nov 16th I think the true state of the case should be sufficiently clear, but I may repeat that men are not forced to take rum as a ration

Mr CURRIE Would the right honourable gentleman be good enough to communicate a copy of his answer to Sir Thomas Barlow, the President of the Royal College of Physicians, who, if correctly reported in the *Times* of the 9th inst, entertains an extraordinary conception?—Mr TENNANT Yes, Sir, I shall be very glad to do so

Prevention of Dope Poisoning in Aircraft Factories

Mr ROWLANDS asked the Under Secretary of State for the Home Department whether he received a report of the inquest held at Crayford on Jan 8th in connexion with the death from dope poisoning of a young woman employed in varnishing the wings of aeroplanes, whether any similar cases had occurred, and whether measures had been successfully taken to ensure the safety of the workers using dope.—Mr CECIL HARMSWORTH answered Several cases of this poisoning occurred at one or two aircraft factories towards the end of last year, and at the Home Secretary's request a full investigation was made by Dr Willcox, senior analyst to the Home Office, and Dr Legge, medical inspector of factories Their inquiries showed that the poisoning was caused by the fumes given off by the varnish, and could be prevented by the installation of a suitable system of ventilation which would effectually carry off the fumes. Steps were immediately taken in concert with the Admiralty and the War Office to secure the provision of effective means of ventilation in every aircraft factory where the dope is being used, and there is every reason to believe that these measures will be successful No further case of poisoning has been reported since the one referred to by my honourable friend

Mr ROWLANDS Are the authorities thoroughly well satisfied that the precautions taken will secure the safety of the lives of those engaged in this occupation of varnishing, and will there be an official report of the examination and inquiry?—Mr CECIL HARMSWORTH I understand that the authorities are thoroughly satisfied with the precautions now being taken

Medical Inspection of School Children

Sir W BYLES asked the President of the Board of Education whether in accordance with Section 13 of the Education (Administrative Provisions) Act 1907, and Section 3 of the Employment of Children Act 1903, he would at once direct all rural education authorities to provide for the medical inspection of all children leaving school for agricultural employment and direct them to prepare and serve on the employer of each child such certificate as was contemplated by the Acts cited and justified by the condition of health and education of the child, and whether he would order that the full details of each case should be immediately reported to the Board of Education and publish them in a Parliamentary paper weekly during the continuance of the war—Mr J A. PEASE said in reply Provision is already made in the code for the medical inspection of all children after reaching the age of 12 and no facts have been brought to my notice which would justify the imposition upon all local education authorities of such an addition to the work of school medical service as my honourable friend suggests Any inquiry as to the Employment of Children Act, 1903, should be addressed to the Home Secretary

Mr W THORNE What happens when children leave the school below the age of 11? Is there any medical inspection then?—Mr PEASE Not if they leave at 11 but under the Robson Act there should only be a partial exemption at 11 There ought to be two medical inspections before the age of 11 If they leave at 11 they may escape the third or final medical inspection, which takes place at the age of 12

Cases of Diphtheria

Mr FELL asked the President of the Local Government Board whether his attention had been called to the numerous cases of diphtheria which were occurring in various parts of the country, whether he was making inquiry into the causes of this outbreak, and whether he proposed to issue any instructions dealing with the matter —Mr HERBERT SAMUEL replied Although in the last quarter of 1914 the number of cases of diphtheria was somewhat in excess of that for 1913 I am glad to state that the number of cases notified in England and Wales during the first five weeks of this year is about 1000 less than the number notified in the corresponding period last year Returns of notified cases are received weekly from each district These are examined and it is a matter of routine practice in my department to call for special reports on outbreaks, and if necessary to direct a medical inspector to make a local investigation

Mr FELL Is it not the case that there have been numerous outbreaks in some places and have not a good many deaths occurred during the past few weeks?—Mr H SAMUEL I am informed that the cases of diphtheria are distributed over a very large number of areas, and that there have been few considerable outbreaks in any particular localities

Royal Commission on Sewage Disposal

Replying to Sir J YOXALL, Mr H SAMUEL said The final report of the Royal Commission on Sewage Disposal has now been signed and will be issued shortly

MONDAY, FEB 15TH

Diseases amongst the Troops

In reply to Mr ROWLANDS and Mr W THORNE, who asked for particulars as to the cases and deaths among the Expeditionary Force from disease since the outbreak of war, Mr TENNANT said that he would furnish them with a return on the subject It is as follows —

Return showing the Number of Cases and Deaths amongst the Expeditionary Force and the British Troops in the United Kingdom owing to Certain Diseases, from August 1st, 1914

—		Typhus fever	Typhoid fever	Cholera	Small pox	Scarlet fever	Diphtheria	Measles	Dysentery	Pneumonia	Cerebro-spinal meningitis
Expeditionary Force [1]	Cases	0	625[4]	0	*	195	*	175[3]	*	*	*
	Deaths	0	49[4]	0	*	4	*	2[3]	*	*	*
British troops in the United Kingdom [2]	Cases	0	262	0	1	1379	783	1045	215	1508	62
	Deaths	0	47	0	0	22	6	65	1	301	26

[1] The figures in this class include cases and deaths up to Feb 11th 1915

[2] The figures in this class include cases and deaths up to Jan. 31st, 1915.

[3] These figures include Indian troops—cases 5, deaths 0

[4] These figures include Indian troops—cases 25 deaths 4

* Returns for these diseases are not at present available.

There have been no cases of cholera or of typhus either in the Expeditionary Force or amongst the British troops in the United Kingdom.

Inoculation in the Army

Replying to Mr PETO, Mr TENNANT said that he was not in a position to announce any change of policy with reference to the inoculation against typhoid fever of officers and men in the army, but he would like to inform the House that 97 per cent of the 29th Division had been inoculated.

The Enlistment of Medical Students

Mr MCCALLUM SCOTT asked the Under Secretary of State for War whether he was aware that the calling out of numbers of medical students in the Territorial Force and their enlistment in other forces were likely to result in a shortage of doctors at an early date, to the injury both of the nation and of the army whether since this fact became known many medical students had been willing to return from the army to the universities in order to qualify as medical practitioners at the earliest possible date, and whether the Secretary of State was prepared to permit such persons to resume their medical course —Mr TENNANT replied Arrangements have been made for the return to their professional studies of medical students serving in medical units of the Territorial Force Students in their final year of study who have only their final examinations to pass may also be released from the combatant corps if they apply

TUESDAY, FEB 16TH

Medical Officers of the Territorial Force

Mr ROBINSON asked the Under Secretary of State for War whether, in view of the fact that medical men fresh from the schools received 24s—more than a major's pay—whilst medical officers who had for years been training with the Territorial Force and had in many cases left large practices received only the pay of their rank and neither the allowances granted in the field, the £60 gratuity at termination of the war nor prospect of pension he would cause inquiry to be made with a view to more equitable treatment being given to the more experienced officers —Mr TENNANT answered As I have already explained, it may be found necessary to give special rates to officers commissioned on emergency, but there is no intention of making this universal I should add that a major of the Royal Army Medical Corps receives 28s a day in pay and field allowance, while the medical officer specially commissioned receives 24s inclusive of all cash allowances

WEDNESDAY, FEB 17TH

Frost-bite amongst the Troops

Mr SANDERSON asked the Under Secretary of State for War whether he could state the number of cases of frost bite among the troops of the Expeditionary Force, whether any, and if so how many, waterproof stockings or trench waders in the office of trustee and for vesting the fund in the trustees for the time being without conveyance or assignment, (c) for vesting the management of the fund, the determination of the persons to receive benefits therefrom, and the distribution thereof amongst such persons, in such body as may be determined by the Order, being a body representative of the naval medical service, either with or without the addition of representatives of the Admiralty, (d) for enabling all persons who are or who may hereafter become naval medical officers, or who may at any time have been naval medical officers to become subscribers to the fund, (e) for determining the terms of subscription and the manner and time of payment thereof, (f) for making eligible to benefits from the fund the widows and orphans of all persons who at the time of the making of the Order may have contributed to the fund, and, subject to such conditions as may be prescribed by the Order, of persons who may after that date have become subscribers to the fund, and the Order may contain any incidental, consequential, or supplemental provisions which may appear to be necessary or proper for the purposes of the Order (2) An Order in Council under this Act may be altered or revoked by a subsequent Order in Council

2 This Act may be cited as the Naval Medical Compassionate Fund Act, 1915

A schedule to the Bill provides for the repeal of certain provisions in existing enactments

Report of the Central Midwives Board

The report on the work of the Central Midwives Board for the year ended March 31st, 1914, has been issued It is therein stated that the Midwives Roll on March 31st, 1914, contained the names of 37,290 women, an increase for the year of 1727 This latter figure shows a reduction of 211 in the numbers added to the roll during the year, as compared with the previous year Of the total, 16,939 have passed the Board's examination and 9583 have been admitted to the roll in virtue of prior certification under Section 2 of the Midwives Act The total number of trained midwives amounts to 26,572 and of untrained to 10 718, the percentages being 71 3 and 28 7 At the same period last year the percentages were 69 and 31 respectively The proportion of trained midwives increases steadily as the names of the untrained women disappear from the roll, but it must be remembered that a large number of the former, which may be estimated at not less than 60 per cent, do not practise as midwives in England or Wales As far as can now be estimated the proportions of trained and untrained women in actual practice are about equal Last year, of those practising as midwives, the untrained exceeded the trained

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HOUSE OF COMMONS

WEDNESDAY, FEB 10TH

Vaccination and Small pox

Mr YEO asked the President of the Local Government Board whether he was aware that more than half the children born in England and Wales were now escaping vaccination and that small pox had been almost entirely absent since the passing of the Vaccination Act, 1907, and if so, whether he would consider the desirability of arranging that vaccination should now be entirely voluntary —Mr HERBERT SAMUEL replied The statements in the first part of the question are substantially correct except that there was no marked change in the number of deaths from small pox following upon the passing of the Vaccination Act 1907 It is not the intention of the Government to introduce legislation on the subject

St John Ambulance Brigade

Replying to Mr THOMAS, Mr H BAKER (Financial Secretary to the War Office) said All men of the St John Ambulance Brigade who are employed in military hospitals are enlisted for the Royal Army Medical Corps and are treated for pay and allowances, including separation allowance, in all respects as regular soldiers

Drug Accounts Regulations in Scotland

Mr PRINGLE asked the Prime Minister whether his attention had been called to an interdict granted by Lord Anderson in the Court of Session on Feb 2nd on the application of the Glasgow Insurance Committee ordaining the Scottish Insurance Commissioners to cancel any directions given by them for laying the National Health Insurance (Drug Accounts Committee) Regulations (Scotland) 1914 before both or either of the Houses of Parliament whether the application was made and granted on the ground that no petition against the Order was possible in this House because the Government was to occupy the whole time of the House whether under the Order of Feb 3rd the opportunity to petition against Orders and Regulations laid upon the table of the House had been taken away and if so whether the Government would propose an amendment of the Order of Feb 3rd whereby the right to petition against Orders and Regulations laid upon the table would be restored —Mr ASQUITH furnished the following written reply My attention has been called to the matter referred to I must not be taken to accept the statements made in the second branch of the question but the grounds on which the application was made are I believe accessible to my honourable friend As under the Order of Feb 3rd no opportunity would arise of discussing petitions against such Orders and Regulations, the Government will endeavour to make some arrangement that time should be given when discussion is necessary and desirable

Health of the Army

Speaking in the course of the debate on army estimates Mr TENNANT (Under Secretary for War) made reference to the service rendered to the country, and particularly to the War Office and the Royal Army Medical Corps, by the British Red Cross Society, the St John Ambulance Association, and voluntary agencies generally all over the country He should like to endorse the eulogy which had been passed on them by the noble lord the Member for Hitchin (Lord Robert Cecil) He (Mr Tennant) had tendered his acknowledgment of the admirable manner in which they had helped in every possible way It was a pleasing fact that the St John Ambulance Association and the British Red Cross Society, which were previously acting in rivalry the one with the other, were now working under a joint committee which tended of course, to more efficient work being achieved by both The question had been raised of the evacuation of hospitals at Boulogne and elsewhere, and it had been suggested that the wounded had been moved too early from these hospitals in order to make room for others That was a real difficulty The War Office authorities were anxious that the sick and wounded should be left in the base hospitals as long as possible, and so much so was that the case that if he mentioned the fact that recently only 700 odd beds were vacant at Boulogne, he thought that it would be accepted as proof of the excessive care taken to keep the sick and wounded in the base hospitals and to prevent their removal too early (The remarks of the right honourable gentleman on the subject of the inoculation of the troops against typhoid were summarised in last week's issue of THE LANCET)

Mr W LONG expressed regret at the delay of the Government in coming to a decision on the question of making inoculation compulsory in the army For future recruits inoculation ought to be made compulsory

THURSDAY, FEB 11TH

Recoveries of Wounded Soldiers

Sir GEORGE SCOTT ROBERTSON asked the Prime Minister how many out of the 104 000 casualties in the Expeditionary Force had now returned to duty —Mr ASQUITH replied I fear that it would be contrary to the public interest to give exact figures but my honourable friend and the House will be glad to know that about 60 per cent of the wounded recover and become fit for service

Treatment of Nerve Strain amongst Soldiers

Mr DUNCAN MILLAR asked the Under Secretary for War whether the Red Cross military hospital which had been opened in Lancashire for the reception of uncertifiable soldiers suffering from nerve strain was solely under War Office control or whether it was visited by Lunacy Commissioners and under lunacy administration —Mr TENNANT answered The hospital referred to is an exclusively military hospital, and the reception care and discharge of the soldiers admitted are under the sole control of the War Office The soldiers are not certified and are not under lunacy jurisdiction The premises, however are the property of the Board of Control and some members of the Board visit the institution from time to time in order to supervise such matters as supplies, heating repairs and the maintenance of the premises but they in no way concern themselves with the treatment of the patients

Non inoculated Soldiers

Mr TICKLER asked the Under Secretary for War whether he was aware that men who had joined Kitchener's Army now in training at Brocklesby had been informed that unless they consented to be inoculated against typhoid they would not be allowed to proceed to the front with their companions and whether this was in accordance with the instructions of the War Office —Mr TENNANT answered No such circumstances as the honourable gentleman describes have been reported I stated in an answer to the Member for Haggerston on Nov 23rd the position of inoculated men as regards the probability of their proceeding to the front The matter remains as it then stood

The Rum Ration

Mr CURRIE asked the Under Secretary for War whether rum was issued as a ration to troops at the front if so under what conditions it was issued whether young men were forced in any circumstances to take rum as a ration whether he was aware that there was a popular belief that it [illegible] effect and if so whether he would [illegible] of the belief to be made in view of its prejudicial effect upon recruiting —Mr TENNANT [illegible] I would

NORFOLK EDUCATION COMMITTEE.—Assistant Medical Officer Salary £300 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £120 per annum with board residence and laundry Also Assistant House Physician for six months. Salary at rate of £100 per annum with board residence and laundry

PADDINGTON GREEN CHILDREN'S HOSPITAL, London W—House Surgeon Salary at rate of £80 per annum with board residence and washing

QUEEN CHARLOTTE'S LYING IN HOSPITAL, Marylebone-road N W—Assistant Resident Medical Officer for four months Salary at rate of £50 per annum with board residence and washing

ROCHESTER, ST BARTHOLOMEW'S HOSPITAL—Senior Resident House Surgeon unmarried Salary at rate of £300 per annum with board residence and laundry

ROYAL ARMY MEDICAL CORPS (TERRITORIALS) THIRD 1ST HOME COUNTIES FIELD AMBULANCE (Maidstone)—Seven Medical Men as Officers

ROYAL EYE HOSPITAL, Southwark.—House Surgeon Board and quarters &c.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST City road E C—Clinical Assistant in Out patient Department

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN S E—Second Resident Medical Officer Salary at rate of £100 per annum with board and washing Also Temporary Honorary Assistant Physician to Out patients

ST MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plaistow E—Junior Resident Medical Officer Salary at rate of £90 per annum with board residence and laundry

ST PETER'S HOSPITAL FOR STONE &c Henrietta street Covent Garden W C—Junior House Surgeon for six months Salary at rate of £75 per annum with board lodging and washing

SALFORD ROYAL HOSPITAL.—Casualty House Surgeon Salary at rate of £100 per annum with board and residence.

SALISBURY GENERAL INFIRMARY—House Surgeon and Assistant House Surgeon unmarried. Salary £100 and £75 per annum respectively with apartments board lodging and washing

SCARBOROUGH HOSPITAL AND DISPENSARY—Senior and Junior House Surgeons Salary £100 and £80 per annum respectively with board residence &c.

SHEFFIELD CHILDREN'S HOSPITAL.—House Surgeon. Salary £150 per annum with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Female Assistant House Surgeon and Female Assistant House Physician Salary £85 and £80 per annum respectively with board residence and washing

SHEFFIELD ROYAL INFIRMARY—House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

SHEFFIELD SOUTH YORKSHIRE ASYLUM Wadsley—Locum Tenens Assistant Medical Officer Salary as arranged with apartments board &c

SHREWSBURY ROYAL SALOP INFIRMARY—House Physician Salary at rate of £110 per annum with board and apartments

SOUTH AFRICA, FRERE HOSPITAL, East London—Resident Medical Officer unmarried. Salary £300 per annum with board, lodging and washing

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL—Junior House Surgeon for six months. Salary at rate of £120 per annum with rooms board and washing

SOUTH LONDON HOSPITAL FOR WOMEN—Female Assistant Physician

SOUTH SHIELDS INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY—Junior House Surgeon Salary £115 per annum, with residence board and washing

STOCKPORT INFIRMARY—Junior House Surgeon Salary £100 per annum with board washing and residence.

SUNDERLAND ROYAL INFIRMARY CHILDREN'S HOSPITAL.—Female Resident Medical Officer for six months. Salary £100 per annum with board residence and laundry

SWANSEA UNION INSTITUTION—Resident Assistant Medical Officer Salary £295 per annum

TAUNTON AND SOMERSET HOSPITAL, Taunton—Senior House Surgeon. Salary £120 per annum with board, lodging and laundry

TRURO ROYAL CORNWALL INFIRMARY—House Surgeon unmarried. Salary £150 per annum with rooms board, and washing

WAKEFIELD CLAYTON HOSPITAL—Female Junior House Surgeon Salary £120 per annum all found

WALSALL AND DISTRICT HOSPITAL.—Female Assistant House Surgeon and Anæsthetist. Salary £110 per annum with board, residence and laundry

WARWICK COUNTY LUNATIC ASYLUM—Temporary Assistant Medical Officer Salary £6 6s per week, with board &c

WARRINGTON INFIRMARY AND DISPENSARY—Senior House Surgeon Salary at rate of £200 per annum with board apartments and laundry

WEI HAI WEI COLONY—Medical Officer Salary £300 per annum with free unfurnished quarters &c.

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon unmarried Salary £150 and £120 per annum respectively with residence board, and laundry

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford E—Junior House Surgeon Salary at rate of £100 per annum with board residence and washing

WEST RIDING OF YORKSHIRE CARDIGAN SANATORIUM near Wakefield—Assistant Medical Officer Salary £300 per annum with partial board

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY—House Surgeon Salary £150 per annum with board lodging and attendance

WIGAN ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY—Female Junior House Surgeon Salary £130 per annum with board apartments and washing Also House Surgeon Salary £170 per annum with board apartments and washing

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THE Chief Inspector of Factories Home Office London S W, gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Ballinrobe in County Mayo at Llansawel in the county of Carmarthenshire a Rathgormuck in County Waterford at Slievereagh in County Cork at Southwold in the county of Suffolk and at Tarbert in the county of Argyllshire

Births, Marriages, and Deaths.

BIRTHS

FORSTER.—On Feb 11th at Woodhill Crowthorne Berks, the wife of Lieutenant C M. Forster R.A.M C of a daughter

SMYTH—On Feb 13th at Southcroft Manor-road High Barnet the wife of Francis Radway Smyth M R C S L.R C.P of a daughter

WYARD—On Feb 13th 1915 at 6 Connaught Mansions Battersea Park S W., to Constance Enid wife of Lieutenant Stanley Wyard M D M.R C P, a daughter

MARRIAGES

GUNN—MACDONALD—On Feb 6th at the Catholic Apostolic Church *Edinburgh* James Turner Gunn M.B Ch.B F R C S Edin to Adelaide Lucy Frances only daughter of Mr and Mrs N D *Macdonald Coll Earn Auchterarder*

SKRIMSHIRE—LOGAN—On Jan 16th at St Paul's Church Poona *Francis Robert Bradley Skrimshire* Captain R.A.M C to Nona Jean, youngest daughter of the late C B Logan and of Mrs Logan Westmarch Torquay

DEATHS

HUNTER.—On Feb 4th at 31 St James-street Paisley N B John Baird Hunter M D Glasg of 3 Smithhills street Paisley aged 78 years

MCGOWAN—On Jan 29th 1915 at his residence "Hill side" Tabankulu *Pondoland Cape Colony of pneumonia W Oscar S* McGowan M.B Ch B eldest son of Dr William McGowan Maghera Co Derry (Cablegram)

MCKILLIAM—On Feb 7th at his residence Ballandalloch Blackheath Robert McKilliam M.D

N.B —A fee of 5s is charged for the insertion of Notices of Births Marriages and Deaths

BOOKS, ETC, RECEIVED

HOUGHTON MIFFLIN COMPANY *Boston and New York* and **CONSTABLE AND CO** London

Animal *Experimentation* and Medical *Progress* By William Williams Keen M D LL.D with Introduction by Charles W Eliot LL D *Price 7s 6d.* net

KING P S London.

The Campaign against Syphilis. By F W Giles M.B Durh, Member of the Council of the White Cross League. *Price 6d*

LAURIE T WERNER London

Progressive Portugal. By Ethel C Hargrove F R G S Price 6s

Manual of Training for Jungle and River Warfare By Major Gordon Casserly *Indian Army Price 3s 6d* net

The Balkan Cockpit. By W H Crawfurd Price. Price 10s 6d net

LONG JOHN LIMITED London.

Home Exercise and Health By P G Masters B A. Cantab Third (revised) edition with additions Price 2s *6d* net

LONGMANS GREEN AND CO London.

Town Planning By George Cadbury jun. Price *7s 6d.* net

Directions for a Practical Course in Chemical Physiology By W Cramer Ph.D D Sc Second edition. Price 3s net

Howe's Classified Directory to the Metropolitan Charities, 1915 Price 1s

LIPPINCOTT J B COMPANY Philadelphia and London.

Text book *of* General Therapeutics for Veterinarians By Eugen Fröhner Authorised translation from fourth German *edition* by Louis A Klein. *Price 12s 6d.* net

MILES EUSTACE, Chandos street, W C

Uric Acid Fetish. By Eustace Miles M.A. and C H Collings Price 1s *6d*

NATIONAL LEAGUE FOR PHYSICAL EDUCATION Tavistock-square London, W C

Mothercraft A course of lectures delivered under the auspices of the National *Association for* the Prevention of Infant Mortality at the Royal Society of Medicine and at Charing Cross Hospital Medical School. 1914 *Price 3s* net

ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH, New York.

Studies from the Rockefeller Institute for Medical Research Vol XIX. Reprints.

THACKER, W AND CO London and India.

History of the Indian Medical Service 1600-1913 By Lieutenant Colonel D G Crawford, Bengal Medical Service retd. Two Vols Price 28s net.

THE PONS PRESS Bridge-street Manchester

How You Live Again. By J Mooney M.B *Price 5s* net

UNIVERSITY PRESS Cambridge

Flies in Relation to Disease Bloodsucking Flies By Edward Hindle B A. Ph D Assistant to the Quick Professor of Biology Cambridge

WHITAKER, London

Whitaker's Almanack, 1915. By Joseph Whitaker F S.A. Price 2s 6d

Whitaker's Peerage Baronetage Knightage and Companionage 1915. Price 5s net.

WYMAN AND SON London and **H.M STATIONERY OFFICES**

Manual of Instruction for the Royal Naval Sick Berth Staff Price 2s had been furnished to such troops, and whether any oilskin coats to wear with the same had been supplied in place of the usual army greatcoats —Mr TENNANT said in reply The total casualties from frost bite to Jan 24th last amount to 9175 Large numbers of gum boots and similar articles and waterproof coats and capes have been provided in addition to the usual army boots and greatcoats

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to THE LANCET *Office, directed to the Sub Editor no later than 9 o clock on the Thursday morning of each week such information for gratuitous publication*

AUSTIN E C F R C S Eng L R C P Lond has been appointed Medical Superintendent of the Withington Poor law Institution

DANIELS DAVIS M D B S Lond F R C S Eng has been appointed a Senior Surgeon to the Mansfield General Hospital

JOHNSON J STAFFORD M B B Ch N U I has been appointed Temporary Resident Surgical Registrar at the Richmond Whitworth and Hardwicke Hospitals

MCFARLAN W H has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Hawes District of the county of Yorks North Riding

NEALE, T NORMAN L A H Dub has been appointed Dispensary Medical Officer for the Powerscourt District Dublin

PICK LAWRENCE M R C S L R C P Lond has been appointed Assistant Schools Medical Officer to the Barry Education Committee

POLLOCK J H M B B Ch N U I has been appointed Temporary Resident Pathologist at the Richmond Whitworth and Hardwicke Hospitals

SALTER C E M D Lond F R C S Eng has been appointed Temporary Assistant Medical Officer of Health and Assistant School Medical Officer for Scarborough

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

ASHTON UNDER LYNE DISTRICT INFIRMARY AND CHILDREN S HOSPITAL.—Senior House Surgeon Salary £140 per annum with board residence washing &c

BARROW IN FURNESS NORTH LONSDALE HOSPITAL.—House Surgeon Salary £150 per annum with residence board and laundry

BEXLEY KENT LONDON COUNTY ASYLUM —Locum Tenens Medical Officer Salary 6 guineas a week with quarters board and washing

BIRKENHEAD AND WIRRAL CHILDREN S HOSPITAL, Woodchurch road —House Surgeon Salary £100 per annum, with board residence and laundry

BIRKENHEAD BOROUGH HOSPITAL.—Senior House Surgeon Salary £120 per annum with board and laundry Also Junior House Surgeon Salary £100 per annum with board and laundry

BIRMINGHAM CITY MENTAL HOSPITAL, Rubery hill —Female Junior Assistant Medical Officer Salary £200 per annum with apartments board laundry &c

BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer unmarried Salary £2[illegible]0 per annum with apartments fire lights and attendance

BIRMINGHAM YARDLEY ROAD SANATORIUM AND ANTI TUBERCULOSIS CENTRE.—Third Assistant Medical Officer Salary £200 per annum with board and residence

BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY —House Surgeons Senior and Junior Salaries £150 and £130 per annum with board residence and laundry

BOOTLE COUNTY BOROUGH —Temporary Clinical Tuberculosis Officer Salary at rate of £100 per annum

BRADFORD CHILDREN S HOSPITAL.—House Surgeon Salary £120 per annum with board residence and laundry

BRIDGWATER HOSPITAL.—House Surgeon unmarried Salary at rate of £125 per annum with board lodging and washing

BRISTOL EYE HOSPITAL.—House Surgeon Salary £1[illegible]0 per annum with board residence and laundry

BRISTOL GENERAL HOSPITAL.—Resident Obstetric Officer for six months Salary at rate of £120 per annum with board residence &c

BRISTOL ROYAL INFIRMARY —Throat Nose and Ear House Surgeon Salary at rate of £120 per annum with board apartments and laundry

BROADMOOR STATE CRIMINAL LUNATIC ASYLUM Crowthorne Berks —Assistant Medical Officer unmarried Salary £2[illegible] per annum with board rooms, washing and attendance

BURNLEY VICTORIA HOSPITAL.—House Surgeon Salary £[illegible] per annum with residence board and washing

BURSLEM HAYWOOD HOSPITAL.—Female Resident Medical Officer Salary £1[illegible]0 per annum with board residence and laundry

BURY INFIRMARY —Junior House Surgeon Salary £[illegible]0 per annum with board residence and washing

CANCER HOSPITAL, Fulham road, S W —House Surgeon for six months Salary £100 per annum

CANTERBURY KENT COUNTY ASYLUM Chartham —Third Junior Assistant Medical Officer Salary £[illegible]0 per annum with quarters board washing &c

CARMARTHEN JOINT COUNTIES ASYLUM —Temporary Second Assistant Medical Officer Salary at rate of £[illegible]0 per annum with board lodging washing &c

CENTRAL LONDON OPHTHALMIC HOSPITAL Judd street W C —House Surgeon Salary at rate of £[illegible] per annum with board and residence

CHESTER, CITY AND COUNTY OF THE CITY OF —Assistant Medical Officer of Health Salary £3[illegible]0 per annum

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST Victoria Park E —House Physician for six months Salary at rate of £[illegible] per annum with board residence and washing Also Resident Medical Officer Salary £200 per annum with board &c

CLAYBURY LONDON COUNTY ASYLUM Woodford Bridge Essex —Fifth Assistant Medical Officer unmarried Salary £2[illegible] per annum with board apartments and washing

DARLINGTON HOSPITAL AND DISPENSARY —House Surgeon Salary £150 per annum with board, attendance and laundry

DEVONPORT ROYAL ALBERT HOSPITAL —House Surgeon unmarried Salary £150 per annum with board and laundry

DEWSBURY AND DISTRICT GENERAL INFIRMARY —House Surgeon Salary £170 per annum with board residence and laundry

DUBLIN SCHOOL OF PHYSIC TRINITY COLLEGE.—Mary Louisa Prentice Montgomery Lectureship in Ophthalmology Salary about £[illegible] per annum

DUDLEY GUEST HOSPITAL.—Senior Resident Medical Officer and Assistant House Surgeon for six months Salary £150 and £[illegible] per annum respectively with board, residence attendance and washing

DUMFRIES AND GALLOWAY ROYAL INFIRMARY —Female Resident House Surgeon Salary £120 per annum

EAST HAM COUNTY BOROUGH OF —Tuberculosis Officer Salary at rate of £500 per annum

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon unmarried Salary £70 per annum with board lodging and washing

EXETER ROYAL DEVON AND EXETER HOSPITAL.—Senior House Surgeon for 12 months Also House Physician and Assistant House Surgeon for six months Salary at rate of £250 per annum for senior and £150 for junior posts with board apartments and washing

FIJI (THE GILBERT AND ELLICE ISLANDS PROTECTORATE AND THE SOLOMON ISLANDS PROTECTORATE) —Three Medical Officers Salary £350 per annum free quarters provided

GLAMORGAN COUNTY COUNCIL.—Medical Officer for Inspection of Children in Public Elementary Schools Salary at rate of £3[illegible]0 per annum

GLASGOW ROYAL MATERNITY AND WOMEN S HOSPITAL.—Two Indoor House Surgeons and Two Outdoor House Surgeons at the Hospital and One Outdoor House Surgeon at the West End Branch (which is open only to Lady Graduates) Indoor appointments for six months and outdoor for three months

GREAT YARMOUTH HOSPITAL.—House Surgeon unmarried Salary £200 per annum with board lodging and washing

HALIFAX ROYAL INFIRMARY —Second and Third House Surgeons unmarried Salary £120 and £100 per annum respectively with residence board and washing

HOLBORN UNION INFIRMARY Archway road N —Second Assistant Medical Officer Salary £150 per annum with board apartments and washing

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton —House Physician for six months Salary 30 guineas

HOSPITAL FOR SICK CHILDREN Great Ormond street London W C —Assistant Casualty Medical Officer unmarried for six months Salary £30 with board residence &c

HULL, CITY AND COUNTY OF KINGSTON UPON HULL.—Temporary Senior Tuberculosis Medical Officer Salary at rate of £500 per annum

HULL, VICTORIA CHILDREN S HOSPITAL, Park-street —Resident House Surgeon and Resident Assistant House Surgeon Salary £[illegible]0 and £50 per annum respectively with board and laundry

INVERNESS NORTHERN INFIRMARY —House Surgeon Salary £1[illegible]0 per annum with board &c

LABORATORIES OF PATHOLOGY AND PUBLIC HEALTH —Bacteriologist Salary £170 per annum

LEICESTER ROYAL INFIRMARY —House Physician Salary at rate of £120 per annum

LINDSEY (LINCOLNSHIRE) COUNTY COUNCIL.—Combined Temporary Assistant Tuberculosis and Assistant School Medical Officer Salary at rate of £300 per annum

LIVERPOOL CITY HOSPITAL, Grafton-street.—Visiting Physician Salary at rate of £13[illegible] per annum

LIVERPOOL, CITY OF —Locum Tenens School Medical Officer Salary 6 guineas per week

LIVERPOOL COUNTY ASYLUM Rainhill near Liverpool —Temporary Assistant Medical Officer Salary £6 6s per week with apartments board attendance and washing

LONDON COUNTY COUNCIL LEWISHAM CENTRE FOR THE DENTAL TREATMENT OF SCHOOL CHILDREN Rushey green S E —Anaesthetist one half-day every fortnight Salary £25 per annum

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—Three House Surgeons and Two House Physicians each for six months Salary at rate of £[illegible] per annum with board and residence

LONDON HOSPITAL, E —Assistant Surgeon

MANCHESTER, COUNTY ASYLUM Prestwich —Assistant Medical Officer unmarried Salary £2[illegible]0 per annum with board apartments attendance and washing

MANCHESTER, ST MARY'S HOSPITALS FOR WOMEN AND CHILDREN —[illegible] Resident Surgical Officer Salary £[illegible]0 per annum with board and residence Also House Surgeon for three or six months Salary at rate of £70 per annum with board and residence Also House Surgeon at Whitworth street West Hospital for three or six months Salary at rate of £[illegible]0 per annum with board and residence

METROPOLITAN BOROUGHS OF HACKNEY AND ST[illegible] —[illegible] Tuberculosis Officer Salary at rate of £[illegible] per annum

MIDDLESEX COUNTY ASYLUM Napsbury near St Albans —Temporary Assistant Medical Officer Salary [illegible] guineas per week with board lodging washing and attendance

MIDDLESEX EDUCATION COMMITTEE —Temporary Assistant School Medical Officer Salary at rate of £[illegible] per annum

MILE END OLD TOWN INFIRMARY —Second Assistant [illegible] and Junior Assistant Medical Officer Salary £[illegible] and £[illegible] per annum respectively with board [illegible]

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON Greenwich road S E —Junior House Surgeon [illegible] Salary £[illegible] per annum with board and residence and laundry

NEWPORT (MON) ROYAL GWENT HOSPITAL.—[illegible] Medical Officer [illegible] Salary [illegible] for six months at rate of £[illegible] per annum [illegible] months £[illegible] and [illegible] laundry

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne street Edgware-road W

THURSDAY —8.30 P M Paper:—Dr E G Little Rodent Ulcer its Nature and Some Methods of Treating it.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND Lincoln's Inn Fields W C

MONDAY WEDNESDAY AND FRIDAY —5 P.M. Hunterian Lectures:—Prof A. Keith: The Anatomy and Mechanism of the Alimentary Canal. (Illustrated by specimens from the Museum of the College and by the use of the epidiascope) (Lectures I, II, and III)

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith road, W

MONDAY —10 A.M Dr Simson: Diseases of Women. 10.30 A.M, Medical Registrar Demonstration of Cases in Wards 12 noon, Dr Bernstein Pathological Demonstration 2 P.M. Medical and Surgical Clinics. X Rays. Mr D Armour: Operations Dr Pritchard Bacterial Therapy Department. Mr B Harman and Mr Gibb: Diseases of the Eye

TUESDAY —10 A.M. Dr Owen: Demonstration of Cases in Wards 12 noon Mr T Gray: Demonstration of Fractures &c. 2 P.M., Medical and Surgical Clinics. X Rays Mr Baldwin Operations Dr Davis: Diseases of the Throat, Nose and Ear Dr Pernet Diseases of the Skin.

WEDNESDAY —10 A.M. Dr Saunders: Diseases of Children Dr Davis: Operations of the Throat, Nose and Ear 11 A.M Mr Souttar Demonstration of Minor Operations 12 noon, Lecture:—Mr Souttar Abdominal Diagnosis 2 P.M Medical and Surgical Clinics X Rays Mr Pardoe: Operations Dr Simson: Diseases of Women Mr Gibb: Diseases of the Eye.

THURSDAY —9 A.M. Dr Bernstein: Bacterial Therapy Department. 12 noon, Lecture Dr G Stewart: Neurological Cases 2 P M., Medical and Surgical Clinics X Rays Mr D Armour: Operations Mr B Harman: Diseases of the Eye.

FRIDAY —10 A.M Dr Simson: Gynæcological Operations 10 30 A.M. Surgical Registrar Demonstration of Cases in Wards 12.15 P M Lecture:—Dr Bernstein Applied Pathology 2 P.M Medical and Surgical Clinics X Rays. Mr Baldwin: Operations Dr Davis Diseases of the Throat, Nose, and Ear Dr Pernet Diseases of the Skin.

SATURDAY —10 A.M Dr Saunders: Diseases of Children Dr Davis Operations of the Throat, Nose, and Ear Mr B Harman: Eye Operations 12 noon Lecture:—Mr Souttar: Surgical Anatomy of the Abdomen 2 P.M., Medical and Surgical Clinics X Rays. Mr Pardoe Operations

NORTH EAST LONDON POST GRADUATE COLLEGE, Prince of Wales's General Hospital Tottenham N

MONDAY —Clinics:—10.30 A.M. Surgical Out-patient (Mr E Gillespie) 2.30 P.M Medical Out-patient (Dr T R. Whipham) Gynæcological (Dr J B Banister) 3 P.M., Medical In patients (Dr R. M Leslie)

TUESDAY —2.30 P.M. Operations Clinics:—Medical Out-patient (Dr A. G Auld) Surgical (Mr Howell Evans) Nose Throat, and Ear (Mr H. D Gillies) X Rays and Electrical Methods (Dr Metcalfe) 3.30 P M. Medical In patient (Dr A. J Whiting) 4 30 P.M Clinical Demonstration —Dr A. G Auld: Selected Medical Cases

WEDNESDAY.—Clinics:—2 P M., Throat Operations (Mr Gillies) 2.30 P.M. Children's Out-patient (Dr T. R. Whipham); Skin (Dr G N Meachen); Eye (Mr Brooks)

THURSDAY —2.30 P M Gynæcological Operations (Dr A. E Giles) Clinics:—Medical Out-patient (Dr A. J Whiting) Surgical (Mr Carson) X Rays and Electrical Methods (Dr Metcalfe)

FRIDAY —2.30 P.M., Operations Clinics:—Medical Out-patient (Dr A. G Auld): Surgical (Mr E. Gillespie) Eye (Mr R. P Brooks)

THE THROAT HOSPITAL, Golden-square W

MONDAY —5 15 P.M Special Demonstration of Selected Cases

THURSDAY —5 15 P M. Clinical Lecture.

ST JOHN'S HOSPITAL FOR DISEASES OF THE SKIN 49, Leicester-square W C

TUESDAY —6 P.M. Dr K. Sibley Seborrhœa and Psoriasis

THURSDAY —6 P.M. Chesterfield Lecture:—Dr M. Dockrell: Some New Growths.

ROYAL INSTITUTION OF GREAT BRITAIN Albemarle-street, Piccadilly W

TUESDAY —3 P M Prof C S Sherrington: Muscle in the Service of Nerve (Lecture VI)

MANCHESTER HOSPITALS POST-GRADUATE CLINICS

THURSDAY —ANCOATS HOSPITAL, Mill street.—4.30 P.M. Dr Bythell: Military Radiography

For further particulars of the above Lectures &c see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title-page to Vol. II of 1914 were given in THE LANCET of Dec. 26th, 1914

VOLUMES AND CASES.

VOLUMES for the second half of the year 1914 are now ready Bound in cloth, gilt lettered, price 16*s*, carriage extra.

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office, Feb. 17th 1915.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp Shade.	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks.
Feb 11	29·61	S E	...	79	47	37	37	38	Foggy
12	29 41	N E	...	50	41	35	35	36	Foggy
13	29 01	S E.	0·19	43	43	34	38	39	Raining
" 14	28 78	W	0·21	65	42	39	37	39	Raining
" 15	29·60	N W	—	63	45	35	34	36	Fine
" 16	30·13	S W	0·19	67	45	33	33	33	Foggy
" 17	29 62	S W	--	49	48	33	43	44	Raining

Notes, Short Comments, and Answers to Correspondents.

VERMIN IN THE TRENCHES

To the Editor of THE LANCET

SIR,—The screeching of the shells and the ping of the rifles must be very trying to the nerves of our soldiers in the trenches but the added filth and mud in these dwelling places, with the forced personal uncleanliness, is a physical strain of equal sacrifice to the men and in the midst of this abnormal state of affairs the additional irritation of the wandering louse calls forth our aid for its immediate capture Not that this can be done readily as in ordinary civil life, still there should be no difficulty in trapping these pests swarming in their ideal quarters If trench existence is contrary to personal cleanliness and parasitical life is engendered, there is only one remedy, and that is poison Both large and small vermin can be only successfully destroyed in this way when they are in abundance There fore some easily accessible weapon of destruction should be in the possession of every soldier, and in the emergency castor oil, on the one hand, for application to sore places while for poisonous duties a pepper box containing pyreth rum powder, Keating's powder, or, best of all, flowers of sulphur Now, the latter can be dusted into the clothing, the stockings, or in any part of the underclothing When the body gets warm the effect of the sulphurous fumes on the parasites and the ova will soon tell Then, when an oppor tunity occurs, a gipsy fire is suitably extemporised, and the clothes overhanging the products of combustion—i e, smoke —will determine the life of the vermin I am sure this simple suggestion will comfort the external body of our noble men at the front, and they will appreciate this remedy out of fashion May I add that sulphite of soda, 2 drachms to 1 pint of water, for bathing the body is inimical to parasitic life I am Sir, yours faithfully,

Alton, Hants, Feb 9th, 1915 JOHN FREDK BRISCOE

To the Editor of THE LANCET

SIR —We notice in your valued publication of Feb 6th that in an article dealing with this matter Lieutenant Colonel S Monckton Copeman quotes some directions for using —

Water	*10 gallons*
Jeyes' fluid	1½ ounces
Soft soap	1½ pounds

and the lather of this compound is to be allowed to dry on the garment In the first place, soft soap is hygroscopic and therefore unsuitable to be mixed with something that is to be allowed to dry, and in the second place, there are many more effective vermin destroyers than this particular fluid

It seems to us that a soap like our "Cofectant" soap or our biniodide of mercury soap, being soda soaps, allowed to dry on the garment would be a much greater protection than such a compound as suggested above, and not liable to cause the garments to keep damp "Cofectant" has been proved to kill the eggs or larvæ of vermin as well as the active units We are, Sir, yours faithfully

EDWARD COOK AND CO LIMITED

Feb 16th, 1915 (THOS ALEX COOK, Director)

"ANCIENT LIGHTS"

To the Editor of THE LANCET

SIR —An interesting survival of mediæval organotherapeutics in rural England came to my notice to-day Measles of a rather severe type is epidemic here just now and one of my patients a sturdy boy aged 4 who had passed through a stage of heavy rash has had a good deal of subsequent bronchial catarrh with troublesome night cough but with no signs of pneumonia This morning I found him distinctly better after a night of quiet sleep and was just about to commend the action of the last bottle of medicine when the mother, who can neither read nor write forestalled me 'I must tell you what we done she said, and what they done was this A wise old woman had seen the boy on the preceding evening His cheeks were flushed and she pointed out that this showed that the 'inflammation" had se in and advised them to get from the butcher the lungs of a sheep just killed to make a deep cut in each lung and to apply them each to one of the soles of the patient's feet keeping them attached all night by a bandage This was religiously done and when taken off this morning the lungs were hotter than when applied and had drawn out all the inflammation The credit for the boy's recovery will I fear not be mine This piece of medical lore must have been handed down by word of mouth through many generations of illiterate people

I am Sir yours faithfully

Bromsgrove, Feb 15th 1915 H C[illegible]LEON KIDD

URINE IN CHILDREN'S DISEASES

D G W —With the exception of brief articles in works on diseases of children, such as Dr Dawson Williams's "Medical Diseases of Infancy and Childhood," most of the references to the urine in relation to children's diseases occur in text books dealing with the general aspects of urinary analysis There are, for example incidental references to the urine of children in Brandeis's "L Urine Normale et Pathologique", Neubauer Huppert's "Analyse des Harns," Vols I and II, Abderhalden's "Handbuch der Biochemischen Arbeitsmethoden," Vol V Part I Blumenthal's "Handbuch der Speziellen Pathologie des Harns", and Mitchell's "Modern Urinology" The first named book deals perhaps more fully than the others with the urine of children, and it gives several useful tables showing the composition at various ages We do not at the moment recall any articles in recent medical literature dealing specially with the examination and diagnostic value of analyses of the urine in children

Mr Stanley Burns (*Montreal*) —The details should be sent to the Imperial Cancer Research Fund, 8-11, Queen square London, W C

Enthusiast —We are informed on the best authority that our correspondent's argument is based upon misconception

Dr T D Harries —The criticism does not, we hope, apply to the present generation

COMMUNICATIONS not noticed in our present issue will receive attention in our next

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY, Burlington House, London, W

THURSDAY —Papers:—Mr J F Twort and Prof L Hill: The Effect of the Depth of Pulmonary Ventilation on the Oxygen in the Venous Blood of Man —Dr A J Ewart: On the Function of Chlorophyll (communicated by Prof A. C Seward) —Mr E. Heron Allen Contributions to the Study of Bionomics and Reproductive Processes of the Foraminifera (communicated by Prof W A Herdman) —Mr A Compton The Influence of the Hydrogen Concentration upon the Optimum Temperature of a Ferment (communicated by Prof W Bulloch)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

MONDAY
  SECTION OF ODONTOLOGY (Hon Secretaries—F Coleman F R Smyth): at 8 P M.
  Short Communications
  Dr Ackerley: (1) Some Primary Factors in the Causation of Gingivitis (2) Disappearance of Adeno-Fibroma of Breast after adequate treatment of Oral Sepsis.
  Paper
  Dr H Ewan Waller: The Influences of the Thyroid Gland upon Dental Caries
  SECTION OF MEDICINE —Members of the Section of Medicine are specially invited to attend the meeting of the Section of Odontology (See above)

TUESDAY
  SECTION OF MEDICINE (Hon Secretaries—John Fawcett Charles R Box): at 5.30 P M
  Dr Frederick Taylor: Case of Multiple Pulsating Tumours Secondary to Hypernephroma.
  Dr Parkes Weber: (1) Bilateral Hypernephroma with Secondary Thrombosis of the Inferior Cava and Uræmia (2) Latent Addison's Disease revealed by the occurrence of Pneum[illegible]

THURSDAY
  SECTION OF NEUROLOGY (Hon Secretaries—T Grainger Stewart H Campbell Thomson): at 8 P M
  Clinical Meeting
  Demonstration of Cases

FRIDAY
  SECTION OF EPIDEMIOLOGY AND STATE MEDICINE (Hon Secretaries—G S Buchanan William Butler): at 8.30 P M.
  Special Discussion
  The Epidemiology of Cerebro-spinal Meningitis (opened by Sir William Osler)

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square W

MONDAY —8.30 P M Adjourned X Ray Evening Items of Interest in Connexion with the War will be [illegible] by Dr A C Jordan Dr H Orton Mr G [illegible] Dr [illegible] Dr R Knox and others

ROYAL SOCIETY OF ARTS, John-street, Adelphi, W C

WEDNESDAY —8 P M Mr W J [illegible] The [illegible] of Germany

HUNTERIAN SOCIETY, Barbers Hall, Monkwell-street, E C

WEDNESDAY —9 P M, Dr [illegible] [illegible] Apparatus for Localising [illegible] Dr G T Western Vaccine Therapy [illegible]

CHILD STUDY SOCIETY, LONDON, Royal Sanitary Institute, 90, Buckingham Palace-road, S W

THURSDAY —6 P M Discussion on the Care and [illegible] the Children from Antenatal Period [illegible] Dr [illegible] Pritchard [illegible] One to Five Years Dr D Forsyth

The Morison Lectures

ON

THE NEW PSYCHIATRY

Delivered before the Royal College of Physicians of Edinburgh on March 8th, 10th and 12th, 1915,

BY W H B STODDART, M D LOND, F R C P LOND,

LECTURER IN MENTAL DISEASE, ST THOMAS'S HOSPITAL, ETC

ABSTRACT OF LECTURE III[1]

(Delivered on March 12th.)

MR PRESIDENT AND GENTLEMEN,—Another important psychological mechanism which often serves as an indicator of repressed complexes, not only in nervous disorder, but also in everyday life, is "projection" The peculiarity of this phenomenon is that the *effects of the repressed complex are* attributed by the individual possessing it not to himself, but to some other person. A few examples will explain my meaning People who are guilty of some failing imperfection, or weakness, of which they are ashamed, are exceedingly liable to attribute the same fault to others If a thief loses an article his first thought is that somebody has stolen it from him, and the man who is ever ready to disbelieve any statement made to him is himself a person who is habitually economical of the truth The dishonest financier is always on the alert lest somebody should swindle him, and he is exceedingly intolerant of anybody who succeeds in doing so The man who is unfaithful to his wife is usually suspicious that she may have been unfaithful to him, and how *often* have we all heard an asylum patient declare that his wife is insane, or a drunkard accuse his consort of insobriety Self reproach is so unpleasant to consciousness that it is repressed and sublimated into reproach of other people

THE NEUROSES

I now propose to discuss various matters that have been elucidated by psycho analytic methods respecting the neuroses, psychoneuroses, and psychoses Freud recognises two neuroses proper —viz., neurasthenia and the anxiety neurosis Probably a few cases of hypochondriasis are due to the same etiological factors as these neuroses and should therefore be included in the same group

Neurasthenia

Neurasthenia is a term which hitherto has been used very loosely, and the separation of the anxiety neurosis as a distinct disease is due to the clinical insight of Freud The term "neurasthenia" is now limited to a class of case which exhibits very definite symptoms the chief of which is an undue tendency to fatigue This is well demonstrated in ergographic tracings from neurasthenic patients In a normal person such tracing shows a gradual increase of power at the beginning of the experiment so that the lever rises more and more with each successive contraction This is ascribed to the effect of practice Subsequent contractions remain at the same level before fatigue sets in when the level rises less and less until the finger becoming absolutely useless, the tracing becomes a straight line With a neurasthenic, on the other hand, the initial increase of power due [illegible] is not shown. The first few contractions may be of an average height, but fatigue sets in immediately and the contractions become weaker and weaker. The same phenomenon is shown in experiments devised for the purpose of investigating the laws of mental fatigue In Weygandt's method, for instance, the patient is given a sheet of paper with columns of figures to be added He starts at the first column and at the end of a minute writes down his result so far as he has gone Then he passes to the next column, adds for a minute and puts down the result as before, and so on through the whole series In a normal person at first the effect of practice is noticeable, in that the added portions of the column get longer and longer until, fatigue setting in, they grew shorter and shorter In the neurasthenic, on the other hand, the added portions shorten from the very first Mistakes in the addition also occur earlier than in a normal individual The so called "irritable eye" exemplifies the muscular fatigue, the patient complaining that the eyes ache on reading for a short time, although no error of refraction can be found Examination with the perimeter soon fatigues the retina and, unless carried out quickly, the visual field will be found contracted or spiral

These patients are anxious enough to be busy about their affairs like other people, but all effort, mental or physical, leads to an intense feeling of fatigue In many cases, even the thought of doing anything causes the patient to tremble and to break into a profuse perspiration. Other symptoms are a sense of pressure on the top of the head, often localised to one spot on the left of the middle line, and various paræsthesias, especially of the joints and muscles and the back of the head over the occipital spine The last is explained as a "crawling" or "screwy" sensation and was aptly described by one patient, whose case was related to me, as a feeling as if there were a blackbeetle inside the skull lying on its back and kicking to get on its legs again Feelings of abdominal discomfort also occur and there may be hypochondriacal notions respecting the genito urinary apparatus Similar symptoms frequently occur in states of general debility, such as chlorosis, and in the early stages of organic nervous disease such as disseminated sclerosis or general paralysis In these conditions the case should, of course, not be labelled "neurasthenia", but when the above symptom complex occurs independently of any other disease then we have to deal with a case of true neurasthenia. In all cases of this kind, without exception, there is always to be found one essential etiological factor—viz, sexual excess In the majority of cases this takes the form of masturbation, but in a few patients the disease is traceable to frequent nocturnal pollutions, and I have come across a still smaller number of neurasthenics who, being habitual roues, owe their neurosis to excessive indulgence in normal sexual intercourse Such cases differ in recovering easily and rapidly as soon as the cause of their malady is explained and removed Suitable advice and recommendations as to mental hygiene are the proper remedy, but it is often necessary to carry out a certain amount of psycho analysis in order to trace and uproot the complexes which constitute the foundation of such irregular sexual impulses

The Anxiety Neurosis

The "anxiety neurosis" is characterised, as its [illegible]plies, by a persistent state of anxiety or fear usually without obvious cause, but sometimes [illegible]ated by some real cause for anxiety This state is always out of proportion to its cause, and

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[1] Lectures I and II were published in THE LANCET of March 2[illegible] and [illegible] respectively

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U —University College Cork Secretary of

V —Messrs Volans and [illegible] Leeds Yorkshire [illegible]

W —West London Post Graduate College Secretary of [illegible] Lond Secretary of [illegible] Secretary of Mr T [illegible] Mr J D [illegible] Lond impulses Some of these patients have feelings of *incompleteness* in action, in intellectual problems, in emotional reaction, and in perception Others have strange feelings of unreality and of depersonalisation, called by Janet psycholeptic crises Formerly this condition was called "obsessional insanity," a term which was justifiable in that it offered no explanation The mind is obsessed or besieged by such thoughts, fears, or impulses Janet advanced a step by recognising what he called a "splitting of consciousness" or "mental dissociation" induced by a "lowering of the psychological tension," the psychical response of a psychasthenic to his environment being inadequate Freud regards the compulsion neurosis as a disease of the unconscious, and as having a purely sexual basis, regarding the symptoms as substitutions for certain repressed sexual ideas and emotions

[Dr Stoddart here discussed Freud's views and those of Dr Ernest Jones, concluding that psycho analysis has proved to be the only really successful method of treating the compulsion neurosis, but hypnotism may be used in much the same way as for hysteria—viz (1) for suggestion, (2) to recover buried memories, and (3) to obtain an emotional reaction to a repressed complex He briefly discussed other modes of treatment, and continued]

Maniacal Depressive Insanity

Maniacal depressive insanity is a disorder in which the patient is liable to attacks of mania, melancholia, or stupor, these being in some cases accompanied with or replaced by some delusional state It is useless to attack this psychosis while the patient is passing through one of these acute phases of the disorder Radical treatment of the disease must be undertaken during a period of sanity or, as the populace would say, during a "lucid interval" It is interesting, moreover, that psycho analysts, who have had experience of these cases, have come to the conclusion that a very short analysis is most successful in effecting a cure, while a complete analysis, in the Freudian sense, only leads to relapse, but, as I said before, many psycho analysts of experience differ from me on this point

Dementia Præcox

Dementia præcox has been most carefully studied by Jung from a psychological point of view, and the conclusion at which he arrives is that there is a remarkable psychological resemblance between it and hysteria The complexes and the mechanism of their repression are exactly the same, yet hysteria is an eminently curable disease while dementia præcox is conspicuously incurable The catatonic symptoms can easily be conceived as purely repressive devices, and it has been definitely proved in some cases that certain stereotyped actions are distorted representations of the fulfilment of repressed wishes, but at the same time we must not lose sight of the fact that these same symptoms also occur in certain organic cerebral diseases whose origin is at least much more organic than psychical Again, the question is not yet absolutely settled whether dementia præcox is a psychogenic or organic disease Alzheimer and others have described areas of gliosis in the deepest layers of the cortex, others have discovered fatty degeneration of the nerve cells, others, again, have observed cerebellar changes, all of which might very well be due to excess or defect of certain internal secretions This idea, surmised by Kraepelin, has been rendered probable by Mott's discovery that certain glands possessing internal secretions, especially the ovaries and testes, are more or less atrophied in dementia præcox On the other hand, Jung appears to have cured, or at least considerably ameliorated some cases of dementia paranoides by psycho analysis only Jung recognises all these difficulties and gets out of them by supposing that the mental conflicts of dementia præcox give rise to toxins which act deleteriously upon the cerebral substance I must confess that to me this idea does not appeal very strongly, but Kraepelin, who will have nothing to do with psycho analysis, is, curiously enough, rather pleased with the suggestion

The chief characteristic of patients suffering from dementia præcox is that they are living a dream and in the end completely retire from the world of reality (autism) Up to the present very little psychological investigation of the disease has been made, but we hope to learn much from the investigation now going on at Zürich For the present, therefore, we must regard the pathology of dementia præcox as still undetermined.

Paranoia

The last disease I must submit for your consideration is paranoia This is a mental disorder of the fourth or fifth decade as a rule, and it is characterised by the progressive development of systematised delusions The patients being of a suspicious temperament see hidden meanings in incidents which possess no unusual value for the ordinary man, and from the inevitable accumulation of such misinterpretations they evolve a system of delusions which vary from patient to patient The cases are divided into two main classes (1) the eccentrics or mattoids, the borderland cases of insanity, including faddists and cranks of all kinds, and (2) the egocentrics, including patients who suffer from delusions of persecution, jealousy, exaltation, and ill health (hypochondriacs) All these patients are perfectly clear mentally, have no hallucinations, behave well and can think intelligently apart from their particular delusions, but they are firmly convinced that there is nothing mentally wrong with them, and therefore always feel aggrieved when they are involuntarily placed under care for their malady

Since the advent of our new psychiatry many patients of the above mentioned class have been analysed by modern psychological methods all over the civilised world, and the outcome has been the remarkable discovery that paranoia is a psychosis erected on the invariable basis of repressed homosexuality Naturally enough the idea that a person has homosexual inclinations is usually repugnant to him, he refuses to admit it to himself, and it is repressed into the unconscious Should such repression fail, the homosexual complex reappears in consciousness in the disguised form of paranoia or, I may add, as dementia paranoides, for it has been shown that the same psychical mechanism is at work in this variety of dementia præcox, designated by Kraepelin in his most recent edition, by the way, as "paraphrenia."

Although psycho analysis has been successful in elucidating the psychology of this disease the method usually fails as a mode of treatment I understand, however, that some psycho analysts have effected a cure and many have alleviated the patient sufficiently to enable him to go about his business with a certain degree of mental comfort the other symptoms of the neurosis are exaggerations of the normal physical signs of fear Such are irregularity and an increased frequency of the pulse, palpitation, anginal attacks, general vaso motor constriction with coldness and blueness of the extremities, dryness of the mouth, perspiration (especially of the hands), polyuria, diarrhœa, respiratory oppression and air hunger, even attacks of asthma, vertigo, tremor, attacks of ravenous appetite, nausea and sometimes actual vomiting, night terrors and insomnia, hyperæsthesia for visual impressions and especially for noises, and a general apprehensiveness Such patients are liable to exacerbations of their various symptoms in which the feeling of terror may be extremely severe with a feeling of congestion in the head and a dread of impending death It is even said that there may be temporary loss of consciousness, but I have not seen such a case

Freud and all who have subsequently investigated the matter are agreed that the anxiety neurosis owes its origin to an accumulation of mental excitement which finds no somatic outlet, and, further, that this excitement is almost always, probably always, of a sexual nature Accordingly we meet with this neurosis among engaged couples who cannot afford to get married, in widows and widowers, in women whose husbands practise coitus interruptus (this is the commonest cause), in women during the climacteric whose husbands have reached senility, and in patients who with great effort have renounced masturbation There are other important contributory factors Heredity is one, and the condition also arises from overwork and exhaustion, especially after severe illness and prolonged watching by the bedside of a sick relative by night as well as by day Unfortunately the obvious remedy for such a neurosis is usually impracticable, and it is my custom in these cases to seek by means of a short analysis interests of the patient into which his repressed energy may be directed (sublimation of the sexual impulse) and, in the meantime, to prescribe some anaphrodisiac medicine, my favourite mixture for such purposes being a combination of camphor with the extract of black willow

The Psychoneuroses and Psychoses

The psychoneuroses and psychoses are on an entirely different plane from the neuroses The neuroses, as we have seen, owe their origin to existing causes, probably of a chemical nature, at the time of the malady, but the psychoneuroses and psychoses are compromise formations between repressed wishes and the forces which repress them, that is to say that their mechanism is exactly the same as that of dreams The obvious differences between dreams and the psychoneuroses are that in the one the subject is asleep and desires to go on sleeping while in the other he is awake, and also that dreams are normal while psychoneuroses are abnormal

[Dr Stoddart here illustrated by the imaginary case of a younger step sister unfairly subordinated to the rest of the family, how the different endings possible to the well known story of Cinderella might produce ideas of persecution or dementia præcox or hysterical paraplegia]

Hysteria

Freud s theory of hysteria depends on the recognition of the infantile development of sexuality [illegible] events occur during childhood which at the time [illegible] no sexual significance, but the recollection of them after maturity is disproportionately exciting because puberty has in the meantime incomparably increased the reacting capacity of the sexual apparatus These unconscious infantile memories influence the whole sexual life of the individual and may be the determining cause of its disturbation Such hypnoid states are subconscious rather than unconscious manifestations of hysteria Sometimes, however, the phantasies or memories assume an unconscious form and then we have the so called hysterical attacks These consist of a series of emotional displays which are rendered comprehensible when the physician has discovered the underlying thought, for he is then able to see that such emotional manifestations are such as might be expected to occur in response to the given stimulus

Lastly, we have "conversion hysteria' which results from a persistent strife between some painful memory and the restraint of the censor from its coming to the surface, the result of the struggle being a compromise whereby the idea by distortion becomes converted into a somatic symptom, some bodily motor or sensory innervation or inhibition

Psycho analysis is to be regarded as the most radical form of treatment of hysteria and other functional mental disorders to be presently discussed, but I might here refer to other methods in common use Weir Mitchell's "rest cure ' is quite fashionable at the present time and undoubtedly gives good results in many cases, provided it be used rationally and in combination with some psychical influence at the same time Suggestion is most commonly used, and Weir Mitchell s private opinion of the whole procedure was that it acted mainly as a suggestive agency The prolonged mental and physical rest are beneficial the removal from home surroundings has the advantage of withdrawing the patient from an environment which has usually proved somewhat irritating the massage and possibly the electricity tend to improve metabolism, and the over feeding is well suited to patients who are ill nourished Let me say at once, however, that this method is worse than useless in any other condition than hysteria, and even in this disease failures are far from uncommon Moreover, the expense is often as great as in psycho analysis

Hypnotism may be employed with advantageous and often dramatically successful results in hysteria Hypnosis is much more easily achieved in this disease than in other mental disorders, and it may be used in one of three ways (1) to get the patient into an extremely suggestible mood so that suggestion of recovery may be given, (2) to recover buried memories or (3) to get the patient to react emotionally to buried memories

The Compulsion Neurosis

The compulsion neurosis is a disease which shows itself in a large number of ways The patients have a clear intellect and good memory and they are well orientated in time and place but they suffer from mental symptoms into which morbidity they have a clear insight They suffer from irrepressible thoughts which often take the form of metaphysical questionings such as "When was the beginning of all things?" "Who created [illegible] What existed before that?" [illegible] God?" or they attach undue importance to superstitions or they cannot help repeating in their minds things they have heard [illegible] suffer from morbid fears or morbid [illegible] were not under my care, and these were treated by Dr Nicholls.

I must make apology for lack of scientific methods I have been, all through, unable to obtain a lumbar puncture needle in this country, and lack of a bacteriological laboratory rendered microscopical examination of pus my only means of investigation of the organism

As regards the second series of cases—the more important one—scientific observation was rendered even less possible, by reason of the difficulties naturally encountered in such work when it is done in connexion with the transport arrangements of an expeditionary force on active service

CASE 1A.—Aged about 25 Physique poor History of sudden onset of pain at the back of the neck and across the shoulders, and severe occipital and vertical headache On the second day head retraction was marked, but not excessive Kernig's sign positive, abdominal and epigastric reflexes absent, knee jerks normal. The plantar reflex as with all natives was not obtainable, owing to the thickness of the soles of the feet On the third day there was purulent conjunctivitis in the right eye the pus showing a Gram negative diplococcus with an intracellular distribution. The case showed no further features of interest, and made an uneventful recovery

CASE 2A —Aged 20 years. Physique fair In general the case was almost precisely similar to the last save that the conjunctivitis affected both eyes, the pus from which showed the diplococcus, and there was a nasal discharge of thick yellow, creamy pus, which also contained intracellular diplococci After four days the patient became unconscious, with very marked head retraction, and died on the eighth day At the necropsy I found thick yellow pus in the pia arachnoid involving the brain from base to vertex descending into the greater fissures and all along the spinal cord

The following is a different type of case showing more severe onset, but proceeding to complete recovery

CASE 3A —Aged 15 Physique poor Onset very sudden with headache and pain at the back of the neck and across the shoulders, followed in about 12 hours by unconsciousness lasting three days during which he was brought a seven hours railway journey He was fed by tube for seven days Head retraction and Kernig's sign marked Eventually gradual recovery commenced without any special features, and was complete in about five weeks from the onset of the disease

The other cases of the same epidemic showed no features of special interest The two cases that reached necropsy showed post mortem findings similar to those in Case 2A

One case that occurred in the same epidemic, in which, though the patient died before I saw him, there is very little doubt of the diagnosis exemplifies very well another distinct type of the disease The onset in a native of superb physique was very sudden with pains at the back of the neck and across the shoulders, and severe headache Unconsciousness supervened in about an hour and a half, and death in six hours At the post mortem examination the only macroscopical feature was excess of cerebro spinal fluid, which was removed from absolute clarity by the nearest possible turbidity In none of these cases was any treatment, other than symptomatic, adopted

I was told by my colleague, Dr Nicholls, of the success of his prophylactic measures of burning down all the natives' huts occupied by those amongst whom his cases occurred, syringing out the nose and naso pharynx with weak antiseptic of everyone exposed to infection, and causing them all to take a bath in a strong solution of cyllin, and immersing all bedding, clothes &c, in a still stronger solution I therefore decided to follow out the same plan of campaign, only instead of burning the huts I pulled them all down and left the corrugated iron sheets of which they were made lying under the powerful African sun for two days, and subsequently had them re erected on a different site The bathing of all the natives exposed to infection, together with their clothes, bedding, &c, in cyllin 1 in 400 and 1 in 200 respectively, was carried out, but owing to there being considerably over 500 natives to be dealt with, I omitted the nasal syringing on the theory that an antiseptic strong enough to kill the meningococcus will probably have a similar effect on the cells of the nasal mucosa, whereas one strong enough only to inhibit their growth will so injure the nasal mucosa as to render it even more unable to resist the attacks of the organism The result of these measures, as of those of Dr Nicholls, was absolutely successful, not a single case occurring amongst the natives in the vicinity until six months afterwards, when the second epidemic occurred amongst natives lately imported from a totally different source

Second Series

This epidemic, as above mentioned, occurred amongst natives employed as military porters, who had been for a month in Mombasa, and amongst whom, while in Mombasa, a few sporadic cases had occurred

CASE 1B —Aged about 14 Physique and general condition poor Onset almost insidious, with mild headache, very slight stiff neck and slight pains in the limbs These increased until on the third day, the headache was very severe and the head retraction excessive On the fifth day semiconsciousness supervened, with at times delirium, in which the patient was very restless and, on one occasion, eluded his watchers and walked 400 yards before he collapsed This condition continued for some eight days, during which wasting became excessive Recovery commenced about the twelfth day proceeded uneventfully, and was complete in about five weeks from the onset

There followed five cases of no special interest, four of which died These five cases showed a tendency for the disease to assume a more virulent type, as evidenced by the suddenness of onset, severity of general symptoms, excessive head retraction, shortened time before the onset of unconsciousness, and the rapidity of the occurrence of death. None of the cases that died had any treatment other than symptomatic The one that recovered was treated with intramuscular injections of soamin, gr 5, on alternate days, but only in the later stages of the disease when convalescence was well established—i e, during the later stages of the epidemic, when I made the exhibition of soamin a routine measure

CASE 2B —Aged about 25 Physique and general condition exceptionally good History of syphilis probable, but not very clear Taken ill at 6 P M with severe headache, and pain in the back of the neck and back. The obtainable history is not very clear except that he was obviously very ill quite soon after the onset About 2 A M unconsciousness supervened and continued without remission until death When I first saw him at 9 30 the next morning he was deeply unconscious with rapid stertorous breathing and in a condition of absolute flaccidity, and presenting no sign of meningitis excepting the unconsciousness The general aspect of the case was almost exactly like that of a severe cerebral hæmorrhage The pupils were of medium size, reacting to light No strabismus There was absolutely no resistance to any passive movements of any kind Fæces had been passed the bladder was distended necessitating the use of a catheter Though I was naturally on the look-out for meningitis I could not correlate this case with any known manifestations of that disease and made a tentative diagnosis of cerebral hæmorrhage The patient died at 11 A.M, 17 hours after the onset of symptoms. At the post-mortem examination I found thick creamy yellow pus without molesting those people with whom he is brought into contact. Recovery is said to have been effected in a few cases of fairly recent origin by a method which somewhat resembles psycho-analysis, but differs from it in that the physician seeks, in the first instance, to obtain a positive transference before tackling the disease itself. He gets the patient to give a complete history of his life, endeavouring meanwhile to discover incidents and characteristics which have a bearing on his delusional state, and to disclose them. During the whole of this process, which takes 20 to 30 hours, he accepts the patient's point of view throughout until he ultimately gains his whole confidence and convinces him of his friendship, without, however, actually encouraging his delusions or agreeing with every word he says. Then, when a suitable opportunity offers, he suggests that the patient may have come to an erroneous conclusion about some quite insignificant occurrence. After a few more sittings, as opportunity offers, he points out another minor occasion when the patient might have been mistaken. So he goes on until he sees his chance for tackling the main delusion and pointing out that even here he may have also been mistaken. The physician takes advantage of any attitude of doubt and completes the cure by "therapeutic conversation." The whole procedure requires an enormous amount of tact, patience, and skill. Moreover, the physician must be familiar with these mechanisms of paranoia which have been discovered by the psycho-analytic method.

CONCLUDING REMARKS.

The main object of these lectures has been to expound the principles of psycho-analysis proper, its technique, the psychological mechanisms which it has disclosed, and the bearing of these mechanisms, not only on many of the patients in the asylums of Great Britain, but also on an enormous number of people pursuing their ordinary vocations in spite of curable mental worries or spending an enormous proportion of their time and income in nursing homes. The physician who will undertake the radical cure of these poor sufferers will earn the gratitude of society as well as that of the patients, which is always unbounded; but he must be a man of courage, for he will have to face the opposition of the "herd" for many years to come. In spite of all we may say, the subject of sex will remain taboo, yet no physician of experience can deny the enormous rôle played by sexual conflicts in the genesis of the neuroses. I do think that cases sometimes occur in which the psychogenetic conflict is non-sexual, but they are so rare that I can see the psycho-analytic literature of the future augmented by reports of such cases as curiosities.

Although I attach so much importance to psycho-analysis, I hope that no words of mine will detract from the systematic investigation of cases by other methods. It would be deplorable, for instance, if attention to psychological investigation should distract from the work of the clinical laboratory and thus allow a positive Wassermann reaction, so common in dementia præcox, for example, to be overlooked.

It has often been said that the frequency of mental disease is due to the effect of civilisation, to the hurry, bustle, and struggle for existence associated with urban life, to defective sanitation, insufficient sleep, overwork, poverty, brain fag, [illegible]ication, and a host of other things incident on civilisation. With all our modern conveniences, the Poor-law, hygienic surroundings, hospitals, comfortable railways with restaurant cars and sleeping accommodation, typewriters and telephones, such a view is manifestly erroneous.

That insanity is the result of civilisation is obvious to anybody who looks the facts in the face, but psycho-analysis has revealed that the essential factor is not hurry, bustle, and brain fag, but the repression of the instincts enforced by civilisation.

It is not to be supposed that the prophylaxis of insanity lies in letting loose the reins of licentiousness and depravity. The problem is far more intricate than this, and it is not likely that it will be solved in the present century, much less in our own time. The mystery at present surrounding sex and birth problems must be removed by systematic education of the young in such matters; early marriage must be made more possible than existing circumstances will permit, and old men and parents will have to remember the days of their own youth when they enact the laws which are to govern society. Moreover, the whole populace will have to be educated in such matters before any serious change can be accomplished.

CEREBRO-SPINAL MENINGITIS,

WITH NOTES ON TWO EPIDEMICS.

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Cerebro-spinal meningitis, or spotted fever, is a disease of great importance to the practitioner, for though nowadays large epidemics are rare in England, the occurrence of the disease in small numbers is frequent in our larger towns. In East Africa the disease has assumed characters so virulent that it is the dread of the native and the bugbear of the employer of native labour. This is not surprising, for in 1913 it killed, in one tribe, numbers variously estimated at 20,000 to 40,000.

It is a curious feature of the disease that there are places in East and Central Africa where it is always endemic and seldom epidemic, as, for instance, Uganda in general and the coast town of Mombasa, whilst in the highlands of British East Africa the endemic form is not often seen, and when the disease occurs it is usually in the form of an epidemic of greater or less virulence.

In the second of the epidemics to be here described the persons involved were natives of Uganda and the borderland between British East Africa and Uganda who were brought down to the coast to act as military porters in connexion with the campaign against German East Africa. While in Mombasa three or four cases of a clearly sporadic nature occurred, following the usual custom of that town, where amongst the natives post-basic meningitis is of continual occurrence.

First Series.

The first epidemic that came to my notice was of a much milder character than the second. It occurred at almost the same place in the highlands as the second, but amongst natives whose normal habitat more nearly approximates to the altitude in which they were then living. In all I had 8 cases in this epidemic, resulting in 4 deaths and 4 complete recoveries. Besides these a small number of cases occurred amongst natives who whereas the mildest case and the one showing the most insidious onset was in a patient of exceptionally poor physique and in a condition of very poor health for one month before he developed the disease Doubtless, however, I failed to diagnose many still milder cases This is an extraordinary and, I think, inexplicable feature of my cases, and one that held good, almost without reservation, throughout the two epidemics

Conditions of bronchial catarrh were very common amongst the natives in whom the second epidemic occurred, amounting certainly to 25 per cent of the whole number, but I have not been able, on looking over my notes, to correlate any special tendency for those so affected to be attacked by meningitis

Incubation period—I obtained no evidence to enable me to make any statement as regards this Three weeks elapsed after the porters were brought from Mombasa to the highlands before the first case occurred, but his only serves to prove that someone must have carried the virus about with him for that period without showing any symptoms

Prodromal symptoms—I was unable to notice any constant prodromal symptoms The disease usually attacked perfectly healthy individuals without any warning In one case there had been low fever and headache from an unknown cause for nearly a month before meningitis became obvious, but this had probably nothing to do with the disease

The Onset and Acute Stages of the Disease

These may be divided into five general types or degrees of acuteness —(*a*) Fulminating type, (1) exhibiting the ordinary symptoms of rigidity, &c, and (2) accompanied by coma so deep as to give rise to complete flaccidity, (*b*) acute type, (*c*) the common type, less acute than (*b*), (*d*) subacute type, (*e*) those cases in which symptoms of cerebro spinal meningitis are practically or entirely absent, and (*f*) spinal type These must not be taken as pathological or even clinical entities, but merely as an attempt at classification and subdivision of the disease into the forms in which it is usually seen For the purposes of description cases complicated by infection by the meningococcus of other organs than the meninges may be placed in a separate category as under (*g*) combined infection, (1) with rhinitis, (2) with conjunctivitis, (3) ? with enteritis

(*a*) *Fulminating type*—1 A very common form, of which Cases 3A and 5B are examples The onset is very sudden, and in a few minutes the patient is completely collapsed Unconsciousness comes on within an hour or two, but is never so complete that the general muscular rigidity is lost, though the irritability usually seen in meningitis is commonly absent Death is almost invariable 2 A rare form of which I have only seen one example—Case 2B Diagnosis of this form is probably impossible except by the examination of the cerebro spinal fluid, as the clinical condition presents no resemblance to the commonly accepted picture of meningitis

(*b*) The ordinary extremely *acute form*, in which the onset is sudden, with headache, pain in the back of the neck, and very frequently with pain across the shoulders, with or without the headache and pain in the neck The patient is very ill within a few hours of the first symptoms, and coma supervenes in from 24 to 48 hours The ordinary signs and symptoms of meningitis are always present, headache being always acute, head retraction often excessive, Kernig's sign strongly positive, and irritability continues throughout the coma

(*c*) The *commonest form* is something between Type (*b*) and Type (*d*) The mode of onset is variable, ranging from practically the same thing as in Type (*b*), sometimes accompanied by rigor, to insidious headache, gradually intensifying, with pain radiating down the neck and across the shoulders In other cases rheumatic pains in the limbs, and usually across the shoulders, are the first complaint If the patient is examined in the earliest stages it will generally be found that there is resistance to anteflexion of the head and if the head is forcibly rotated so that the head looks towards one or other shoulder, pain is complained of. A forcible depression, and at the same time forward movement of the shoulders, causes discomfort Within 24 hours the nature of the case has usually become obvious by reason of the marked stiffness of the neck or even obvious head retraction, and the presence, to a greater or less degree, of spasm of the ham-strings, giving rise to Kernig s sign This type of case usually becomes semi unconscious with continuance of excessive irritability and dislike to being disturbed throughout the acute stages of the disease, and in five to seven days is usually on the way to recovery Sometimes in this type of case coma deepens, is protracted, and the patient dies from exhaustion or toxic absorption

(*d*) *Subacute type*—In this form onset is very insidious, usually with headache, and often with pains of a rheumatic type in the limbs, back of the neck, and across the shoulders These may continue for several days before the persistence and increasing severity of the headache and occurrence of stiffness of the neck or head retraction give rise to suspicion of the true nature of the disease The duration of the active stage is from seven to ten days, and complete recovery is the rule This form is exemplified by Cases 6B and 9B

(*e*) *Cases unaccompanied by the ordinary symptoms of meningitis*—These are cases of a very mild type which range from Type (*d*) to those in which there are no symptoms, and the diagnosis rests on the demonstration of the meningococcus in the nasal mucus In these cases at the extreme end of a long series of types of decreasing virulence, there is probably very slight or no infection of the meninges, the sole lesion being a meningococcal infection of the naso pharynx I probably encountered many such cases, but, owing to circumstances especially inauspicious for investigation, completely failed to recognise them

(*f*) *Cases in which spinal symptoms predominate*—These cases are obviously due to the predominating implication of the spinal meninges, whilst the cerebral meninges are comparatively little affected Possibly there is a definite infective myelitis of the cord and neuritis of the spinal nerve roots, or in other cases these may be of toxic origin only Cases 6B and 7B are examples of this type, different regions of the cord being affected

(*g*) *Cases in which there is meningococcal infection other than that of the meninges*—(1) *Rhinitis and naso pharyngitis*—This is probably of universal occurrence, to a greater or less degree, in every case of cerebro spinal meningitis, and is probably the initial lesion In certain instances of which Cases 2A and 3B are examples, it becomes a marked feature of the case by reason of the excessive amount of pus discharged therefrom.

involving the whole brain and spinal cord, especially abundant at the vertex. The ventricles were filled with turbid fluid, and the ependyma slightly injected.

The 10 or 12 following cases were of the ordinary acute or fulminating type, and betrayed a gradual though distinct tendency for the later cases to be of more virulent nature, both as regards the suddenness of onset, shortness of time before unconsciousness supervened, and rapidity of death The average history would be sudden collapse of the patient while at his work, complaint of pain in the back of the neck and across the shoulders, and headache of varying intensity In one or two cases the headache seemed to be almost absent, pain in the head not being complained of until quite late in the disease In the earlier cases unconsciousness usually came on in the third or fourth day, and death in five to seven days, and in the later ones unconsciousness in from six to 36 hours, and death on the second to the fifth day Head retraction, Kernig's sign, and general rigidity were present in all these cases, the abdominal and epigastric reflexes were always absent No cases showed any material change in the tendon reflexes

CASE 3B —A case of the ordinary rapid type with unconsciousness on the third day and death on the fifth day On the third day enormous quantities—several ounces—of thick yellow pus were discharged from the nose In this pus I demonstrated the presence of intracellular diplococci

CASE 4B —A case of the rapid type with death on the third day Unconsciousness supervened only about 10 hours before death On the second day diarrhœa commenced, at first with the passage of fæcal stools, afterwards no fæcal matter was passed, but large quantities of mucus mixed with yellow pus Unfortunately, I was unable to examine this pus microscopically

CASE 5B —Aged 22 or 23 Physique and general condition good Sudden collapse while at work at 12 o'clock midday Within half an hour the patient was unconscious, and died at 2 P M The post-mortem examination showed a slight excess of cerebro-spinal fluid, containing pus cells and intracellular diplococci

At this stage, three weeks after the outbreak of the epidemic, the general run of cases showed a tendency to diminution of virulence according to the standards above set forth, while coma lasted a shorter time, and death became less inevitable

CASE 6B —The patient was of good physique but the general condition was unsatisfactory He came as an ordinary out-patient complaining of headache I found stiffness of the neck and a very doubtful Kernig's sign, and gave him a prophylactic dose of soamin, gr 5 The next day he complained of pains in the arms and legs and there was slight head retraction, and an undoubtedly positive Kernig's sign, together with distinct general muscular rigidity of the limbs For three weeks the neuritic pains in the limbs continued, and he complained of girdle pains involving the trunk roughly from the dorsal roots 9 to 12 and I was able to demonstrate a band of hyperæsthesia involving the skin area of the same dorsal nerve roots I could not find any anæsthesia. Weakness of the legs increased and eventually became excessive. The knee and ankle jerks were very weak, but could always be obtained with difficulty, but there seemed no doubt that the weakness of the legs though largely due to the general condition was to be partly accounted for by a definite myelitis involving the anterior cornua of grey matter of the lumbar region, or neuritis of the anterior nerve roots Wasting of the muscles of the legs was very excessive

At no time did this case show any signs referable to cerebral meningeal involvement, except for the very slight headache and almost negligible retraction of the head Recovery was gradual but complete, the patient complaining of pains of a rheumatic type in the limbs for a fortnight or [illegible] weeks after the cessation of all active disease.

CASE 7B —Almost exactly similar to Case 6B except that the first symptom was neuritic pains in the limbs The arms in this case were more involved than the legs, and there was indefinite hyperæsthesia over the chest In this case there was rather more head retraction than in the last case, and a distressing feature was a very severe herpes labialis involving the upper and lower lips, and spreading outwards on either side of the corners of the mouth

CASE 8B —A case of mild type and slow onset On the fourth day the temperature rose to 107° F, and I found signs of a slight broncho pneumonic condition at the left base The hyperpyrexia continued for three days with a temperature of from 105° to 107°, and the case ended in complete recovery

CASE 9B —This patient, aged about 17, was of very poor physique and general condition, and had been attending as out-patient for a month with chronic headache and a temperature of from 99° to 100° every day, to account for which I found nothing on physical examination. He eventually developed a Kernig's sign and head retraction Eventual complete recovery

I adopted the same prophylactic measures in this epidemic as were so successful in checking the first. On two occasions the bathing of the 800 natives implicated in cyllin 1 in 400, and their clothes, bedding, &c, in cyllin 1 in 200, was carried out. The camp in which they lived was twice moved, the corrugated iron, of which the huts were made, being at the same time exposed to the sun for two days Isolation of contacts was, of course, carried out and a strict isolation of cases enforced The hut in which any case had occurred was broken down and the iron composing it exposed to the sun for two days and all the huts had their roofs removed every day, so that the vertical sun could get at the interior As a last despairing measure the camp was split into two separate halves, and each half into two sections, in the hope that one section might be declared free from the disease, but no good resulted, and the disease only died out when all the natives were returned to their own homes in a part of the country where cerebro spinal meningitis is endemic and not epidemic

The treatment adopted was in the main symptomatic, but in the later stages of the epidemic intramuscular injection of soamin, gr 5, on alternate days was carried out on every case, both in the case of those in the acute stage and of those convalescent from the acute stage in the earlier stages of the epidemic As regards these injections the syringe and needle were carried in a small tin filled with cotton wool soaked with methylated spirit The soamin was made up in a solution of gr 1 in ♏ 5 of filtered water, sterilised by boiling, and kept in a small glass stoppered bottle holding 16 doses For use the syringe was removed from the spirit soaked wool (a small piece of which was used to cleanse the patient's buttocks), the needle inserted into the bottle and the required dose drawn up into the syringe, and injected into the buttocks of the patient If, as was almost invariably the case, another injection had immediately to be given, the process was repeated without further sterilisation, and though I gave upwards of 300 injections in this way, in no instance did any untoward symptoms occur

Persons attached—It will be noticed in the cases which I have detailed above that in patients of strong physique and good general condition the onset was rapid and sudden, the attack severe, and death the rule, whereas the milder cases invariably occurred in the poorer specimens The two most virulent cases that came under my notice were Cases 2B and 5B, and these were both natives of exceptional physique and general condition,

A TAMPON FOR CONTROLLING A SEVERED INTERCOSTAL ARTERY,

WITH OTHER POSSIBILITIES

By JOHN FURSE McMILLAN, M.R.C.S. Eng.,
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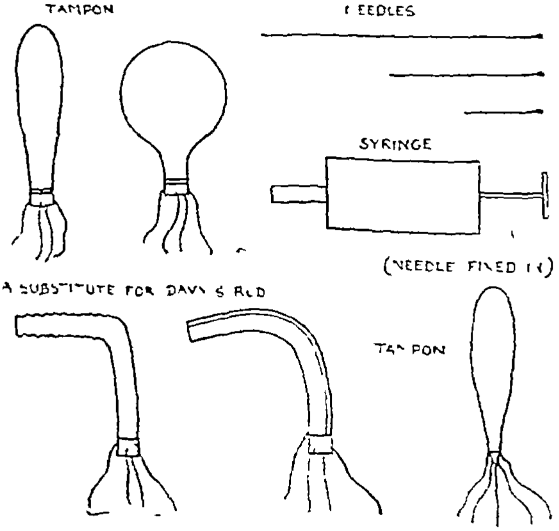
On one occasion, at Rawal Pindi, India, I experienced the mischance when operating on a case of empyema, the Dieulafoy's aspirator being unavailable, to nick the intercostal artery, whilst using the large trocar furnished in the military operating case The recognised treatment then was, and seemingly now is, to plug the wound with a dossil of lint saturated with perchloride of iron, or, failing this, to resect a portion of rib and then to tie the severed, or partially severed, artery But of course in peace time, and presumably also in war time, the occasion permitting, one would be very chary of tampering with the rib of a soldier, whereby a weak spot might be constituted

Treatment by perchloride of iron in the present case was ultimately successful. But had I been near an instrument maker I would have had made a small tampon of stiff indiarubber of a fusiform shape such as is shown in the illustration I would have inserted the collapsed round end into the pleural cavity, filled the tampon with water from the nozzle, and then having attached tapes to the stirrups, would have forcibly drawn the now swelled, rounded, hard, and solid indiarubber directly outwards, whereby such pressure would be made upon the nicked intercostal artery as to control it easily, whilst the affixing tapes to the chest wall by means of sticking plaster would complete the matter



Such an invention or contrivance as the above has not hitherto been employed for the control of hæmorrhage where pressure can readily be applied to bone, and nowadays when operations are common for the treatment of bronchiectasis by ligature of branches of the pulmonary artery the possibilities of such a tampon would appear to be great To instance the needles shown, affixed to the nozzle and passed through a wound, should readily control the femoral artery in Hunter's canal, axillary brachial an artery lying on interosseous membrane, the subclavian, by passing the needle under the clavicle, branches of the facial and internal maxillary passed outwards from inside the mouth, as a substitute for Davy's external iliac compressing rod—in this case the indiarubber being of stouter substance and of the shape shown in the diagram. Again, the deep gluteal vessels might be compressed against the femur or ligaments, whilst run through the palm the deep palmar arch should be thus controlled without danger of sloughing, for with a water tampon the pressure will be evenly distributed, whilst the main point is backward pressure on bone by the forcible drawing of the tampon towards one

Sandown I W

THE PSYCHOLOGY OF

TRAUMATIC AMBLYOPIA FOLLOWING THE EXPLOSION OF SHELLS[1]

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Ophthalmologists have become familiar recently with cases of amaurosis and amblyopia resulting from the shock of the explosion of shells at the front In many cases direct injury of such a nature as to cause definite organic lesion in the eye or visual paths can be eliminated The earlier symptoms, which I have not personally observed, have been described and investigated by Dr C S Myers, F R.S[2] The history of a typical case is briefly as follows

A man after more or less prolonged fatigue, induced by marching and exposure in the trenches, is incapacitated by the explosion of a shell in his immediate vicinity He may be merely knocked down or thrown into the air, and more or less seriously injured or wounded by concussion, shrapnel bullets, or shell splinters. Consciousness is lost for a variable time, but often not so far as to prevent automatic movements, so that the man may walk in a dazed condition to a dressing station The mental equilibrium at this stage is much disturbed, and all memory of this phase is usually lost The most striking feature of the case is that the man is instantaneously struck blind The blindness may be associated with deafness, loss of smell, and loss of taste, but all these are less frequent than the blindness On examination it is found that there are intense blepharospasm and lacrymation The lids are opened with great difficulty and examination of the eyes is almost impossible I am not aware of any record of the condition of the pupils at this stage In the course of a week or two the blepharospasm diminishes and it becomes possible to examine the fundi Of course, there may be local injury to the eye, but in uncomplicated cases the eyes are found to be normal The pupils react to light, though in some cases the reactions are sluggish and sometimes one pupil differs from the other, being larger, or more sluggish in its reactions The fundi appear to be absolutely normal. By this time probably some restoration of sight has occurred Light is perceived and large objects may be distinguished As improvement occurs the patient manages to grope about, usually

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[1] A paper read at the Neurological Section of the Royal Society of Medicine on March 25th 1915.

[2] The Lancet, Feb 13th 1915 p 316

(2) *Conjunctivitis* —This is probably caused merely through the accidental inoculation of the meningococcus on to the conjunctiva, or possibly it is an ascending infection from the nose *viâ* the lacrymal duct, and is of no special interest Examples are quoted in Cases 1A and 2A

(3) *Enteritis* —In the absence of any positive evidence on this I can say nothing The point is of importance in connexion with prophylaxis as regards the treatment of fæces, not so much in England, where the method of disposal of sewage prevents the desiccation and pulverisation of fæces, as in places where the earth system is the rule

General Symptoms and Signs

We have, therefore, in cerebro spinal meningitis a disease varying widely in type, acuteness and severity At one end of the scale it is a disease of such exceptional severity and acuteness that it can cause death in so short a period as two hours (*vide* Case 5B), and at the other end occur cases with possibly no symptoms, and in which the existence of a definite meningeal infection is improbable, though there is certainly a meningococcal naso pharyngitis

I have already discussed, incidental to the description of cases, and analysis of the types of the disease, the common signs and symptoms of the disease It remains, therefore, only to touch on one or two other points of interest

Temperature —In the average case this rises rapidly with the onset of symptoms to anything between 100° and 103°, and thereafter is very irregular until all active disease has ceased In Case 6B, which I saw very early, almost before the signs of meningitis had developed, the temperature had already reached 100 2° In one case (8B) the temperature rose to 107° and remained near that height for three days, but this case was not wholly uncomplicated, there being a broncho pneumonic condition of the lungs at the same time

The pulse —This shows nothing characteristic I was quite unable to verify the popular supposition that the pulse is comparatively slow in meningitis, as in every case the pulse rate was in keeping with the height of temperature then prevailing

Subcuticular hæmorrhages —These were never observed, possibly owing, in some measure, to the black skin of the patients

Ocular palsies —These are said to be very common in meningitis I, however, never saw them in any case of this series

Optic neuritis —I was debarred by general circumstances and the lack of a suitable lamp from making a routine examination of the fundi oculorum (Not that I believe that it would be possible under any circumstances with the average raw native) In no case during convalescence or on recovery was there any complaint of defective sight

Treatment

Dr J O Shircore, of the East African Medical Service, has written a very able article praising the effect of intramuscular injections of soamin in meningitis He claims that the drug is excreted into the cerebro spinal fluid and there has a deterrent effect upon the growth of the organism, and he gives results of the examination of the cerebro spinal fluid of cases before and after the use of the drug, from which he claims that its use caused degeneration of the diplococci That may be so, but in the 35 odd cases that I have used the drug I have failed to notice any benefit from its use Nor could I observe any difference between the general course of the disease in those cases in which it was used and those in which it was not used Ordinary general treatment on symptomatic lines was adopted in all my cases

Lumbar puncture I could not employ, for reasons explained above, though from previous experience of its use in cases of post basic meningitis I very much doubt its efficiency as a therapeutic measure, saving insomuch as its good effect on headache and other pressure symptoms is undoubted

Morbid Anatomy

In all cases I found evidence of pyogenic infection of the meninges of the brain and spinal cord, and in all such as microscopic examination of the cerebro spinal fluid was carried out the meningococcus was demonstrated The fluid varies from the merest possible turbidity to thick, creamy, yellow pus In one or two cases there was a preponderance of the pus at the base of the brain, but in the great majority it ascended well on to the vertex and descended into the greater fissures of the brain.

Neither of the cases that showed a preponderance of spinal symptoms came to necropsy, so that the question of the existence of a definite infective, or only toxic, myelitis and neuritis must remain unsolved

The existence of thick pus in Case 2B, which died 17 hours after the onset of symptoms, is a little difficult to explain on pathological lines

Cerebro spinal Meningitis and Post basic Meningitis, and the Development and Cessation of Epidemics

The difference between these two diseases is an etiological rather than a clinical one, insomuch as the first is the epidemic form of the second They are both caused by organisms morphologically identical, though differing in the physiological character of virulence

Several sporadic cases of meningitis occurred amongst the same group of natives as supplied the second epidemic while at Mombasa, and since they left that place several further sporadic cases have occurred amongst others of their number who remained at the coast. When brought into the cooler climate of the highlands nearly three weeks elapsed before the first case occurred, the next case was two days after, another followed the next day, and thereafter cases occurred at the rate of about two a day for three weeks On some days as many as four new cases occurred, on others only one After the three weeks the rate of incidence gradually declined, until during the last week before the whole group of natives were returned to Uganda, and out of my care—i e, the sixth week of the epidemic—only two fresh cases occurred.

Parallel with the rise and fall of case incidence ran the virulence and acuteness of the attacks This was so well marked that I have no doubt that if it were plotted out there would be a definite and nearly regular curve showing the rise and fall of virulence of the virus

I have no definite information on the point, but had the epidemic continued after their return to their homes where the disease is endemic I should certainly have heard of it, and so the two ends of the curve would indicate the point where sporadic post basic meningitis merges into epidemic cerebro spinal fever

Magadi British East Africa

emotion, the instinct of reproduction, the gregarious instinct, the instinct of acquisition, and the instinct of construction. To these are added certain innate tendencies—sympathy, suggestion, imitation, and so on.

In addition to the afferent impulses received from external stimuli, others are received from internal organs. The sum total of the normal impulses determines the obscure background of consciousness (cœnæsthesia) on which the general tone of mental life depends. The *disposition* of an individual depends upon the sum of all the innate instincts with their specific conative impulses. The *temperament* depends upon the influences exerted on the nervous system and through it on mental process by the functioning of the bodily organs, and on the general functional peculiarities of the nervous tissues.

In lower animals the emotions are probably generally experienced in unmixed forms. In man they tend to become combined in organised systems each centred in some object. These organised systems are the sentiments (A. F. Shand), of which love, hate, and respect are the types. Admiration, awe, gratitude, scorn, contempt, envy are complex emotions which do not necessarily imply the existence of sentiments. Reproach, jealousy, resentment, revenge, shame, remorse, sorrow, pity imply the existence of sentiments directed towards some object. "It is only through the systematic organisation of the emotional dispositions in sentiments that the volitional control of the immediate promptings of the emotions is rendered possible. Again our judgments of value and of merit are rooted in our sentiments, and our moral principles have the same source, for they are formed by our judgments of moral value" (MacDougall).

Further, moral conduct is essentially social conduct. Psychology has been revolutionised in recent years by the writings of William James, G. F. Stout and others, who have thrown into relief the previously well nigh disregarded fact that the development of the individual mind cannot be explained by isolating it and examining its workings by introspection alone. Each mind is endowed with *innate* properties, these show inherited variations which *cause one* mind to differ from another. But in addition to this each mind is subject to acquired modifications due to its environment, and the *most important* element in its environment is the group of other minds with which it is brought in contact. Advance in moral conduct and the development of *character* are brought about by the growth of self-consciousness and of the self-regarding sentiment. The idea of self and the self-regarding sentiment are essentially social products, so that the complex conception of self ultimately attained is always of self in relation to others. MacDougall distinguishes four successive stages in the development of conduct: (1) the instinctive stage modified only by the experience of pain and pleasure; (2) the stage of control by rewards and punishments; (3) the stage of control by anticipation of social praise and blame; and (4) the stage of regulation according to an ideal of conduct.

Such in the sketchiest outline, is the mental evolution which culminates in the individual character. The analogies which have been arduously elicited from comparative psychology are very illuminating but they must not be pressed too far. It is true that in physical development the individual rapidly recapitulates the chief stages of the history of the development of the species, but this is true only in a broad sense, and can only be proved of any detail by direct observation. Similarly in the mental evolution of the child, so ably studied by Preyer, J. M. Baldwin, and many others, an instinctive phase resembling that of lower animals, an animistic stage resembling that of primitive races, and so on, may be dimly indicated, but it is doubtful if a baby ever exhibits a complete yet unadulterated instinctive response.

Underlying the psychological development outlined above there is a physical neural development, in which the tremendous stride which the human species has taken beyond the anthropoid ape is most obviously shown in the enormous development of the pallium. The development of the cerebral cortex, however, has not taken place without the most extensive rearrangement of lower structures. Cerebral control does not mean simply control of unaltered units. It means also modifications in the units themselves—modifications in reflex and instinctive responses both in kind and degree.

To sum up this long but necessary preamble, in the cases under consideration we are dealing with individuals of various moral and psychological character, disposition and temperament. Their temperaments are determined chiefly by the condition of their visceral organs and circulation. Their dispositions are determined by the sum total of the conative impulses of certain primitive instincts which vary within relatively narrow limits in their innate characteristics and relative strengths, and are subject to acquired modifications in accordance with the environment of the individual. Their characters are determined by their *temperaments* and modified innate dispositions, of which the latter are subject to a volitional control which varies according to the social environment and educative experience.

In the evolution from stage to stage through the phases reflex, instinctive, and ideational the earlier stage is not lost, but is made to subserve the new conditions. Thus in the most highly developed species, man, all persist. The earliest or reflex stage persists in the lowest anatomical and physiological level. It can hardly be doubted that the highest is a function of the most recently and highly differentiated part of the cerebral cortex. Whilst, however, we may say that the reflex mechanism is specially associated with the lower—segmental—region of the central nervous system, stretching from the mid brain to the end of the spinal cord, owing to the elaborate rearrangement of structure and function which has occurred, it is at present impossible to localise with any degree of precision the neural bases of the higher instinctive and ideational processes. Their complexity is largely, though by no means wholly, a matter of correlation and association, and the anatomical basis of an isolated physiological function is to be sought rather in a unified system of widely spread neuronic paths—afferent, associational, and efferent—than in any so called "centre."

It is further to be noted that the subservience of the more primitive phases of evolution is associated with what may be described as subservience in consciousness. Afferent sensational impulses, modified by afferent visceral impulses and by other more subtle impulses due to previous experience, lose to a large extent their specific characters and become merged in a complex cognitive impulse. Even from this the mind springs forward as it were to the emotional state which is thus aroused with his hands outstretched before him, but it is noteworthy that he does not usually stumble up against objects in his path As soon as it is possible to take the fields of vision it is found that they are markedly contracted, and that indeed to a degree which seems scarcely consistent with the avoidance of obstacles in walking

The recovery of vision is slow, but eventually it seems always to be complete In the later stages I have had cases in which the right eye is more affected and recovers more slowly than the left It may recover to the extent of having only a central scotoma, though this may reduce the visual acuity to 6/60 or less By perseverance and encouragement the patient may be induced to read a few lines of the types, and I have had cases where the manipulation of weak plus and minus lenses has led to the full 6/6 being read

Now there are several suspicious symptoms in many such cases The eye to recover last is often the shooting eye Some patients show an obvious disinclination to return to duty Some candidly admit to being in a "blue funk" In all there has been a complete mental upset, sometimes accompanied by hysterical symptoms—outbursts of weeping, &c —in the early stages These features render it only too easy to jump to the conclusion that there is often a large element of shamming in the case It is because there is very grave danger of cruel injustice being done to men who have faced the music and come battered out of the ordeal that I wish to attempt an explanation of the underlying psychology

In the first place it is necessary to segregate these cases from allied conditions due to organic lesions or to malingering It is not always easy to eliminate organic lesions of the type which causes so-called retrobulbar neuritis It is still less easy to eliminate malingering, but as this depends upon a knowledge of the psychology of the individual it forms a prime object of the following discussion

Since there is no demonstrable organic lesion these cases may be regarded as examples of injuries or wounds of consciousness This does not imply that there is no neural lesion to account for the psychological disorder, but merely that it has hitherto escaped observation Without entering into a disputed question, which is largely metaphysical, we will adopt the view of parallelism between physiological neural processes and psychological events or changes in consciousness

As regards cases of the type to which the group under consideration belongs, it may, I think, be admitted that the disorder of the conscious processes varies with the nature and severity of the injury and with the organisation of the individual's character Of these the latter is by far the more complex, and in order to make my meaning clear it will be necessary as briefly as possible to sketch the evolution of character In doing so I shall be guided chiefly by the deductions of such writers as C Lloyd Morgan, J Mark Baldwin, and William MacDougall, whose extraordinarily suggestive work does not seem hitherto to have been sufficiently brought to bear upon pathological problems

Mental evolution may be divided into three stages, which may be called the sentient, the conscious, and the ideational The sentient stage is exemplified in those organisms which show simple reflex response to stimulation In the lowest stage of all, such as the amœba, the three parts of the reflex arc, the afferent, central, and efferent, are not anatomically differentiated Organic evolution is accompanied by anatomical complexity and correlation of reflex arcs The conscious stage is exemplified by those animals, such as birds and lower mammals, in which complex and compound reflexes have become organised into instincts, mere sentience—as we may call it, for we can have no knowledge of what this lowest grade of consciousness really is—gives place to consciousness which is limited to the perceptual plane The mind of such an animal is conscious only of the percepts derived from concrete objects It reacts to these primarily in an instinctive manner in accordance with inherited instincts, the motor responses varying according to the species In addition, however, it has acquired the ability to modify these motor responses in the light of experience In other words, it is capable of controlling and modifying its instinctive reactions by intelligence In the highest stage, which is reached so far as we know only by man, consciousness is raised to the conceptual plane The animal has acquired the ability to think in terms of abstract ideas and to form rational judgments

Animal life possesses one all pervading feature, the capacity for and manifestation of movement, and from one end to the other of the scale the movements are teleological or purposive It is for the metaphysicians to explain—if they can—why a merely sentient organism manifests purposive movements when it is inconceivable that it can in any sense have knowledge of the end which will be ultimately attained Indeed, it would be a bold assumption that such is really the case if it were not unexceptionably proved that at a higher level many lower animals perform the most complicated instinctive actions for an end—often the preservation of the species—which it is quite impossible that they can foresee Movement entails wear and tear of protoplasm, no matter how lowly it be, so that the fundamental teleological factor is the search for food, and biological necessity demands the preservation of the species Hence the behaviour of the lowest organisms is directed to two ends, nutrition and reproduction

The simple reflex is a purposive response to stimulation The stimulus sets up an afferent impulse which acts upon a central mechanism. The motor response is determined in the centre by the nature of the afferent impulse, and in its simplest form is a positive or negative taxis

The simple instinct, compounded of complex reflexes, shows a similar tripartite nature, afferent, central, and efferent The afferent impulses so modify the central mechanism as to give rise to an affective state in consciousness This state is an emotion It in turn gives rise to a definite and specific conation or striving to a particular end The conation manifests itself in motor activities all designed to attain that end In so far as the end is attained the emotion is satisfied and a pleasurable feeling is experienced, in so far as the end is thwarted, dis pleasure is experienced, and this usually reinforces the conation until eventually the end is attained

MacDougall enumerates the following primary instincts and emotions of man the instinct of flight and the emotion of fear, the instinct of repulsion and the emotion of disgust, the instinct of curiosity and the emotion of wonder, the instinct of pugnacity and the emotion of anger the instinct of self abasement (or subjection) and of self assertion (or self display) and the emotions of subjection and elation (or negative and positive self feeling), the parental instinct and the tender

Its restoration, however, will be in accordance with the innate dispositions of the individual If he is naturally mean spirited it is unlikely that his self regarding sentiment has developed beyond the stage of merely masking an ever present pusillanimity, his motive power is limited to a sense of shame If he is naturally of a fine character his fears will be suppressed with ever increasing vigour as he becomes more and more conscious of the ideals of conduct which have shaped his character In this stage of struggling to regain control the patient is at a disadvantage, and the acute observer will have the best opportunities for studying his springs of conduct There are rare characters in which the emotion of physical fear appears to be non existent, but in the vast majority of cases it is present, and however cleverly it is masked or however nobly it is suppressed it has to be reckoned with. If merely masked it will prove a very powerful incentive to the avoidance of renewed exposure to danger, and a temporary disability may give place to deliberate fraud If suppressed it may yet require all the help which can be derived from the highest sentiments, reinforced by suggestion and by the active sympathy of discreet friends and advisers These may all fail, but if so it is a case for pity and encouragement rather than contempt and obloquy

It appears to me that these are the principles which should guide the medical adviser in his investigation and treatment of the case We are accustomed to take the past histories and present conditions of our cases In these "wounds of consciousness" the past history involves a difficult investigation of the innate dispositions and propensities of the individual, the environment to which he has been subjected in his home life, his school life and his further career, and last, but not least, in the special cases under consideration—the motives which led him to join the colours, For every man who enlists is not *necessarily* a ready made hero Many have enlisted *merely* because they are ashamed of not following the *example* of their friends All honour to them, but they are not equipped with the sterling qualities of the man who is impelled by a noble ideal The latter may recover completely from the shock, reinforced, indeed, by the sense of a moral victory won The former may remain partial wrecks, too fearful of a renewal of their terrifying experience to be of any use in the fighting line By *injudicious* forcing they may be wrecked entirely On the other hand, by carefully studying their habits and tastes they may be switched off into other paths which will lead to the restoration of self esteem and make them again useful members of society

The investigation of the present condition is simply psycho analysis in the true sense of that much abused term Amongst the many instincts and sentiments which have been enumerated and which will require to be studied and weighed, the sexual instinct will hold its proper and no more than its proper, relationship It cannot be ignored, for it is at the foundation of the parental instinct, the tender emotion and the sentiment of love As such it is potent for good or evil and it is the physician's part to utilise it for good as far as may be and above all not to frustrate that end by his own indiscreet probings

As Dr Myers has shown, hypnosis may be valuable in reconstructing the history I am doubtful as to its use as a method of treatment but others are better qualified to judge on that point As regards therapeutic measures, it should be remembered that fright causes great exhaustion of the suprarenal glands

I have restricted my remarks to a special type of so called traumatic neurosis, but it is obvious that the principles which have been discussed are capable of wide reaching application

HETEROLOGOUS TRANSPLANTATION MOUSE TUMOURS IN RATS

BY W E BULLOCK, M D EDIN,

ASSISTANT IMPERIAL CANCER RESEARCH FUND

WHEN a tumour arising in one species of animal is inoculated into an animal of another species the tumour fails to grow progressively This specificity has in some cases been found to be so marked that a tumour occurring in one variety of mice will not grow in another variety Throughout the literature of the experimental investigation of cancer there may be found repeated references to these facts, which must be taken into consideration in any theory of cancer J B Murphy[1] has shown, however, that rat and mouse tumours may be grown by inoculating developing chick embryos *The inoculation is made on the fifth to the eighth day of* incubation The transplanted tumour fragment grows vigorously up to about the seventeenth day and then begins to be absorbed. Thus we have here a remarkable and conspicuous exception to the rule of specificity already noted

It has been shown by Rywosch[2] that chick embryos have practically no bactericidal or bacteriolytic powers, and *a priori*, one would suppose that the explanation of the success of the transplantation of rat and mouse tumours to chick embryos is to be found along similar lines—namely, the absence in the developing chick of the mechanism by which resistance to tumours of a foreign species is produced The phenomenon has also been explained by assuming that the embryo contains an excess of "growth substances' which are *not* yet differentiated and which can thus provide sufficient of these necessary materials for the proliferation of the tumour cells[3]

It seemed reasonable to anticipate that the mammalian embryo will provide as *suitable* a host for a tumour of another mammalian *species as* the more distantly related chick embryo, and it is with this possibility that the present paper deals A brief outline of the work has already been given in July, 1914, in the Twelfth Annual Report of the Imperial Cancer Research Fund

The technique by which developing chicks are inoculated is very simple, but the difficulties of inoculating mammalian embryos through the uterine wall without bringing gestation to an end are very great, though it has been *done*[4] It was therefore decided first of all to inoculate new born rats with mouse tumours It is to be noted that when a freshly hatched chick is inoculated with a rat tumour the tumour *fails* to grow, and it might be thought by analogy, *that* a mouse tumour would not grow in new born rats But this was found not to be so..

The rat under 24 hours old is *inoculated* by the needle method, preferably in the subcutaneous tissue of the back Occasionally the needle strikes a vein and a fair amount of blood is lost, but only one animal in several hundred was killed by the actual inoculation The transplantation must be and becomes concentrated on the efferent conation Consciousness is focused on the appointed end, all else is relegated to a subconscious background

The effects of an intense emotional shock on this highly complex system may, *a priori*, be expected to be manifold and complex Let us consider the effects of a blinding flash of light In the first place it will produce certain definite reflex results—sudden closure of the eyes, retraction of the head, perhaps recoil of the whole body, and so on. Actual damage may be done to the delicate retinal structures, resulting in temporary or permanent defect of vision But apart from these effects, the strong light stimulus will have other far reaching results Sudden and unexpected visual sensations play an important part in the sensational complex which gives rise to the emotion of fear They are less potent, as a rule, in this respect than auditory stimuli Nevertheless, they arouse an emotional state which varies from mere surprise to actual fear Doubtless the natural instinct of flight is suppressed in the adult by the intervention of the self regarding sentiment and manifests itself only in a sudden start If the blinding flash is accompanied by a loud noise the emotion of fear is still more powerfully aroused If also accompanied by an offensive smell the emotion of disgust is aroused and gives rise to repulsion

The response of an individual to such a shock depends, therefore, essentially upon the degree of development of his self regarding sentiment As we have seen, this depends upon his disposition—i e, the sum of all his innate instincts, his temperament, and the modifications and control which these have acquired as the result of his environment and experience We cannot, however, isolate the sensational complex which causes the shock from the concurrent circumstances The response will vary also according to these conditions—e g, according to whether the individual is alone or one of a crowd, and so on

In the case of a soldier under shell fire the conditions are unique The man is usually bodily fatigued, whereby his control is impaired He has "the fear of death before his eyes" and is in a state of acute excitement, whereby his normal judgment is impaired These conditions conspire to give his innate instincts ungoverned play On the other hand, positive self feeling, aided by suggestion and imitation and the sentiments of patriotism, the honour of the regiment, his own honour, and so on, enforce his volitional control At last, however, the shock comes which strikes him unconscious It is not to be supposed that he is thereby anæsthetised to these emotional storms It is rather to be conjectured that he is rendered "subconscious," and hence the more a victim of his lower instincts This view is supported by the emotional behaviour of the men in the early stages, and by the fact that many of their actions can be revived by hypnosis

The "unconsciousness" in these cases is to be explained physiologically by an abrogation of the functions of the highest level cortical cells Recovery shows that the cells are not irretrievably damaged, and it is most likely that the block occurs on the afferent paths at the synapses of these cortical cells Consciousness returns but there is blindness So far as objective evidence goes the lower visual paths are intact and function normally The optic nerves carry their impulses at any rate as far as the pupil reactions are concerned The condition resembles uræmic amaurosis I have seen it also in children after post-basic meningitis The block is somewhere above the so called primary optic centres—external geniculate bodies, optic thalami, and superior colliculi It, too, is probably in the synapses of the cortical cells, in this case the synapses of the fibres of the optic radiations Sometimes such a block occurs physiologically and it is probably to be explained in the same manner Everyone knows what may happen when reading an uninteresting book whilst the attention is diverted by some other train of thought A paragraph is read and one suddenly becomes conscious of the fact that nothing has been conveyed to the mind Yet on reading it again one may recall certain sentences as undoubtedly having been read though they failed to reach the fully conscious mind Perhaps the suppression of the image of a squinting eye is to be explained in the same manner

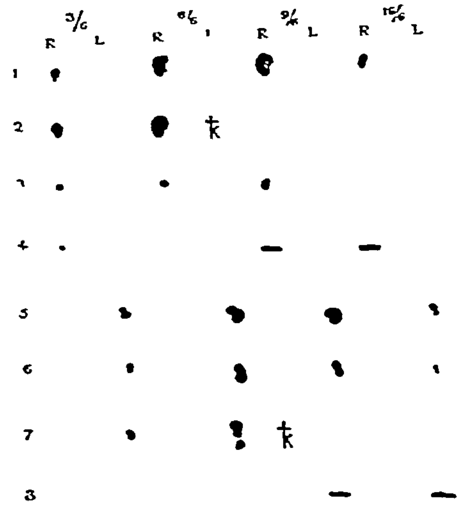
It is definitely stated by Dr Myers that smell is partially lost in spite of the fact that there is no unpleasant odour noticeable when a shell explodes This is probably to be explained by suggestion I do not, however, think that it is necessary for the explanation of loss of vision and hearing that the visual and auditory paths respectively should have been definitely stimulated These paths—situated in such intimate relation with the higher levels—play such a prepotent part in cerebral processes—equilibration, spatial percepts, and so on—that at any rate a partial visual block might be expected at times to persist beyond the recovery of consciousness The duration of such persistence, however, is likely to be much greater if the primary shock has a powerful visual element, whether it be a blinding light or an awe inspiring spectacle

Though in the cases under special consideration there can be little doubt that the early loss of vision has a definite neural basis, it must, I think, be conceded that in the later stages the neural basis is of that undefined nature which we associate with so called "functional" conditions In other words, it is neurotic, but it is not "shamming," difficult though the line be to draw between them. I have had one case in which the vision of the left eye improved to 6/6, while that of the right improved to 6/36 By manipulating various glasses I succeeded in making the patient read 6/6 with + 0 5 D sph and − 0 5 D sph before the right eye and + 6 D sph before the left He had the chance of taking a commission and was eager to do so I feel convinced in my own mind, from his character and demeanour, that he was quite honest

It has already been mentioned that in the earliest stage of recovered consciousness volitional control is almost or quite abrogated The man is merely an emotional animal, or rather worse, for he is deprived of that intelligent control which plays such an important part in animal life His behaviour is hysterical, but it is a passive hysteria, unlike the commoner active hysteria in which the partially emancipated emotions are often guided by some preponderant ideational impulse There can be little doubt that in this stage the most potent of the primæval instincts—fear—holds almost undisputed sway, irrespective of the normal character of the individual, for the loss of volitional control implies the loss of the coördination of all those complex factors which make up the character of the man As recovery progresses the outward manifestations of fear are more and more masked or suppressed for the self regarding sentiment gradually again becomes restored

One of the most interesting of Murphy's discoveries in his work with chick embryos is that the inoculation of a fragment of adult fowl spleen or bone marrow prevents the growth of a rat tumour inoculated simultaneously[6] The addition of spleen or, to a less extent, of bone marrow enables the chick to resist the growth of the tumour cells These experiments have been repeated with young rats, using spleen taken from a healthy adult rat Half a litter of eight new born rats were inoculated in the right axilla with 0 01 c c of an emulsion of mouse carcinoma (63), the remainder were inoculated in the left axilla with the same dose of the same tumour and in the right axilla with 0 01 c c of rat spleen The growths obtained are represented in Chart D, which shows that the spleen has had no effect on the growth of the tumour The same experiment was carried out with sarcoma (37) and with carcinoma (206), with similar results It is probable therefore, that the mechanism of the production of resistance in chicks to a tumour of a foreign species is different from that in young rats The change from the new born to the adult condition must take place fairly rapidly, as young rats a few days old already inhibit to a marked degree the growth of most inoculated mouse tumours

CHART D



New born rats inoculated with mouse carcinoma (63) and with spleen obtained from an adult rat doses 0·01 c.c. (a) Animals 1 to 4 received tumour in right axilla. (b) Animals 5 to 8 received tumour in left axilla and 0·01 c.c. of spleen in right axilla. It will be noted that no difference is observable in the amount of growth in (a) and (b) Scale as in Chart C

The temporary growth and ultimate disappearance of mouse tumours in new born rats do not differ essentially from the results of similar inoculations into adult rats In them also temporary growth often only recognisable on microscopic examination, precedes the rapidly ensuing arrest of growth and absorption of the foreign tumour cells Bashford and Russell[8] have shown that this disappearance follows on the development of an active immunity If baby rats in which tumours of considerable size have developed and been absorbed be re inoculated with fresh mouse tumour, it is seen that they are immune in the same way and the sequence in the new born rat only differs from that in the adult in the relative proportions of the two stages of growth and absorption. There is no valid reason to assume a different cause for the ultimate disappearance in the two cases and the actively immune condition which has been demonstrated in both suffices to account for it completely The disproportionate amount of growth obtainable in new-born rats is in all probability due to a failure, or rather delay, in the process of active immunisation It must not be forgotten, however, that young animals are in general more suitable for tissue transplantation than old. Propagation in series is in consequence possible in very young animals by taking advantage of the rapid growth that occurs in the period which precedes the development of inimical substances The success which has attended the attempts of several investigators to cultivate mammalian tumours and normal tissues *in vitro* in the plasma of alien species also points in the same direction, as in these circumstances the cellular elements responsible for the development of immunity are absent

The results of these experiments are mainly of importance because of the analogy they present to the much more obscure process of immunity production by mice and rats to transplantable tumours arising in individuals of their respective species This analogy is not very close, but it is instructive to note that Russell[7] has shown that those propagable tumours which grow progressively do not produce resistance to a subsequent inoculation. In alien species, however, even the strains which grow without inducing resistance in their own species exhibit only temporary growth and induce active immunity The experiments will be continued, and the discussion of their bearing on this and other aspects of the cancer problem is reserved for a later date

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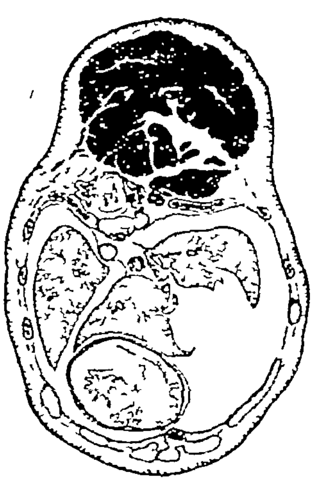
CORONERS' SOCIETY OF ENGLAND AND WALES —Dr F J Waldo H M coroner for the City of London, was elected President of the Coroners Society of England and Wales at the annual meeting in London of the society on March 23rd In returning thanks for the honour done him. Dr Waldo reminded members that the founder and first president in 1846 was Mr Serjeant Payne a leader and reformer among coroners He was president for 26 years till his death in 1872. The first secretary was Mr Langham Both these gentlemen were predecessors of Dr Waldo as coroners for London before the administrative County of London came into being Succeeding presidents were Sir John Humphreys coroner for Middlesex and his successor, Dr Danford Thomas who had done so much for the improvement of coroners courts mortuaries and post mortem rooms still so badly wanted in the country Another strong coroner he said was Thomas Wakley Founder of THE LANCET and coroner for Middlesex, who successfully fought the justices at quarter sessions in their refusal to pay the rightful fees of coroners for what they (the justices) alleged were unnecessary inquests Mr Wakley brought in the Coroners Act of 1860 whereby county coroners were paid by salary in place of fees Dr Waldo said that the object of the Coroners Society was to foster coöperation between coroners to aid them in the more effective discharge of their duties and to maintain their rights in the public interest. He promised to do his utmost to uphold the dignity of the coroner's court and the status privileges and rights of the coroner carried out quickly and the animals must be kept warm The chief difficulty in this work lies in rearing the young rats The mother is very liable to kill her young after they have been interfered with, but these accidents may be very much reduced by handling the mother *rat frequently during the period* of gestation

The tumours inoculated were a polymorphous sarcoma (37), a carcinoma (63) which in mice grows progressively until it kills the host, and a carcinoma (206) which grows for about 16 days and then disappears, leaving the mice in an immune condition With each of these tumours it was found that rapid growth takes place in rats inoculated during the first day of life for from 10 to 17 days, the tumour then disappearing, as illustrated in the charts reproduced (*Charts A, B, C) From a dose of* 0 01 c c it is easy to obtain in 10 days a tumour weighing over 1 gramme (Fig 1) The mass consists of healthy tumour cells, showing in microscopical sections their characteristic shape and arrangement, with numerous mitotic figures After the tenth to seventeenth day increasing numbers of fibroblasts grow in thick strands from the capsule into the tumour, the tumour cells becoming *necrotic Eventually in a further period varying* from one to two weeks the whole tumour is absorbed.

FIG 1



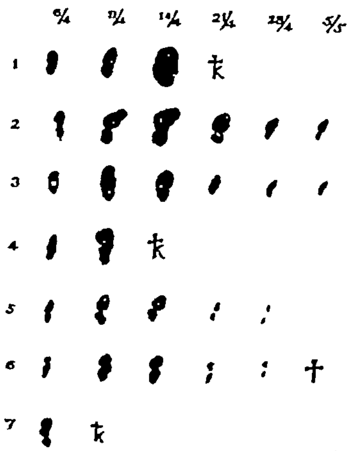
Section through the thorax of a young rat 17 days old bearing a mouse sarcoma. The tumour (black) is penetrating between the spine and the muscles Small areas of necrosis and bands of fibroblasts are found in the tumour In the healthy parts of tumour mitoses are numerous

With regard to the sarcoma it was found to differ from the carcinomata in that it grows very well also in half grown and adult rats Russell[6] has shown that the cells of a mouse carcinoma survive and multiply in the normal adult rat for nine days, but the extent of this growth is insignificant compared with what has been obtained from minute grafts of the polymorphous sarcoma (37) Chart C indicates the size of the tumours obtained with doses of 0 02 c c of this sarcoma.

The attempt has also been made to cultivate this sarcoma in series both in new born and in half grown rats In the former case the attempt was partly successful, the tumour was maintained 49 days for five generations in rats, and was then lost through the mother eating the young animals The growths of the third and fourth generations were, however, smaller than the first and second. This want of complete success was certainly due in part, if not altogether, to the difficulty of obtaining a regular supply of animals of suitable age, and to the frequency with which the mother rats killed their young

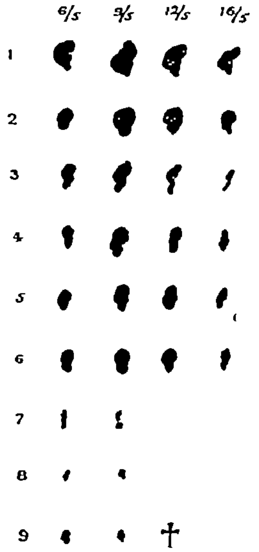
When a tumour which has been *kept growing in a succession of* rats for as long as 46 days is again inoculated into mice it grows as vigorously as the tumours which have never been grown in rats In other words, it is not modified by change of "soil", the tumour cell is killed outright more readily than it is changed in character It does not seem possible to cause the tumour to adapt itself to its new species of host so completely as to lose its capacity to grow in the species in which it arose This practically amounts to saying that a mouse tumour cannot be converted into a rat tumour any more than a mouse can be converted into a rat In the experiments in which the attempt was made to grow sarcoma (37) in half grown rats, the tumour failed at the fourth inoculation, the growths becoming progressively smaller Altogether the tumour was kept growing for 22 days in three generations

CHART A



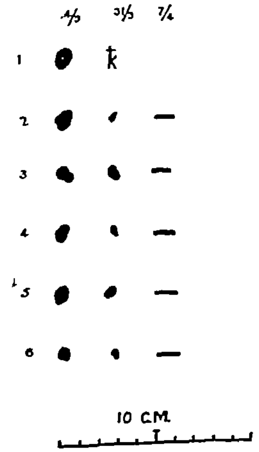
New born rats inoculated on 30/3/14 with mouse carcinoma (63) dose 1 01 c.c Scale as in Chart C

CHART B



New born rats inoculated on 29/4/14 with mouse carcinoma (206) dose 0·01 Scale as in Chart C

CHART C



Half grown rats average weight 60 grammes, inoculated 17/3/14 with mouse sarcoma (37) dose 0·02 c c the remainder being of the ordinary rod form It will be noted that the "granule" or "spore body" is generally larger than the culture "granule", it is also sharply defined and intensely stained, and has attached to it the bacillary portion of the organism. It is also to be noted (Fig 2) that there are forms present in which two 'spore bodies" are fused together, not in juxtaposition, with their bacillary portions issuing out at opposite poles They are not so commonly met with as the single form With the above characteristics it is difficult to regard these bodies in any way as degenerative The bacillary, or rod portion, of the organism varies in length and in staining power The long forms[5] may have more than one spore body in their length In their manner of staining they are to be found in all stages, from not staining at all with carbol fuchsin to being firmly acid alcohol fast

Besides the above, one meets forms identical with those of the original culture apparently unchanged some two to three weeks after a peritoneal injection In general, from one's present experience, it appears (see above) that the longer the animal lives the more the above forms tend to assume or become the ordinary rod form, they have been obtained in pure culture from the animal tissues

Members of the streptothrix group are known to acquire acid fast characters with age

I wish to express my sincerest thanks to Mr A R Smith, M Sc Lond, chemical expert to Messrs Joseph Watson and Sons, soap manufacturers, Leeds, for the suggestion of the use of a liquid wax Sperm oil, being a liquid wax, was accordingly chosen In the earlier part of this work solid waxes were added to agar—e g, beeswax, gondang, pisang, carnauba, Chinese wax, some with glycerine and some without As might be expected, the waxes did not mix[6] with the agar In spite of this growth occurred slightly on bees' and Chinese wax, an insect wax I also desire to acknowledge my indebtedness to Professor A E Boycott, for giving me permission, and all facilities, for performing the animal experiments of this work in his laboratory, as well as to Mr A G R Foulerton, of University College, London, and Dr J C G Ledingham, of the Lister Institute, for kindly giving me cultures of streptothrices and tubercle bacilli.

The Joint Hospitals Pathological Department Manchester

PNEUMOCOCCAL INFECTIONS TREATED WITH AUTOGENOUS VACCINES

BY NATHAN RAW, M D DURH M R C P LOND

LIEUTENANT-COLONEL, R.A M C (T) SENIOR PHYSICIAN LIVERPOOL MERCHANTS WAR HOSPITAL.

THE following is a brief note of three cases of very virulent pneumococcal blood stream infection, in which, in my opinion, the patients would certainly have died but for the employment of autogenous vaccines

The great mortality from pneumonia and the disappointing results in a great many cases from ordinary medicinal treatment compel us, as a profession to employ every means in our power to minimise this heavy fatality, and I am convinced that in a great many cases (I candidly admit, not in all) we have in vaccine a valuable remedy which will if given in the early stages of the infection, turn the scale in favour of recovery

During the last five years I have treated in hospital and elsewhere 310 cases of pneumonia with vaccine with 42 deaths, or a mortality of about 13 per cent In many of these cases vaccine was administered on the second or third day of the disease, and was given every four hours or at longer intervals, according to the severity of the case, and although the results have not always come up to our hopes and expectations, yet I have never once observed any unfavourable symptom follow the use of vaccine in whatever dose it has been administered

The much debated question as to whether or not a vaccine should be given in the course of an acute infective disease must, in my opinion, be answered in the affirmative, and during a recent visit to France I was much interested to find that acute cases of typhoid fever with high temperature were being treated with antityphoid vaccine with excellent results, and I feel sure that in the near future this form of treatment will become more generally used by physicians

A vaccine to be potent ought to be autogenous—that is, it should be prepared from the sputum or blood of the patient—and if this can be prepared quickly it can often be used with good effect

I will briefly mention three very severe pneumococcal infections which were treated as a last resource by autogenous vaccines, and, I am glad to say, successfully

CASE 1.—A young man aged 30, was seen in consultation with Dr Williams He was suddenly attacked with acute lobar pneumonia of the right base, which rapidly spread upwards, and in a couple of days the other lung was involved The toxæmia was severe, the temperature reached 105° F, and the pulse rate was 160 In addition to general treatment he had several injections of stock pneumococcus vaccine and after a great struggle up to the ninth day he had a favourable crisis Six days after the crisis he developed a large fluctuating swelling in the right lumbar region, which on aspiration was found to contain thin creamy pus full of pneumococci The swelling was freely incised and drained and was followed by similar abscesses in the neck the left elbow, and finally, an enormous swelling over the left hip This was opened and drained by Mr D Douglas Crawford About this time the patient commenced to expectorate a large quantity of similar pus, and it was evident that he had an abscess on the right lung I inoculated a mouse at the Liverpool University, which died in 24 hours from septicæmia. From the heart's blood a pure culture of pneumococcus was readily obtained and a vaccine was prepared. In all Dr Williams gave him 16 injections of this autogenous vaccine, commencing with 50 millions and rising to 100 millions at a dose The patient became alarmingly thin and wasted but after several months of suffering, during which at many times he was not expected to recover, he slowly rallied and is now quite well, with the exception of a little restricted movement of his hip-joint. In this case the improvement only showed itself after the autogenous vaccine was commenced, the patient's condition not being influenced one way or the other by the homologous vaccine

CASE 2—A female aged 25, was seized on the onset of her confinement with a very severe rigor and pain in her right chest The child was born in a few hours, but the mother rapidly became delirious with a temperature of 105 2° F and a pulse rate of 144 Pneumonia supervened in the right lung with complete consolidation of all lobes The patient was in a critical state for eight days, and Dr James Marsh of Atherton, with whom I saw the case, remained in the house for over two weeks Several injections of homologous vaccine were given to supplement the ordinary restorative treatment, and apparently with good effect On the twelfth day she developed a painful swelling in the left shoulder joint, extending down the arm and pointing over the bicipital groove. This was opened and drained, and from the pus, which was pneumococcal in appearance, I inoculated two mice at the

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[5] Some of these rods may be undergoing degenerative processes

[6] The difficulty was overcome by adding a little neutral soap but the bacilli did not grow

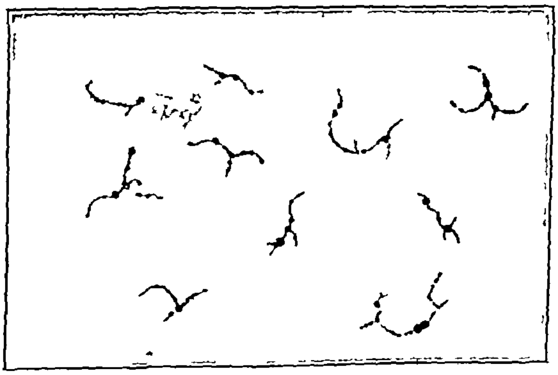
FURTHER OBSERVATIONS ON
SPERM OIL TUBERCLE BACILLI THEIR BIOLOGICAL SIGNIFICANCE

BY A. H MILLER M A., M D CANTAB , M R.C P LOND ,
JOINT PATHOLOGIST TO THE SALFORD ROYAL, MANCHESTER CHILDREN'S AND MANCHESTER NORTHERN HOSPITALS

CERTAIN changes in the tubercle bacillus were described by me last year[1] I here wish to go over some points previously mentioned and to bring forward some new matter

The percentages employed in the article mentioned and in the present one are empirical, other percentages may do as well or better More recently the crude sperm oil has been used The organism on the crude oil seems to grow better and more quickly on it than on the refined oil There does not appear at the present time to be any essential difference between the two as regards either the loss of power of the organism to stain with carbol fuchsin or the formation of granules, except that by the improved growth of the organism these two conditions take place more readily If however, the original culture of tubercle bacilli, to give them their common term, growing on the ordinary solid media is at all old, or growth is sluggish when subcultured, they will probably not grow at all, or only very slightly, when placed on the oil media For the oil media the bacilli must be known to be actively growing With actively growing bacilli there is often a definite moist growth in about 12 days' time, but the bacilli themselves are apparently no different from those obtained from the usual sources It takes a further period of from three to four weeks before the changes described begin to become visible[2]

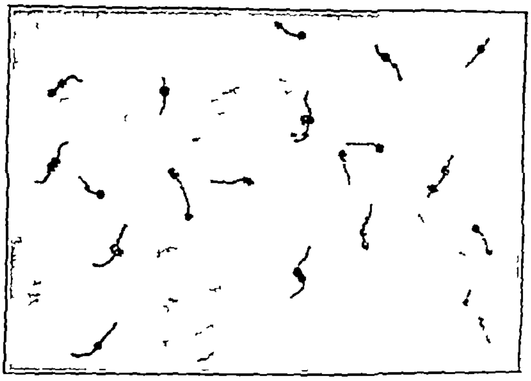
FIG 1



A three months-old culture stained with carbol fuchsin and washed Not decolourised 1/12 in lens No 6 ocular × 1500 Figs 1 and 2 drawn by J M Manby

The term "beading" that was used in my former communication is not an accurate description of the organism in all cases, especially in its earlier stages and with the lower percentages of oil (2 5), for the staining parts and the non staining parts of the organism are then often in the form of definite long segments Later, when with the richer oil mixtures the granules begin to develop and the segments to become broken up, the term "beading"[3] is perhaps better It is not my purpose here to go into the earlier stages of the organism, the lower percentages of the crude oil have not yet been tried, but to bring forward the late results of growth on 5 per cent mixtures of the crude oil[4] and some of the results of animal inoculation The organism grows on the surface of 5 per cent crude oil and 5 per cent glycerine as a thick uniform greasy pellicle Microscopically it alters considerably in shape and form, it begins to *branch* (Fig 1) Branching is also seen in the refined oil (5 per cent), but not to so great an extent The stage of growth here represented shows the branching forms here and there in a field, the remainder of the field being occupied by rod segments The rod segments also are more filamentous and irregular, the latter from the breaking up of their substance by the formation of granules and in some of them by the presence of little offshoots, the beginnings or the stumps of their ramifications At the same time they stain with greater difficulty The staining portions of the segments do not as a rule stain with their usual vividness The slide requires to be well heated for eight or more minutes Branching appears in most cases to occur where there is a large "granule' present In others small lateral offshoots seem to arise from the segments without any granule being visible, possibly false branching Granules form in the segments as they grow, and they in their turn give off other segments Further evidence that these "granules" are essentially bodies whose function is to germinate can, I think, be seen in animal inoculation Fig 2 represents oil bacilli after passage through a guinea-pig The culture was a two months old growth on 5 per cent refined oil and 6 per cent glycerine The growth, not emulsifying with watery fluids was ground up with olive oil in the proportion of two loopfuls of growth to a cubic centimetre of olive oil and then injected intraperitoneally The animal died 22 days later The necropsy showed the liver, spleen, omenta, and glands nearly solid with tubercles A portion of the tuberculous material was then placed in a mortar, and films were made of the expressed juice Microscopically, there are a large number of "bacilli" present, some 20–30 in a field, nearly all of which are as those depicted,

FIG 2



Oil bacilli after passage through guinea pig From a two-months old growth on 5 per cent refined oil and 6 per cent. glycerine Stain Zeihl Neelsen The non staining portions of the rods are not shown in the figure × 1500

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[1] Cultivation of the Tubercle Bacillus Change in Form by Growth on Sperm Oil and Glycerine Egg Medium THE LANCET Sept 19th, 1914 p 739

[2] These changes are of course not peculiar to the oil media One often sees similar abnormal *forms* in old cultures on *other media.* For instance I have a culture of human bacilli on *Dorset s medium* It had grown very well but had been allowed to become dry When examined at a growth of five months the rods had grown for the most part longer they showed all stages from not taking the stain at all to well stained segments and there were an enormous number of granules present, especially noticed after being decolourised (acid alcohol) A slide fixed with a saturated *solution of* corrosive sublimate is not different from one fixed by passing through flame

[3] At the best the *term in its reference* is not a good one

[4] 5 per cent is not the limit A strain of bovine is growing well on 8 per cent crude oil and 5 per cent. glycerine

There were rigor, pains in the back, rise of temperature, cough, and general malaise, also faint râles quickly became evident over both lungs I determined to give a polyvalent antistreptococcic serum with as little delay as possible, so that evening, at 9 o'clock, I gave 3000 units of antistreptococcic serum, the temperature being then 102 4° F The patient had a comfortable night and on the following morning the temperature was 99 6° It rose towards evening again to 101 4°, so I repeated the injection of serum, and after another comfortable night the morning temperature read 98 8°, above which it made no further rise Some ten days later, when the patient was up and about symptoms recurred, but the temperature only reached 100 8° However, I again administered serum precisely as before, with the result that the following day the temperature was normal, and has remained so ever since

CASE 2.—The patient, a girl aged 19 years, developed acute laryngitis followed by symptoms of general bronchitis When I saw her the temperature was 103 2° F Polyvalent antistreptococcic serum, 3000 units, was administered On the following morning the temperature was 101°, no rigors, cough. soft, expectoration easy The temperature that evening was 99 8°, and from this time on there was a general abatement of symptoms with rapid recovery

CASE 3—The patient was a man, aged about 63 years, the subject of chronic bronchitis with frequent acute exacerbations during the winter months I saw him for the first time in the early stages of one of these acute attacks I gave him the serum as in the previous cases, which was followed by an improvement that was progressive and maintained, so that no repetition of the treatment was necessary

From these results I formed the following conclusions 1 That the streptococcus was the main cause of the toxæmia in most case of acute bronchitis 2 That, giving an antistreptococcic serum in the early stages will increase the blood resistance against the micro organism that is likely to cause the most serious trouble 3 That the serum may be given and repeated without the fear of such dangerous reactions as I, at any rate, have experienced with vaccines 4 Serum has the great advantage that it can be got at once, where a vaccine, which if it is to be any good, must be autogenous, and cannot be secured for some days

It would be interesting to have the opinions of others on this subject, for certain it is that, provided proper aseptic precautions are carried out, the early treatment by serum injection is associated with very little risk, and will help to combat a very common and dangerous enemy which is ever waiting to find an entrance to the human body The treatment applied to other acute diseases may give similar results, but the effect on these cases impressed me considerably

St James s place S W

EDINBURGH SICK CHILDREN S HOSPITAL—The annual meeting was held in the board room of the hospital on March 17th Mr Charles I G Paterson vice-chairman of directors presiding, referred to the absence at the front on military service of their chairman Colonel James Clark He took the opportunity of publicly thanking Colonel and Mrs Clark for all they had done for the hospital Fifty years ago he said they had only 20 beds, now they had 120 and 2166 children had passed through the wards in the year The out patient departments showed the equivalent of 27,000 visits The year s expenditure was about £9600 but still there was a deficit of £3800 which had to be met out of the legacies Dr A H Freeland Barbour, President of the Royal College of Physicians of Edinburgh moved a resolution commending the Children s Hospital to the liberality of the public The care given to children reduced the mortality of the city and might preserve to the country a Jellicoe or a Kitchener

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Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF DERMATOLOGY

Exhibition of Cases and Specimens

A MEETING of this section was held on March 18th, Dr J J PRINGLE, the President, being in the chair

Dr J A. NIXON showed the Parasite "Pediculoides Ventriculosus" responsible for the disease known as 'cotton-seed dermatitis," an epidemic of which occurred among dock labourers in Bristol in January, 1915 the parasite probably being the same as that causing ' barley itch "—Dr A. WHITFIELD demonstrated the Acarus obtained from a specimen of Copra which was responsible for the disease known as "copra itch", the lesions were almost identical with those described by Dr Nixon and yielded readily to treatment by sulphur ointment. It was surprising that although the disease was well known to practitioners in the East End of London it was not generally recognised in the hospitals—Dr J M H MACLEOD had seen one case of copra itch and one of cotton seed dermatitis He had come to the conclusion that in the latter condition the acarus was a parasite of a caterpillar found in great abundance in the cotton seeds—Dr GRAHAM LITTLE and Dr G PERNET discussed the cases

Dr J H STOWERS brought up two brothers with Alopecia due to over-dosage of X rays in the treatment of ringworm —Dr DUDLEY CORBETT, Dr KNOWSLEY SIBLEY, and Dr PERNET discussed the prognosis

Dr PERNET showed a case of Iodide Eruption with much pigmentation in a man suffering from syphilis who had treated himself with a familiar "blood mixture"—The PRESIDENT Dr WHITFIELD Dr A. EDDOWES, and Dr PARKES WEBER discussed the case

Dr PERNET also showed a typical case of Non ulcerating Erythema Induratum in a girl aged 15—The PRESIDENT and Dr GRAHAM LITTLE made observations on the case

Dr SIBLEY brought forward a case of Nodular Lupus Vulgaris complicated with Lymphangitis in a girl aged 18, in which the microscopic appearances were unusual and the von Pirquet reaction negative—Dr WHITFIELD considered the sections to be typical of lupus vulgaris He thought that the disease was likely to be aggravated by the streptococcal lymphangitis—The case was further commented on by Dr H G ADAMSON Dr S E DORE, Mr J E R MACDONAGH, and Dr DOUGLAS HEATH

Dr DORE and Dr KINNIER WILSON showed a case of probable early Anæsthetic Leprosy in which there was dissociation of sensation in the lower extremities with thickening of the skin over the knuckles, blisters between the toes, and dystrophy of several nails both of hands and feet—Dr WHITFIELD suggested the Wassermann test in addition to a tuberculin injection—Dr PARKES WEBER and Dr PERNET favoured the diagnosis of leprosy

Dr ADAMSON showed a case of large Circinate Lichen Scrofulosorum in an adult—The PRESIDENT remarked on the rarity of this condition in adults as compared with its frequency in children

Dr ADAMSON also showed a case of Macular Atrophy and accentuated the toxæmic origin of the condition which was often due to syphilis or tuberculosis

Mr H C SAMUEL exhibited a Linear Nævus on the thorax, neck, axilla and forearm of the left side The condition had not manifested itself till 16 years of age—Treatment by means of carbon dioxide snow was discussed by Dr GRAHAM LITTLE and Dr ADAMSON

Dr PARKES WEBER demonstrated a case of Generalised Atrophic Scleroderma with Sclerodactylia in a middle aged woman He made special reference to the absence of pulsation in the dorsalis pedis arteries, an observation which was confirmed by Dr STOWERS

Dr GRAHAM LITTLE brought forward a boy with Simultaneous Herpes Zoster of the third and eighth left dorsal segments the intervening areas being free from lesions, he considered the case unique.—The PRESIDENT, Dr A. M H GRAY, Mr SAMUEL, Dr ADAMSON, and Dr HEATH spoke on the subject.

University, and from the blood obtained a vigorous culture of pneumococcus A vaccine from this culture was prepared and given in doses of 100 millions daily, as the case was desperate In two days another large swelling appeared over the left hip, which tracked down the thigh under the fascia lata, this was also opened and drained The pus contained enormous numbers of pneumococci The patient had in all 14 injections of autogenous vaccine, and finally she made a good recovery There is still some stiffness with adhesions in the left shoulder, but otherwise she bears no trace of her virulent infection

CASE 3 —A girl, aged 16, was admitted to the hospital suffering from acute lobar pneumonia with great pain and distension of the abdomen The pneumonia ran a very acute but short course and the crisis occurred on the fifth day The abdomen being still very painful and tender to pressure it was thought necessary to explore it On opening it in the middle line a large quantity of creamy pus escaped, which under the microscope was found to swarm with diplococci and well marked capsules Two mice were inoculated and a vaccine was prepared The abdomen was drained for ten days and after six injections of autogenous vaccine the discharge ceased and the patient made a slow but complete recovery In the course of her illness she developed puffy swellings over both elbows and the right shoulder These swellings gave every appearance of suppuration, but after constant fomentation with boracic lotion they slowly subsided and entirely disappeared

I am convinced that we have in pneumococcus vaccine a valuable aid in the treatment of pneumonia, and although not a specific remedy it ought always to be used in those cases of a virulent type which threaten the life of the patient

Liverpool

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

DYSPEPSIA OR ULCER?

BY I B MUIRHEAD, M D, C.M GLASG

THE following case illustrates a point in the diagnosis of gastric ulcer hitherto little noticed Whilst emphasising the differences of opinion which still divide the profession with regard to the question of operation, it suggests that localised pain, associated with diminishing weight, may come in many cases to be looked upon as a sufficient indication for surgical interference

The patient, a woman aged 40, was seen on Sept 21st, 1914 Three months previously she began to suffer from pain after eating, vomiting, constipation, and failure of strength Her weight had fallen from 9 st to 6 st Vomited matters were usually grey or whitish in colour, occasionally darkish brown, contained no blood No blood passed from bowel Inability to procure sufficient food might have had a share in causing the illness, but this was denied very strenuously The extreme emaciation, languid look, feebleness, and obvious anæmia were striking In the abdomen, beyond tenderness on palpation, nothing abnormal was found The position of the pain centre was, however, rather out of the common It was definitely fixed at the junction of the upper and middle thirds of the line separating the left lumbar and umbilical regions Here pain after eating was chiefly felt, and this was nearly always the situation of the pain, which led up to the attacks of vomiting It may be stated that while later pain was frequently complained of elsewhere, the position mentioned, somewhat above and to the left of the umbilicus, was always recognised by the patient as the seat of her chief and permanent pain. No enlargement of the spleen or lymphatic glands, urine normal.

From Sept 21st to Nov 4th treatment relieved both pain and vomiting up to a certain point, but the decline of strength and weight showed no improvement It therefore became obvious that, if surgical treatment was to be given a chance, the time had arrived She accordingly went to hospital, with a certificate that, in the opinion of her medical attendant, she was suffering from an organic gastro-intestinal trouble Though the certificate did not mention operation, the patient understood my views and the object of her visit At the hospital three separate examinations, each lasting about a quarter of an hour, were conducted by different members of the staff, whose unanimous conclusion was that "they could find nothing beyond a history of dyspepsia and constipation."

As already stated, the patient denied that she had ever vomited blood, and down to Nov 4th repeated examinations failed to discover a single unequivocal hæmatemesis Almost immediately on returning from hospital she began to vomit blood, and continued to do so in considerable though diminishing quantities for about a week with the usual debilitating effects, accentuated by her already reduced state From Nov 10th to 15th, and again on the 21st, dark tarry motions were passed. After the 22nd no blood appeared externally, she vomited seldom, had comparatively little pain, and took nourishment fairly well. Apart from a slight tonsillitis from Nov 27th to Dec 3rd the lull in the acute symptoms continued till the morning of Dec 11th, when rather severe abdominal pain was again complained of At 11 A.M on that day her appearance suggested a recurrence of bleeding, her pulse was quick and feeble, and her breathing laboured. She died the same afternoon A necropsy was refused. In conclusion, I should like to make mention of the services rendered by the King's nurses

Stoke Newington N

NOTE ON THE USE OF ANTISTREPTOCOCCIC SERUM IN ACUTE BRONCHITIS

BY J G HAYES, L.R C S, L.R C.P IREL

I DO not know if antistreptococcic serum has been widely used in the treatment of acute bronchitis, but a few remarks on my own personal experience of its use may not be out of place First of all, I believe I am right in saying that in the majority of cases of bronchitis, and particularly the more severe forms, some strain of streptococcus plays an important rôle, anyway, in cases where I have had the sputum examined streptococci have nearly always been found The following are examples in which I have used the serum —

CASE 1 —The patient was a woman, about 30 years of age, the subject year after year for some considerable time of recurrent attacks of very acute bronchitis associated with high temperature and great prostration necessitating confinement to bed for nearly two months at a time On the occasion of an attack in the beginning of 1913, which was a particularly severe one, autogenous vaccines were used and though the doses were below the average they were followed by such dangerous reactions that they had to be discontinued after the fourth injection In 1914 the patient developed symptoms that suggested a recurrence

Reviews and Notices of Books.

Feeble mindedness Its Causes and Consequences By HENRY HERBERT GODDARD, Ph.D Director of the Research Laboratory of the Training School of Vineland New Jersey for Feeble-minded Girls and Boys New York The Macmillan Company 1914 Pp 599 Price 17s

THE main object of this book, as stated in the first chapter is to consider the problems of crime pauperism intemperance and the social evil from a new standpoint and the new hypothesis with which the author starts may be shortly summed up as follows There are all grades of responsibility—or all grades of intelligence—from zero to the highest that responsibility varies according to the intelligence that intelligence is a relative matter, and certain people may therefore be responsible in some environments while they would be irresponsible in others and that in order to grade responsibility with a view to social work and treatment the intelligence must be measured and an attempt made to draw the line between normal intelligence and defect The author proceeds to state that persons below the line of normal intelligence' have been at different periods called by different names being originally styled ' idiots later "imbeciles ' and still later 'feeble minded , and that now, by common consent the custom has grown up of applying the term ' feeble minded to the highest grade of defectives only confining the two other terms, "imbecile and "idiot to the middle and lowest grades respectively This, he correctly says is now the common classification in England and he also mentions that as a general term for all groups, the word "aments' is sometimes used But in America the word 'feeble minded has been for long widely used both as the generic term for all and for the highest grade alone and the author informs us that since what is known as the ' Binet measuring scale of intelligence and the grading of children by their "mental age have been adopted in America the term 'moron has been substituted for ' feeble minded as the designation of the highest grade It is claimed that the study of ' morons' in American institutions for the feeble minded has resulted in the drawing of a line which marks the degree of intelligence to which these people cannot reach and are consequently incapable of functioning properly in a highly organised society

Following on these preliminary statements and in relation to them the social problems of alcoholism, crime prostitution and pauperism are successively considered

For the rest, this book consists chiefly of a detailed series of 327 unselected cases not of morons only but of all ages and grades of defect and it is said that the theories presented and the conclusions arrived at have been merely those that were suggested by the data themselves Among the chief conclusions that have been forced on the author by the figures is that normal intelligence is a unit character, transmitted in true Mendelian fashion

We have no space to deal at length with the elaborate records of cases which occupy by far the largest portion of this book Whether or no the conclusions appeal to thoughtful (or according to the peculiar orthography which pervades this work *thotful*) readers these records will be of interest to the clinical student of mental defect But the classification of cases into several groups such as hereditary, probably hereditary neuropathic, accidental, and so forth, seems to us to be very superficial to involve confused notions regarding the meaning of heredity and to consist, in a great degree of mere opinions To give one instance, a certain boy classed as a high grade (moron) was the only living child of a mother who had had eight miscarriages or stillbirths The mother was a normal ' of a normal family, the father was also normal, "but evidently a carrier of defect since his mother was feeble minded He was alcoholic, and went with a fast set, which undoubtedly accounts for the miscarriages To confirm our theory that the father must have been a carrier of feeble mindedness we have only to look at an older brother who is feeble minded, and married a feeble minded woman There is no doubt that this boy has inherited the defect thru his paternal grandmother "

One of the most glaring faults in this book is the elementary mistake of regarding ' intelligence " as synonymous with mind an error which marked also the essay of Professor Karl Pearson on this subject which was reviewed in THE LANCET of Jan 2nd Indeed Professor Pearson appears to us to have had in view the work now under consideration when writing his paper in that he not only pointed out that there are other factors, such as the moral factor (which he does not consider "mental) in the complex commonly known as "feeble mindedness ' but also set forth his own refutation of the teaching that mental defect is to be regarded as a Mendelian trait due to the absence of the "unit character' of normal mindedness from the germ plasm We agree fully with Professor Pearson in his demolition of this theory of a 'unit character' in relation to feeble mindedness, and thus may pass over this doctrine, which is emphasised so strongly in this book, without further notice

The diagnosis of "feeble mindedness' or "moronism, is not a matter concerning the intelligence only It is a matter of *mental defect* (in the proper sense of that word), as evidenced chiefly by careful observation of conduct and by study of the history of each case leading to an inference of the incapacity of the subjects to adjust themselves effectively to their social surroundings We believe that no definite hard and fast standard of intelligence alone, such as that adopted by the author for facilitating clinical work nor, again any prescribed method of standardising judgments as to the grade of social inefficiency which shall involve segregation' as hoped for, but not indicated by Professor Pearson, is to be reached or sought for On the other hand we hold that in spite of inevitable differences of opinion regarding some cases, a careful history and prolonged observation of most alleged instances of feeble mindedness will enable most students of mental defect to come to a right and practically useful conclusion We agree to a certain limited extent with the author's views as to some causal relation of feeble mindedness to crime alcoholism prostitution and pauperism but believe that the far reaching conclusions arrived at by him are not borne out by facts and would be very misleading if regarded as duly established

We have not entered here into the question of the heredity of feeble mindedness because

Dr GRAHAM LITTLE further showed (1) a case of Epithelioma of the thigh in a woman, aged 63, resulting from an injury to a congenital pigmentary patch, and (2) a case of Dermatitis Herpetiformis in a boy, chiefly affecting the neck, chest, and groins —The PRESIDENT commented on the difficulty of differentiating between Duhring's disease and pemphigus, and Dr ADAMSON concurred.—Dr HEATH agreed with the exhibitor's diagnosis, and advocated the exhibition of arsenic

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF MEDICINE

Exhibition of Case of Lupus Vulgaris —X Ray Treatment of Ringworm —Prophylactic Inoculation against Tuberculosis

A MEETING of this section was held on March 5th, Dr W G SMITH, President of the Academy, being in the chair

Dr C M O'BRIEN showed a boy, aged 13, who was suffering from a very pronounced form of Lupus Non exedens for the last nine years Although widespread, the face and mucous membrane were practically free Since admission on Oct 8th, 1914, the boy had gained 11 lb For almost three years he had received at the London Hospital one hour's exposure of Finsen light on five days of the week Since Oct 8th, 1914, he had had three sittings per week of 70 minutes each The most that could be claimed was that it stopped the spread Dr J Griffiths, of Cambridge, had inoculated a guinea pig from the lupus tissue with positive results

Dr E J M WATSON read a paper on X Ray Treatment of Ringworm —Dr SMITH said the whole point of X ray treatment was that this method had reduced to weeks a period of treatment which was formerly measured in months The only change in X ray treatment in recent years seemed to be the substitution of frequent exposure to small doses for larger doses given at longer intervals To epilate a child's head was a troublesome process, and he suggested that X ray treatment was forceps treatment abbreviated He maintained that no case of ringworm should be certified as safe so long as one diseased hair could be found —Dr W G HARVEY could support Dr Watson's statement that occasionally cures occurred without epilation being complete The diseased hairs were more freely epilated than the healthy He had usually employed an antiseptic ointment, believing its effect to be mechanical —Dr O'BRIEN said that notwithstanding diversity of opinion as to the effect of X ray treatment on ringworm, the statistics of Paris should leave no doubt as to the efficacy of the procedure Sabouraud held that at the end of 1906, after three years' work, the municipality of Paris had gained financially 2½ millions of francs by the adoption of X ray treatment He had made it a *sine quâ non* before treating a child under the age of 3 to get the consent of the parents in writing, as it had been suggested in some cases treated in London that the exposure to X rays had some effect on the brain of a child —Dr M R J HAYES, in regard to permanent alopecia as a result of the treatment, suggested scrupulous accuracy in the measuring of the dose and caution in the use of old tubes in the treatment of ringworm, as one could not be sure of their vagaries Tubes which had been used for many hours in a period of months would give off rays greater than one would expect He had used cataphoresis with copper sulphate ions, but this was somewhat troublesome and was more painful —Dr WATSON, replying, said his practice was to expose each area with the dose of one Sabouraud for a quarter of an hour If one's tube was new and working properly he did not think there was any danger of baldness even in very susceptible cases

Dr W M CROFTON read a paper on Prophylactic Inoculation against Tuberculosis, and said that practically everyone who attained to adult years got infected with tuberculosis Two objects presented themselves (1) to prevent the microbe obtaining access to the patient, (2) to make the patient's tissue unsuitable for the development of the microbe While it appeared impossible to prevent the microbe gaining access, only a proportion of those infected developed the disease to a serious extent The recovery of the majority was due to a normal resistance, therefore the problem would be solved if the resistance of the minority could be made and kept normal Low resistance was due to (1) bad hygienic surroundings, (2) lowering of resistance by other microbes, and (3) inhibition. A normal resistance might be overcome by a virulent infection General sanitary measures, while they kept down morbidity and mortality to a certain level, would not entirely prevent disease The only method was to render the soil unsuitable by prophylactic inoculation The probability of the success of this measure and the method of carrying it out were discussed T R was used dissolved in liquid paraffin containing 2 per cent benzoyl chloride. The doses were given at intervals of a week, increasing ten times each administration They began at one millionth of a milligramme and rose to one thousandth for infants Ten times these doses might be given to older children, and for adults an extra dose of one-tenth milligramme might be given The test of success would be the reduction of case incidence and of mortality The experiment was innocuous, cheap, and easily carried out A beginning might be made in families in which tuberculosis had occurred —Dr T G MOORHEAD said that he had come to the conclusion that tuberculin as a prophylactic remedy against tuberculosis was not of much value As one looked around, two types of infective disease were recognised Of one, small pox was the type, and of the other tuberculosis In tuberculosis it would seem that a sufficient amount of antitoxin was not produced to prevent a patient from getting a second attack. A survey of such remedies showed that certain of them had been permanently accepted as useful—e g, vaccination for small pox and 606 for syphilis, but of tuberculin, although it had been before the profession now for over 20 years, the value had not become admitted, and at the Congress of Medicine much doubt was expressed as to its utility —Professor B J COLLINGWOOD asked if it was not possible that the liability to tuberculosis which exists in certain individuals is due to the fact that they do not possess the power to produce antibodies to prevent tuberculosis? —Dr SMITH and Dr LAW also spoke

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ÆSCULAPIAN SOCIETY —A meeting of the above society was held in the Metropolitan Hospital on March 19th Dr David Ross, a Past-President, being in the chair —The resident staff showed some interesting cases and skiagrams —Mr W S Soden showed 1 A man with a large mass in the abdomen, found on operation to be fixed to the abdominal wall Gumma was suggested 2 A man, aged 50 with rapidly growing Epithelioma of the Soft Palate on the left side, treated by diathermic cautery with excellent results 3 An anæmic man with Chronic Laryngitis of doubtful origin, syphilitic or tuberculous Wassermann reaction negative even after provocative dose of neosalvarsan No tubercle bacilli were found 4 A man, aged 26, with Comminuted Fracture of the Right Clavicle 5 X Rays of Shrapnel Wounds showing metal remaining after healing of wounds —Mr C K Sylvester showed 1 Skiagram of a Bullet in the Muscles of the Back. 2 Case of Cerebro spinal Meningitis, no loss of abdominal reflexes, and persistent Kernig's sign Diplococcus found only on third examination Three grains of soamin were administered on March 4th and two grains on March 10th, followed by fall of temperature for two or three days An unexplained rise of temperature proved to be the onset of measles 3 Spasm of Cardiac End of Œsophagus History of vomiting for two years A bismuth meal revealed great dilatation of the œsophagus ending in a cone shaped shadow No evidence of new growth Jejunostomy suggested, and later when the condition improves gastrostomy —Mr Mawer showed 1 A boy, aged 14½ years, with swelling under the mandible on the left side, noticed by him since Dec 14th After discussion a cystic hygroma was diagnosed 2 A small female child aged 4 weeks, with a cystic swelling of the left buttock, which was agreed to be an anococcygeal cyst Treatment was deferred until the child had acquired control of her anal sphincter —Mr Dive showed 1 A woman aged 54, with Adiposis Dolorosa. The treatment consisted of the administration of thyroid and pituitary extracts 2 A child, aged 7 months, with painless bony swelling of two weeks' duration of the proximal phalanx of the right fourth finger Diagnosis T B dactylitis, confirmed by X rays 3 A child, 6 weeks old, suddenly noticed to have a swelling of the right elbow, false paralysis of that arm. Diagnosis of epiphysitis

From their study of the conditions under which the disease appears in fish hatcheries, and from their experiments, the authors conclude that this disease is due to a water borne virus, and that the liability of fish to it is enhanced by artificial proteid feeding, overcrowding, and other factors In addition to the beneficial effect of iodine already noted by Marine mercury and arsenic are also stated to influence the condition in the same way The numbering of the pages seems to have been altered in the press, as the authors' references to their own observations are all incorrect This adds a needless difficulty to the task of following their arguments

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Water Supplies Their Purification, Filtration, and Sterilisation

By SAMUEL RIDEAL, D Sc Lond , and ERIC K. RIDEAL, B A Cantab , Ph.D Bonn With numerous illustrations and tables London Crosby Lockwood and Son. 1914 Pp 274 Price 7*s* 6*d* net

THE subject of water supplies is approached in this book mainly from the standpoint of modern methods of purification, and as the advances made in this direction have been considerable during recent years, particularly in America and this country, Dr Samuel Rideal and his son, Dr Eric Rideal, have done good service in furnishing us with a handbook that takes into account these modern developments The chapter on storage affords a good example of the comparatively recent steps taken for the preliminary purification of water by this method "In the case of London alone the storage has been increased in the ratio of 1 to 6 3 in 24 years' Thus under the eight companies the total storage capacity in 1884 in millions of gallons was 1444 5, whereas in 1908, under the Metropolitan Water Board, the storage capacity was 9156 7 gallons The water stored in such large reservoirs not only parts with its silt but also with the larger portion of its contained bacteria, the majority being carried down by the silt to which they have attached themselves, and the remainder for the most part perishing for lack of adequate food supply and subsequently sinking These observations emphasise the importance of storage and lead to the conclusion that in some cases there may be no need to filter the supply

In regard to the softening of water the ingenious permutit process is described This artificial zeolite contains the silicates of aluminium and sodium, and when a hard water is passed through a bed of it, the sodium of the permutit is replaced by the calcium and magnesium of the water which now contains sodium carbonate as an equivalent of the calcium and magnesium salts formerly present

The chapter on sterilisation is very interesting, and includes valuable references to recent applications a field in which Dr S Rideal has laboured successfully This is succeeded by an account of electrical modes of sterilisation, including a description of certain installations in which the sterilising power of ozone, electrolytic fluid the direct current itself, and the ultra violet light of the quartz mercury lamp are described The section on analysis and interpretation of results is somewhat short, but, of course this subject shares little in the main theme of the work The references to literature are copious, and altogether the book gives a very good insight into the present scientific position of water administration

MISCELLANEOUS VOLUMES

IN the preface to the *Manual of Instruction for the Royal Naval Sick Berth Staff* (printed for H.M Stationery Office 1914 Pp 507 Price 2*s*) it is stated that this book has *been written for three reasons to provide a text-book* for probationary sick berth attendants, to promote uniformity of instruction at the naval hospitals, and to provide a concise and comprehensive manual for the sick berth staff in preparing themselves for examination for the higher ratings These objects have been successfully attained, and it would be difficult to find elsewhere so much useful information on the subjects treated of in an equally compact and inexpensive form (The analogous manual of medical corps training for the army is also very good, but its scope is different) In the first hundred pages is given a summary of anatomy and physiology, quite sufficient for the purpose, and well illustrated by 70 figures A few pages follow on bacteriology, and then the main facts of pathology and treatment are plainly set forth in regard to inflammation, hæmorrhage, injuries, poisons and the chief groups of diseases, so far as is needed by an intelligent and well trained nurse. Sick cookery and anæsthetics are dealt with, and a list is given of drugs and appliances, with their properties, doses and uses The instructions for stretcher bearers occupy very little space, and there is much less in the way of drill or routine work than in the analogous medical corps in the army The book is well printed and illustrated It is not correct to state that proteids are the only foods that form tissues (p 92) as fatty tissue is of course largely formed from the fatty food that is eaten and partly also from the carbohydrates It is also not quite accurate to say that spores of bacteria are killed "by the action of the various antiseptics and disinfectants" (p 101), there are many useful antiseptics that are not actually bactericidal, though no application is truly disinfectant unless it destroys bacteria and their spores This book is an official publication and anonymous The author has been most successful in producing a comprehensive manual, admirably adapted for the purpose for which it was written.——Lieutenant-Colonel R J BLACKHAM'S *Indian Home Nursing* (Third edition Simla St. John Ambulance Association 1914 Pp 235 Price 1 rupee), for the guidance of nurses in India, has reached its fifth thousand, which shows that it has been appreciated It contains the material for the five official lectures of the St John Ambulance Association and deals with all nursing matters in quite sufficient fulness It is not clear what is meant by the period of exclusion (e.g , 16 days in measles) "from the day disinfection has been completed in the case of infected children " The difference between cocoa and coca might have been explained in a book intended for popular use The carbonic acid present in air is not 4 per 1000 (p 16) On the whole the book is very useful and trustworthy

The latest addition to the Pocket Guide Series, price 1*s* each published by the Scientific Press, Southampton-street London, are *The Muscular System* and *Notes on the Nervous System* the former by Dr HAROLD BURROWS and the latter by Dr EDWIN L. ASH Dr Burrows gives a brief sketch of the most important features of the anatomy of the skeletal system, his classification being based upon function while Dr Ash summarises the main lines on which the nervous system is constructed Of course an adequate knowledge of both these subjects can be obtained from standard text-books only but for revision purposes the pocket guides should prove useful to students, and nurses will probably find in the books all that they need For the benefit of nurses in particular a chapter on the more common diseases of the brain is appended to 'Notes on the Nervous System "

An Index to First Aid, by J M CARVEL, M R C S , L.S A Hon Associate of the Order of St John of Jerusalem (London John Bale, Sons and Danielsson Pp 135 Price 1*s* net) is described as a vade-mecum for the ambulance worker and all interested in the subject of first aid to the injured its purpose being to indicate briefly the correct line of action to be adopted by the first aider in any particular case this being facilitated by an alphabetical arrangement of subjects Such an index of terms and treatment may conceivably be useful to ambulance workers pending the arrival of a medical there is a general agreement, whatever views may be held as to the nature and mode of heredity, that there is a vastly greater probability of offspring with marked mental defect being born of forebears with a similar defect than of those not so characterised. There is, of course, much evidence to this effect in the interesting cases reported in the book before us, but we find nothing that can be regarded as of fresh scientific or practical import.

The Anatomy of the Human Skeleton

By J. ERNEST FRAZER, F.R.C.S. Eng., Lecturer on Anatomy in the Medical School of St. Mary's Hospital, formerly Lecturer at King's College, London, Senior Demonstrator at the Medical School of St. George's Hospital, and Examiner in Anatomy for the Conjoint Board of the Royal Colleges of Physicians and Surgeons. With 219 illustrations many of which are coloured. London: J. and A. Churchill. 1914. Pp. 274. Price 21s. net.

IT is but rarely that a reviewer experiences the real pleasure afforded by the reading of a book on human anatomy which may truly be termed new—new both in its illustrations and in its text. But such a book is that produced by Professor Frazer, which possesses the added charm that in the very manner of treating the subject the author has struck out new lines for himself. Among the flood of new editions and reprints which it is our lot to wade through, this book comes with its novelty as a particularly refreshing thing, and it must be remembered that if this sense of relief should unconsciously colour the impressions of the reviewer, it is likely also to have its influence upon the student, perhaps wearied by the monotony of his old companions. This is a virtue difficult to over estimate.

Professor Frazer has more nearly than any recent writer "made the dry bones live" for the student of anatomy, if we may be pardoned the old quotation. He has placed the bones before the student as functioning parts of a living body, a mass of mere description of surfaces and borders is avoided, and the bone is studied in all its complex relations to the surrounding structures. It is safe to say that the knowledge gained by the student from following such a course is far more real, and far more likely to be useful than that gained by any method such as the one (alas, ascribed originally to the great Vesalius!) of carrying dried bones at all times in the pocket. We think, perhaps, that the book does not end quite so well as it begins, that the treatment of the skull is not carried out quite so fully as is that of the rest of the skeleton, but this must not be taken as saying that the work here is not done in an excellent and sensible manner.

The illustrations are the work of the author and they are bold and striking, and the text is clear and ample. Two things will, we think, be criticised by a lecturer on anatomy, who is regarding the work as the most recent text book of the science of osteology, rather than as a work from which the medical student may learn of the human skeleton. In the first place, few authorities are named and practically no references are given to the literature, in the second, the old terminology has been retained. It is perfectly obvious that this is deliberate on Professor Frazer's part, and we commend his attitude, for if we regard the work as a handbook for medical students, it is not difficult to see that these very features are in reality positive virtues in such a book. Professor Frazer is to be congratulated upon the production of this volume, for in it the medical student has been provided with a book on bones he can read with interest, which will put him on the right lines for finding out more for himself, and will give him knowledge that will serve him long after his student days.

The whole "get up" of the book is good—we have here, in short, one of the best additions to the student's library made of recent years.

The Practice of Surgery

By JAMES GREGORY MUMFORD, M.D., Lecturer on Surgery in Harvard University, &c. Second edition thoroughly revised. With 683 illustrations. London and Philadelphia: W. B. Saunders Company. 1914. Pp. 1032. Price 30s. net.

THE present edition of this book has been fully revised so as to record the progress and changes that surgery has undergone in the four years since it first appeared, and we wish to reiterate the very favourable opinion that we expressed of the book at that time. The reader will be impressed with the tone of the author, and will recognise that he writes from a wide experience and with a calm judgment capable of estimating correctly the new facts, theories, and methods which are always being brought forward, though there may be some things in the book with which he can hardly agree. The author states in his preface that he has read 70 reviews of his book and that his reviewers do not always agree with him, but adds that neither do they always agree with one another, a comment which shows the book to be a really thoughtful work maintaining a high standard.

The illustrations are all that can be desired. In our former review we referred to the frontispiece which represents the changes that have taken place in surgery, one picture showing the first public demonstration of ether anæsthesia in the Massachusetts General Hospital on Oct. 16th, 1846, and the other showing an operation in the same hospital in May, 1908. The difference is very striking, but some surgeons of to-day would say that even the latter picture does not show the practice of 1915.

Carcinoma of the Thyroid in Salmonoid Fishes

By H. R. GAYLORD and M. C. MARSH. With 55 plates. Buffalo, N.Y.: State Institute for the Study of Malignant Disease. 1914. Pp. 524.

THIS large quarto monograph falls naturally into two parts: one dealing with the histology and morbid anatomy of thyroid enlargement, and the other devoted to a discussion of the conditions associated with varying frequency of the disease and experimental variations of these conditions. The plates refer almost entirely to the first part, and give a very complete picture of the structure of the conditions from the earliest hyperplasias to the most advanced growths. Being mostly prepared from microphotographs they show the limitations of this method of illustrating histological work, the most successful photographs being those taken with very low powers. While these are all admirable, the same cannot be said of the higher magnifications. This indistinctness is particularly unfortunate in the case regarded as a visceral metastasis from a thyroid tumour. The importance assigned to this case by the authors makes it all the more regrettable that only presumptive evidence could be adduced of the co-existence of a thyroid tumour in the fish in question. The conclusion is drawn, from the completeness of the series of transitional forms between the slightest degrees of hypertrophy and the large atypical destructive growths, that "endemic goitre and carcinoma of the thyroid in the Salmonidæ are the same disease."

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man, and also as a ready means of refreshing the memory for purposes of study, but the first aid worker if he is to be of real use should have his knowledge at his finger ends The book is illustrated and interleaved with blank sheets for memoranda

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JOURNALS

The Indian Journal of Medical Research, Vol II, No 2 —This number contains 12 original articles, the first two of which deal with the subject of malaria, one being contributed by Captain E C Hodgson, I M S, on the incidence of the disease in the recently constituted province of Delhi, illustrated by photographs, maps, and charts, the other by Major E L Perry, I M S, treating of the endemic malaria of the Jeypore Hill Tracts of the Madras Presidency Major Perry's paper is illustrated by several plates and diagrams and a map —The next article is by Captain W S Patton, I M S, of the King Institute, Madras, who gives the results of the examination of the peripheral blood of 84 patients suffering from kala azar in the General Hospital at Madras during the 12-month period ended July 15th, 1913 —Two other papers deal also with kala azar, and both are contributed by Major F P Mackie, I M S The first, with a map, describes the progress of the disease in a localised community in the endemic area situated between the Brahmaputra River and the Garo Hills, this region being the oldest known focus of kala azar in the province of Assam The second is a note, with an illustrative plate, on some bodies of unknown nature found by Major Mackie in the fæces of kala azar patients in Assam This officer has for some time been engaged in investigating the malady in this region, and his note raises the suggestion that this form of leishmaniasis may after all be spread by means of the intestinal discharges of the patient and not by a blood sucking insect, but obviously further researches are required before any conclusion upon the matter can be reached —Major A C MacGilchrist, I M S, in continuation of his previous work, furnishes a third communication on his cinchona derivatives inquiry, giving a synopsis and discussion of our present knowledge of the molecular constitution and pharmacological action of the more important of the cinchona derivatives —Some observations on the salivary secretion of the common blood-sucking insects and ticks are contributed jointly by Major J W Cornwall, I M S, of the Pasteur Institute, Coonoor, and Captain W S Patton, I M S, of the King Institute, Madras —A culturable, free living flagellate, and the determination of the lethal value of certain chemicals thereon, form the subject of an article, which is illustrated by a coloured plate, by Dr Gopal Chandra Chatterjee, assistant bacteriologist at the Medical College, Calcutta. The flagellate in question was found by Dr Chatterjee in water taken from a tank, and it grew in ordinary bouillon and peptone water in intensely rich culture The author regards it as possibly a new species of the sub family Trypanoplasma of the Flagellata.—Major E D W Greig, I M S, who has been employed for some time past upon the systematic study of cholera, supplies two papers to this number of the *Journal*, the first dealing with the simultaneous occurrence of cholera and cholera-like vibrios in the tissues of persons suffering from the disease, and on this part of the subject he promises a further contribution at a later date His second paper is on the hæmolytic action of Indian strains of cholera and cholera like vibrios —A joint article by Major W F Harvey, I M S, and Captain H W Acton, I M S, treats of methods of estimation of quantity of organisms in suspension, the organism chosen for this investigation being the dysentery bacillus —Lastly, Major Clayton Lane, I M S, gives a detailed description, with eight illustrative plates, of suckered round worms found in India and Ceylon.—This number maintains well the high practical and scientific standard set by the articles already published in the *Journal* by the officers of the Indian Medical Service

British Dental Journal —The issue for March 1st contains an article by Dr J H Sequeira on oral affections from the dermatological standpoint After referring to syphilis he draws attention to oral tuberculosis and lupus, and then discusses the possible relationship of the erythemata to oral sepsis Jacquet's hypothesis that alopecia areata was intimately associated with trigeminal irritation does not, he thinks, stand the test of careful clinical investigation —Mr W H Dolamore has a short note on the value of metal "cap splints" for the treatment of fractured mandibles He draws attention to several practical points in their manufacture and adaptation, and speaks highly of the results obtained from their use —Mr A Barrett contributes an article on the antiseptic and germicidal value of ether, and Mr Valentine Kay one on the treatment of cysts

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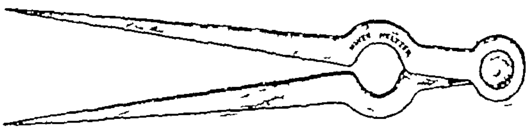
New Inventions.

BONE GRAFT CALLIPERS

In performing a bone grafting operation it is necessary to have some ready means of accurately measuring the extent of the bed the proposed graft is to occupy The instrument here illustrated I have found *exceedingly useful* It presents three advantages (1) The character and size is such as to obviate the necessity of introducing the fingers into the wound—a desirable aim in all bone surgery, (2) after the measurement is taken the callipers can be laid aside, without any chance of losing the exact distance ascertained, and (3) the sharp points conveniently mark the limits of the graft in the periosteum of the bone chosen—usually the inner surface and crest of the tibia



The instrument has been made for me by Messrs Mayer and Meltzer, Great Portland street London W

Harry Platt, M S Lond, F R C S Eng,
Surgeon to and Surgeon in Charge of the Orthopædic Department Ancoats Hospital Manchester

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Isolation Hospitals in Cornwall —The Local Government Board has recently requested the Cornwall County Council to consider the inadequate isolation accommodation in the county, especially in view of the likelihood of outbreaks of infectious diseases when soldiers return from the front The medical officer of health states that, excluding small pox hospitals, there are nine isolation hospitals in the county and 33 districts are quite unprovided for A special meeting of the council was accordingly held last week, at which a committee was appointed to consider the subject

Central Midwives Board —A special meeting of the Central Midwives Board was held at Caxton House, Westminster, on March 12th, Sir Francis H. Champneys being in the chair A number of midwives were struck off the roll, the following charges amongst others having been brought forward Not observing the antiseptic precautions prescribed by Rules E 3 and 7, neglecting to cleanse the child's eyelids as prescribed by Rule E 15, being unable to take and record the pulse and temperature of patients, as required by Rule E 13, not keeping the register of cases as required by Rule E 23, and the midwife refusing to give to the inspector of midwives reasonable facility for the investigation of her mode of practice, as prescribed by Rule E 24 The midwife not keeping her appliances in a cleanly condition, as required by Rule E 1, not possessing the appliances and antiseptics required by Rule E 2, and, in spite of repeated warnings, failing to comply with the rules of the Central Midwives Board Neglect to disinfect the hands and forearms, as prescribed by Rule E 3, neglect to wash and swab the patient's external parts prior to the confinement, as required by Rule E 7 (a) washing the patient with dirty water during the lying in period and neglecting the antiseptic precautions required by Rule E 7 Medical aid having been sought for a patient, the midwife neglected to send any notification thereof to the local supervising authority, as required by Rule E 21 (1) (a), being under the influence of drink on more than one occasion when attending a patient, and not being scrupulously clean, as required by Rule F 1

THE LANCET.

LONDON SATURDAY, APRIL 3, 1915

Health and Occupation

AT a recent meeting of the Eugenics Education Society SIR ARTHUR CLAY read a paper on Eugenics and the Poor law, in the course of which he touched on some problems of peculiar interest at the present moment Having pointed out that the great war in which this country is now engaged is a severe test of the national character, he showed that it is therefore in some measure a test also of the value and efficiency of the various social agencies which directly or indirectly affect the vigour and the vital energies of the population Of these agencies the Poor law is one of the most influential, and we may accordingly expect that the reaction of pauperism to the strain of the war will be found to be one of the most instructive and illuminating sociological phenomena arising out of the present crisis

It will not, of course, be possible for some considerable time to determine the nature and extent of this reaction, but we can already see various indications which warrant us in anticipating that the experience of war will strongly support the view that part, at all events, and probably a large part of the destitution dealt with under the Poor law is of an artificial and unnecessary character This, of course, is no new discovery, it has always been recognised that the administration of public relief can be so conducted as to modify very considerably the amount of pauperism, that, as it has been put epigrammatically, "a nation can have as many paupers as it chooses to pay for" But in the present instance we are enabled to see rather more deeply into the biological conditions which allow of this response to pauperising influences, or, as it may be expressed in less special terms, to the influences making for the physical and moral enfeeblement of the population And we then find, as has been found in respect of other social phenomena under the test of the national struggle for existence, that one of the important lessons to be learned from this war is that under our present social system there is a great deal of preventable waste, that the community does not get the best value out of the individuals composing it, because of the very imperfect adjustment of opportunity to aptitude As an illustration of this point reference may be made to the effect which the war appears to have had on the general health of the non combatant population in this country It was pointed out, for instance at a recent meeting of the Governors of the Royal Sussex County Hospital at Brighton that since the commencement of the war the health of the civil population of that town, judged by the demands for hospital treatment, had improved so much that it was possible to make liberal provision for the reception of wounded soldiers without putting any strain on the resources of the institution And similar observations have been made in other parts of the country, both in regard to general hospitals and in regard to asylums for the insane, though in the latter case the decrease seems to be confined to males, the number of female admissions even showing a slight rise No one, of course, would think of suggesting that this curious change is due to any directly beneficial influence of the war like spirit, or that the ultimate effect of a long and fiercely contested struggle under the conditions of modern warfare is likely to be anything but detrimental to the physical and still more to the mental health of the belligerent nations But it is instructive as showing—for that seems to be by far the most probable explanation of the fact—that the economic readjustments necessitated by the outbreak of hostilities have recalled to activity, and therefore to healthier existence, a considerable number of individuals who under ordinary circumstances would have been nursing their minor ailments The older and feebler men who were taken on to fill the places of the young and robust recruited for active service have improved in health when once more in regular work and well fed, and they have benefited also, no doubt, by the stimulating sense of being again useful members of the community, especially at a crisis that has greatly exalted the intensity of the social consciousness Many of those who have been recalled to active employment were probably men whose main disability was the largely conventional one of years They laid aside their vocations merely on account of having reached a certain age, and, having no particular interest or pursuit to which to turn, inclined to despondency and premature dotage with their concomitant ailments COWPER sums it up very neatly when he says

> Absence of occupation is not rest,
> A mind quite vacant is a mind distressed

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THE LANCET.

LONDON SATURDAY, APRIL 3, 1915

Health and Occupation

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It will not, of course, be possible for some considerable time to determine the nature and extent of this reaction, but we can already see various indications which warrant us in anticipating that the experience of war will strongly support the view that part, at all events, and probably a large part of the destitution dealt with under the Poor law is of an artificial and unnecessary character This, of course, is no new discovery, it has always been recognised that the administration of public relief can be so conducted as to modify very considerably the amount of pauperism, that, as it has been put epigrammatically, "a nation can have as many paupers as it chooses to pay for" But in the present instance we are enabled to see rather more deeply into the biological conditions which allow of this response to pauperising influences, or, as it may be expressed in less *special terms* to the influences making for the physical and moral enfeeblement of the population And we then find, as has been found in respect of other social phenomena under the test of the national struggle for existence, that one of the important lessons to be learned from this war is that under our present social system there is a great deal of preventable waste that the community does not get the best value out of the individuals composing it, because of the very imperfect adjustment of opportunity to aptitude As an illustration of this point reference may be made to the effect which the war appears to have had on the general health of the non combatant population in this country It was pointed out, for instance at a recent meeting of the Governors of the Royal Sussex County Hospital at Brighton that since the commencement of the war the health of the civil population of that town, judged by the demands for hospital treatment, had improved so much that it was possible to make liberal provision for the reception of wounded soldiers without putting any strain on the resources of the institution And similar observations have been made in other parts of the country, both in regard to general hospitals and in regard to asylums for the insane, though in the latter case the decrease seems to be confined to males, the number of female admissions even showing a slight rise No one, of course, would think of suggesting that this curious change is due to any directly beneficial influence of the war-like spirit, or that the ultimate effect of a long and fiercely contested struggle under the conditions of modern warfare is likely to be anything but detrimental to the physical and still more to the mental health of the belligerent nations But it is instructive as showing—for that seems to be by far the most probable explanation of the fact—that the economic readjustments necessitated by the outbreak of hostilities have recalled to activity, and therefore to healthier existence, a considerable number of individuals who under ordinary circumstances would have been nursing their minor ailments The older and feebler men who were taken on to fill the places of the young and robust recruited for active service have improved in health when once more in regular work and well fed, and they have benefited also, no doubt, by the stimulating sense of being again useful members of the community, especially at a crisis that has greatly exalted the intensity of the social consciousness Many of those who have been recalled to active employment were probably men whose main disability was the largely conventional one of years They laid aside their vocations merely on account of having reached a certain age, and, having no particular interest or pursuit to which to turn inclined to despondency and premature dotage with their concomitant ailments COWPER sums it up very neatly when he says

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Annotations.

"Ne quid nimis

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON ELECTION OF PRESIDENT

AN *extraordinary Comitia* of the Royal College of Physicians of London was held on March 29th Sir Thomas Barlow presiding and delivering the usual Presidential Address, in the course of which he referred to the honours that had been conferred on Fellows, Members, and Licentiates during the year He especially mentioned Captain A M Leake, R A M C, who for the second time had been awarded the V C He also reviewed the list of the lecturers of the year, the gifts which had been made to the College, and the medals and scholarships which had been awarded After consideration of the principal matters which had been discussed at the College, the President read obituary notices of the Fellows who had died during the year—namely, Samuel Herbert Habershon, Edward Cox Seaton, Isaac Burney Yeo, Eustace Smith, John Abercrombie, and Philip Henry Pye Smith In conclusion, the President thanked the censors, the officers of the College, and the Fellows for the support they had given him during the time he had occupied the presidential chair Dr P W Latham proposed a vote of thanks to the President for his address, with a request that it might be printed, he added that the Fellows wished to express their highest appreciation of Sir Thomas Barlow's services to the College whilst President Sir Thomas Barlow thanked the College and vacated the chair The ballot then took place for the election for President, and Dr Frederick Taylor was elected The Senior Censor, Dr Percy Kidd, delivered the charge and handed to Dr Taylor the insignia of office The new President then gave his faith to the College and expressed his thanks for the honour conferred on him

THE AIR AS A SOURCE OF EXPLOSIVES

THE demand recently credited to Sir John French, "*Munition* more munition, always more munition,' may well have been "Nitrogen, more nitrogen, always more nitrogen," for without *nitrogen the most distinctive form* of modern munition—namely, the high explosive—cannot be made There is a vast importance attaching to this element *just now*, *it possesses*, as a matter of fact, in time of peace an equal importance, inasmuch as it is an essential constituent of our foods, but until the manufacture of explosives became a matter of national urgency the public was prepared to explain the statement of chemical text books, which are wont to describe nitrogen as an inert element, as meaning an element of no activity Ordinarily speaking, nitrogen is comparatively an inert gas great forces only can find for it affinities, it will not combine under simple circumstances, nor does it exhibit simple characteristics in the same way as the other gases do, as, for example, oxygen hydrogen or chlorine Of course, to some extent it is this very inertness which renders nitrogen a powerful explosive agent So to speak it yearns to be free and a small temptation releases it from the combination in which it is an unwilling partner It is harmless enough in the air and we breathe it with impunity every minute of our lives Yet the future will most likely show that the great foundation of explosives will be the air itself The world's supply of nitrogen in the form of nitrate has been hitherto derived from the beds of this salt occurring in Chili, and something like 400,000 tons of nitrogen in the form of nitrate are annually exported from that country But the same quantity occurs in the air over every 13 acres of ground, and the summarising calculation has been made that the whole atmosphere of the world contains 4000 billion tons of nitrogen In explosives nitrogen may be said to play two parts it carries in essential oxygen, and then is itself released on combustion in a highly expanded gaseous state The nitrification of hydrocarbons of the benzene type (toluol) and of phenols supplies the modern explosive If the issue of war is to depend upon explosives that nation will win who succeeds in utilising the greatest supply of nitrogen, and this consideration has led to some interesting speculations Should the nitrogen of the air become economically available for the purpose all nations will be equally well off as regards the supply of raw material The important question remains, however, as to whether all nations will be equally well situated concerning the means of converting this abundant supply into nitric agents It is only economic power that can do this for practical purposes, and, so far, water power is the cheapest producer of nitric acid from the air The process is simple, but requiring great energy If the temperature of the air is raised to an intense degree a point is reached when nitrogen begins to burn and nitrous acid and nitric acid are formed The necessary temperature is reached by the electric arc flame The arc flame is most economically produced by water power *Thousands* of tons of nitric acid are produced in this way in Norway and Sweden If bombs and shells, therefore, are to be regarded as the decisive *factor in a* war, a limited view which we are *certain* that Sir John French does not take, the nation will win the struggle which can produce the greatest output of these weapons Assuming that no cheaper method of production than by water power converted into electric energy is available, and assuming again that equally effective explosives of a non nitric type are not invented, this conclusion affords a suggestive perspective when the countries which possess great natural water powers and great gasworks are remembered Nitric acid requires partners, and the most effective are produced at the gasworks As far as we know, carbolic acid and toluene are produced nowhere else in practical quantities, so that the gas industry assumes an importance equal to the great water power stations when the production of explosives is considered

THE MEDICAL INSURANCE AGENCY

AT a meeting of the committee of the Medical Insurance Agency under the chairmanship of Dr G E Haslip, which was held at the offices of the British Medical Association on Wednesday, March 24th, a report of the work of the agency during the year 1914 and the audited balance sheet were submitted to the committee by the chairman Both the balance sheet and the report were approved by the committee, and with good reason, as the working of the year was seen to be highly successful The total sum of money received

If, then, we are correct in concluding that our present social and industrial system, by reason of the under occupation which it enforces on the older and less robust members of society, is an important factor in producing the graver impairment of physical and mental vitality which is responsible for much of the pauperism and ill health in the community—if that conclusion is justified, we may, perhaps, hope that in the period of reconstruction which must follow the war some effort will be made to devise a less wasteful method of utilising this human material. As matters stand, any decrease in a workman's industrial efficiency, due to advancing years or physical infirmity, tends ordinarily to withdraw him altogether from useful activity in his regular employment, with the result that the value of his acquired skill and technical experience is entirely lost to society, while the man himself suffers in mind and body through being forced to turn to unfamiliar, worse paid, and less interesting forms of labour Such a system is obviously bad for the community and bad for the individual

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Treatment of Wounds in War

IN SIR WATSON CHEYNE'S recent Hunterian Oration[1] he gave a preliminary account of investigations which were being carried on by a committee appointed by the Medical Department of the Navy to investigate the question of the immediate treatment of wounds in war At that time a variety of antiseptics were being examined, among others salicylic acid, but the results obtained with that substance were not sufficiently definite to warrant any special reference to it in the oration A more detailed account of the investigation will, however, be published immediately in the April number of the *Journal of the Royal Naval Medical Service*, from which it appears that salicylic acid is likely to prove a valuable agent in the treatment of these wounds Experiments on guinea pigs with highly infected earth containing large quantities of tetanus bacilli and also of the bacillus aerogenes capsulatus have yielded, shortly, the following results All control animals died in 30 to 36 hours as the result of infection with the latter bacillus, but those which lived longer as the result of various methods of treatment developed tetanic symptoms Where the earth was mixed before inoculation with a powder of equal parts of salicylic acid and boric acid (called for shortness bor sal) no illness resulted The majority of the animals, in which 5 to 15 minutes after the infected earth was rubbed into the wound the wound was filled up with bor sal powder, recovered, but where the bor sal was made into a paste with gum tragacanth the results were not good, possibly, for one reason, because the amount of bor sal introduced was smaller Where, after infection with the earth, the wound was in the first place filled up with bor sal powder and half an hour later with cresol paste (20 per cent), all the animals recovered and the wounds healed without suppuration. Where bor sal powder was applied first and antitetanic serum was injected afterwards, all but one of the animals recovered. The committee recommend provisionally that the wounds should be thickly powdered with bor sal powder, and that the 20 per cent cresol paste should then be introduced into all the recesses of the wound as soon as possible after the infliction of the injury, and in cases where the wound is soiled with earth antitetanic serum should be given. Steps are being taken to distribute dredgers containing one ounce of bor sal powder, and tubes with long nozzles containing half an ounce of 20 per cent cresol paste, to all the ships in the navy, and in case of landing parties each man will be provided with these as well as with the first-aid dressings This preliminary treatment can be carried out in a very short time and, except in abdominal and thoracic injuries, by anyone who has been instructed, and it is hoped that it may prevent serious infection during the interval which elapses before the wound can be more thoroughly disinfected If a large number of wounded are received at one time, the orderlies could renew the powder and paste and bandage while the surgeons are attending to the most urgent cases The more careful disinfection will consist in cleansing the wounds, removing foreign bodies such as pieces of clothing or shell, which may be easily accessible, washing out the wounds with 1–20 carbolic lotion thoroughly, drying them, and then powdering them again with bor sal, putting in fresh cresol paste, in the case of large wounds a few interrupted stitches will prevent the antiseptic escaping too quickly A wound so dressed may not require further dressing for a considerable time These recommendations are, of course, only provisional, and may be varied as the result of experience or of the investigation of other antiseptics, but in the meantime the above suggestions seem worthy of a thorough trial Those who are interested in the matter will find full details in the forthcoming number of our Service contemporary

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[1] THE LANCET Feb 27th 1915 p 421

DONATIONS AND BEQUESTS —The late Mr Alexander Elder, of the Elder Dempster Steamship Line, left £100,000 upon trust to found, equip or endow a hospital for the poor of Govan, at or near the Elder Park, Govan, to be known as the "David Elder Infirmary" (in memory of his father), £50,000 to the Western Infirmary, Glasgow, for a new wing, to be called the 'Alexander Elder Wing", £3000 to the Southport Infirmary, £2000 each to the Southport Convalescent Hospital and Sea Bathing Infirmary and the Royal Southern Hospital, Liverpool, £1000 each to Dr Barnardo's Homes and the Liverpool Maternity Hospital and Ladies' Charity The residue of his estate will be divided, at the discretion of his executors, among certain charitable institutions, including hospitals, in Liverpool and Glasgow

The Antwerp correspondent, however, throws quite another light upon the actual state of affairs In Belgium, as he points out, prostitution is most carefully and systematically regulated and controlled, submitted to registration and inspection cases of venereal disease are at once submitted to hospital treatment until they are no longer infectious Prostitutes of alien nationality are expelled and made to return to their own countries, in the case of Antwerp, over 80 per cent of the prostitutes thus expelled are German women If the German military authorities wish to put a stop to the prevalence of venereal disease among the German soldiers they should expel from Belgium the German sources of infection, bringing into force once more the Belgian enactments for the regulation of prostitution The matter is not without interest for the Allies at the present moment It is to be expected that they will be advancing along the Western battle front before many weeks are past, and there seems to be good reason for fear lest the Allied troops and the returning inhabitants should be unduly exposed to infection with venereal disease when the country at present held by the Germans is cleared of its invaders and returns to the possession of its rightful owners

TONIC INNERVATION

Dr S A K. Wilson describes in *Brain* (vol xxxvii, 1914) under this title a curious, and apparently not very common, clinical condition which he has observed in three cases Briefly, the symptom consists in inability to relax the muscles which have performed a "willed" or voluntary action, whilst direction of the subject's attention away from the act immediately "unlocks," as it were, the sustained effort In the cases instanced the phenomenon was strictly unilateral, and involved mainly the arm muscles There was, in all, involvement of the cortico spinal path, in two cases the lesion was a tumour situated in, and successfully removed from, the right hemisphere There were slight spasticity and active reflexes in the affected limbs No sensory changes were noticeable Tonic innervation, Dr Wilson suggests, must be distinguished from certain examples of sustained or clonic performance of an act other than the one demanded of the patient, as also from 'ideational inertia" of purely psychic origin It may or may not be associated with apraxia (or simple inability to perform movements which automatically could be executed without difficulty), again a condition of psychic origin The symptom is regarded, in short, as of psychomotor origin—dependent on psychic changes, especially volition in that this element, whilst not *per se* the cause, at any rate influences the act in an obvious manner dependent upon motor changes in that the symptom is only observed when the specific functions of the cortico spinal tract are slightly impaired It is noted that when the pyramidal lesion is more evident the symptom goes the pyramidal involvement it appears, must not be too great That tonic innervation is not attributable to muscle changes is suggested by the strong evidence that its contraction is of the type recognisable by galvanometric observations as characteristic of centrally innervated activity evidence gained especially in myotonia cases which present certain clinical similarities to the condition under consideration Where is the lesion and what is its character? It is said to be extremely likely that the phenomenon of tonic innervation is due to a disturbance of reciprocal innervation in "willed" movements, with such disturbance the relaxation of the antagonistic muscles to those performing an act is interfered with But this reciprocal innervation may be carried out in spine or in cortex In the cases here recorded it is suggested that there was impairment of function of the cortico spinal neurones from a lesion at their cortical end " either the activity of the affected motor centres is directly interfered with or, more likely, the stimuli reaching them by short transcortical paths from a hypothetical psychomotor centre placed in the area in front of the precentral gyrus are interfered with " Finally, it is probable, since few cortical lesions demonstrate the sign, that a certain stage in the functional interference must be maintained

ANNUAL CONGRESS OF THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM

THE annual congress of the Ophthalmological Society of the United Kingdom will be held on Thursday to Saturday, April 22nd to 24th On Thursday morning papers will be read at the Royal Society of Medicine, 1, Wimpole street, W, at the afternoon sitting a discussion on Ophthalmic Injuries in Warfare will be opened by Mr W H. H. Jessop and Colonel W T Lister, at 5 P M the annual business meeting will be held Friday morning will be devoted to a discussion on Detachment of the Retina, to be opened by Dr A Maitland Ramsay, Mr Leslie Paton, and Mr M S Mayou, in the afternoon there will be a clinical meeting at the Royal London Ophthalmic Hospital, City road, E C On Saturday morning papers will be read Members desirous of reading papers or showing cases should communicate at once with the honorary secretary, Mr G Coats, 50, Queen Anne street, W It is intended to hold an exhibition of drawings, specimens, and so on, during the meetings Exhibits should be addressed to Mr M S Mayou, 30, Cavendish square, W

A RECEPTION will be held by the West London Medico Chirurgical Society at the West London Hospital on Friday April 23rd, at 8 30 P M, when the programme will include war exhibits, short addresses on war subjects, illustrated by lantern slides and pictures and music The charge for each ticket, whether for a member, a lady, or other guest, is 5s and it is hoped that members of the society will subscribe even if they are unable to be present for the whole of the proceeds, after the deduction of expenses, will be transmitted as a donation from the society to the Belgian Doctors' and Pharmacists Relief Fund Early application for tickets, enclosing a remittance, should be made to either of the honorary secretaries Mr Oswald Addison, 125 Harley street, W, or Dr Reginald Morton, 66, Harley street, W

AMONG the Fellows of King s College, London, appointed on March 24th occur the names of Sir Arthur William May, K.C B, Director General of the Naval Medical Service, and Sir Arthur Thomas Sloggett, K C B C M G, Director General of the Army Medical Service

Colonel Sir W B Leishman, R.A M C, was personally invested by the King on March 29th at Buckingham Palace with the Insignia of a Companion of the Bath (Military Division) during the year from premiums and other sources amounted to over £10,000, the premium income showing the valuable connexion which has been established in a comparatively short time The actual commissions earned enabled something over £300 to be ear marked for distribution It may be remembered that the committee distributed £315 in November last in medical benevolence, and if its efforts are supported there is no doubt that its annual contributions will become a powerful factor in the support of our professional charities The chairman advised in the report that it would be prudent not to distribute more than £200 of the surplus money, having regard to the uncertainties created by the war, and it was resolved that the following grants should be made, totalling £200- The Royal Medical Benevolent Fund, £75, the Royal Medical Benevolent Fund Guild, £50, Epsom College Benevolent Fund, £50, and the Royal Army Medical Corps Benevolent Fund, £25 The fund has now distributed during its short life £1275 to medical charities, while returning to insurers by way of rebates £3700 The committee has every reason to be proud of what it has accomplished, and to look forward to a greater sphere of work and utility The energy and tact of Dr Haslip, who has given much time and trouble to the work, deserves full recognition

LEPROSY IN HAWAII

SINCE 1909 a new law has been in force in Hawaii making the apprehension and detention of lepers compulsory Every person who has reason to believe that he or any other person not under control by the state is a leper must forthwith notify the fact to the Board of Health, and anyone so reported must be examined medically, after which, if the diagnosis be established, he must be duly isolated Notwithstanding this law difficulty is still encountered in securing the discovery of every case of the disease In a statistical study of leprosy in Hawaii recently published in the *United States Public Health Bulletin*, No 66, Dr George W McCoy gives some interesting particulars regarding the malady in this American dependency The total number of lepers officially apprehended since 1901 has amounted to 1060, or an annual average of about 82 Of this total, 52 were Portuguese, 14 belonged to other European nationality, 13 were Americans, 29 Japanese, and 61 Chinese About half of those apprehended were between the ages of 11 and 25 years It is a curious fact that the incidence of the disease is almost twice as high among males as among females, the respective figures being 673 and 387 Inquiry into the previous history of the cases showed that association with leprous persons was admitted in nearly 37 per cent, and in this number the presence of the malady in a parent, brother, or sister constituted over half of the admitted association Dr McCoy believes that the statement frequently made—namely, that prolonged and intimate contact with leprosy is needed to bring about infection—is certainly not borne out by the facts as witnessed in Hawaii Cases are frequently met with in which there is absolutely no history of any association with lepers Difficulties often arise with regard to the early diagnosis of the disease before apprehension of the patient In 188 cases the leprosy was alleged to have existed less than a year, in 131 for a whole year, in 99 for two years, in 92 for three years, in 48 for four years, and in 42 for five years In 86 it had existed from six to 10 years, and in 49 for more than 10 years In 20 instances it was claimed that the disease had existed the whole of the lifetime The statement sometimes made that the malady has persisted from infancy is generally put forward for the purpose of misleading the investigator It is encouraging to learn that the percentage in recent years of lepers apprehended early is larger than formerly As regards the finding of the bacillus lepræ at the official medical examination, this was positive in 929 cases, in 60 it was negative, and in 71 instances no information on the point was given It appears that nodular cases now form a larger proportion of the whole than in the past, 327 patients suffered from the anæsthetic type of the malady, 384 from the nodular, and 275 from the mixed. In 74 instances the type of leprosy was not recorded. The control of the disease places a heavy financial burden on Hawaii, and at present there is little likelihood of its becoming lighter in the future We learn that the legislature appropriated the sum of $412,130 for the care of lepers, including permanent improvements, for the two year period beginning July 1st, 1913

ANTISTREPTOCOCCIC SERUM IN ACUTE BRONCHITIS

IN another column we publish a note by Mr J G Hayes on the use of antistreptococcic serum in acute bronchitis In the three cases which he records relief followed the administration of the serum It would be unwise to attempt to draw any conclusions from such a small number of cases, a much larger field for research would be necessary Nevertheless, the publication of only a few cases treated by any special method may have some value as indicating the results arrived at by a particular observer, for such results may be corroborated or contradicted by other workers Thus accumulative evidence may be obtained, which eventually may lead to a decision in respect of a therapeutic measure It has frequently been stated that to base an opinion of any form of treatment on the observation of only a few cases can only be fallacious, and probably many observers would challenge Mr Hayes's conclusions The bacteriology of acute bronchitis appears to vary, and that the toxæmia of acute bronchitis is in most cases due to a streptococcus is by no means certain, the pneumococcus is also found, and in such cases antistreptococcic serum would not be indicated If Mr Hayes's lead is followed, it would be well to place the treatment on a more scientific basis by a bacteriological examination of the sputum before the treatment is commenced, so as to isolate, if possible, the pathogenic organism.

GERMAN PROSTITUTES IN BELGIUM

AMONG the many questionable benefits conferred by German Kultur on Belgium appears to be a large number of syphilitic German prostitutes So wrote the Antwerp correspondent of the Dutch journal *Het Telegraaf* a few weeks ago, commenting on the statement of the German Catholic paper, the *Kölnische Volkszeitung*, that about 180,000 cases of venereal disease had occurred in the German armies in Belgium and Northern France The German paper made the assumption that the sources of infection were to be found among the inhabitants of the invaded countries

THE WAR AND MEDICAL PRACTICE AT SOUTHAMPTON

(FROM OUR SPECIAL COMMISSIONER.)

Southampton March 22nd

WHEN it has been necessary to organise the medical profession for some common purpose the practitioners of Southampton have always shown themselves active In the old days of the Battle of the Clubs they were well to the front Indeed, so energetically was this battle fought that the medical aid societies and the various financial schemes based on the exploitation of medical men obtained no hold in the town Accustomed to act in concert the practitioners of Southampton were prompt to meet to discuss the professional situation created by the war directly it was declared On the day itself August 4th, they held a meeting, and by August 5th a circular had been drawn up, printed, and sent round to every medical man in the district Their action was impulsive, patriotic, and generous, whether it was altogether wise is now being discussed The one dominating thought at the outbreak of war was that nothing should stand in the way of the practitioner whose services might be wanted at the front Therefore all the practitioners were informed that during their absence their colleagues would look after their practices It would be a point of honour not to attempt to capture the absentee's patients On his return not only would the patients be restored to him but also he would receive all the fees which they had paid during his absence Thus the profession at Southampton pledged itself to work gratuitously for those of its members who were mobilised What this might entail was obviously not foreseen at the time The fact is that the medical profession like most other sections of the community could not realise what war on a continental scale would mean

The Private Practices of Surgeons with the Colours

A small army or expeditionary force is one thing an armed nation is a very different matter If we had raised an extra force of half a million only above our normal or regular army the generous proposal of the Southampton practitioners might still have been practicable But the figures now reached by our army make the economic results of the Southampton project well nigh impossible Before anything like the number of men now with the colours had been enrolled the effect on panel practice was marked. This as in the case of all contract work depends for its financial feasibility on the percentage of sound lives among the lists of insured persons Now it is just these sound lives the very best of them who are enlisting, and as a panel doctor pathetically put it to me 'they leave the crocks behind.' A large proportion of the new armies in course of formation consists of men who were insured and being healthy and in the prime of life they gave their panel doctors very little trouble. To-day, it seems panel practice means nearly the same amount of work as before the war though there are fewer insured persons to pay for it If, also a panel practitioner finds he has to attend for nothing the paying patients of a fellow practitioner who has gone off to the war, he feels sore So long as only one or two practitioners thus left their practices to the care of their colleagues and this work was divided between several it did no matter very much But we have passed that stage As the war continues and the demand for more troops ever increases the difficulty becomes apparent and at Southampton some medical men are already thinking that perhaps the arrangement was too hastily made Certainly a practitioner should not lose his position acquired perhaps after a long struggle because in his sense of duty he has gone to the war But if this practitioner is [illegible] in the army, and as well paid as if he had remained at home attending to his own practice why should his colleagues do his work for nothing Why should a practitioner be paid twice over once for the work he has [illegible] for the work he has not done? That is the question which is being formulated in Southampton, [illegible] many practitioners who are [illegible] for [illegible] army [illegible] their [illegible] paid for their [illegible] have had any large private practice to be cared for them and returned to them intact, plus a large quantity of fees

But the arrangement made at Southampton on the very first day the war was declared calls for some revision now that the war promises to be of such extent and duration In is felt to be unfair upon medical men who remain behind that they should give their services gratuitously and to an unlimited extent for an unlimited time The income derived from this practice might at least be shared with the absent practitioner, a proceeding which, I believe, is being followed in some districts

If at the end of the war and on his return home from the army the practitioner finds that his private practice has not fallen to pieces, but has been carefully and honourably preserved for him by his fellow practitioners he will have much to be thankful for If, over and above this, he also receives not the whole but a part of what he would have earned had he remained at home, he will, at any rate, feel that his colleagues have not been unmindful of his risks

The Question of Dependents

It must be admitted that practitioners at Southampton may be able to afford to be generous in a way that would be impossible in some districts for they have not lost much in consequence of the war, but this does not mean to say that the war has brought no troubles in its train To begin with, the two principal lines have left Southampton, the ships of the Royal Mail and the Castle Lines now sail from Liverpool and London. It is true that the families of the officers and crews have not all been able to leave Southampton to follow the ships A house held perhaps on a long lease to say nothing of all the furniture cannot be easily given up Still, a considerable number of families connected with these great lines of passenger ships have left Southampton, and the practitioners miss these good paying patients Then the difficulty in regard to the dependents of men who have enlisted is the same here as in many other places Whatever may have been done or said elsewhere all the practitioners I saw at Southampton declared they had only undertaken to attend gratuitously the *necessitous* dependents But it is no easy matter to ascertain who are necessitous, and the action of the Soldiers and Sailors' Society has added to the confusion This society gives prescription books to members of soldiers' or sailors' families The patient's name is put on the top of the book, and it is supposed to serve as an introduction to a medical practitioner At Southampton some prescription books were given to people even before they were ill Kindly ladies visiting the families of soldiers and hearing someone say they were not quite well, would offer prescription books and perhaps recommend their own private doctor They did not at all realise that they were playing the part of Lady Bountiful on the cheap Those who thus received prescription books often thought they might as well go and get a bottle of medicine as it would not cost anyone anything except the doctor while it was the lady who gave the prescription book who became the object of the recipient's gratitude

The Public Medical Service

As the dependents on soldiers are in many cases better off than they have ever been before, the doctors now make inquiries before giving gratuitous advice, and when they find that the patients are not in a necessitous position they are advised to join the Southampton Public Medical Service. This is the modern expression of the old Southampton Provident Medical Association which was organised by the Southampton Medical Union to fight the Friendly Societies and the speculative medical aid insurance companies Joining this bod
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THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE FUND AND RELIEF MEASURES IN BELGIUM

AT the last meeting of the Executive Committee of the Fund full information was forthcoming concerning the urgent needs of the Belgian doctors and pharmacists remaining in their own country, and at the same time a plan was considered and adopted for attempting through the medium of the Fund to alleviate this distress In Belgium the committee formed to consider the position of the doctors and pharmacists has now been largely reinforced, and is known as the Aide et Protection aux Médecins et Pharmaciens sinistres The President is Dr Péchère and the secretary M Delacre The body is a representative one, and has organised machinery for ascertaining where the need among those whom it would help is greatest and for providing systematic relief It has worked in connexion with the National Relief Fund and has received from that Fund a subsidy, which is now exhausted When the Belgian Committee was started Professor Jacobs, professor of obstetrics in the University of Brussels, came to England last November as its delegate, and it is owing to the representations which he then made that the movement in this country, and later in our dependencies and in America, was started The Executive Committee of the Belgian Doctors' and Pharmacists' Relief Fund has always said, in appealing for subscriptions, that a part of the money which it might collect should, as early as the conditions in Belgium permitted, be distributed on the advice of the committee in Belgium At first, however, no method of communication between ourselves and a country mainly occupied by the enemy's army was possible Through the good offices of Mr Herbert Hoover, the Chairman of the National Relief Fund, we were able to distribute some medical material, which was conveyed to its destination by the National Fund, but at that point we were compelled to remain until some effective machinery on the other side rendered more substantial and fruitful coöperation possible The Aide et Protection aux Médecins et Pharmaciens sinistrés has now prepared the ground, and done so with great energy despite the immense difficulties under which it has had to work Forms have been issued to all the doctors and pharmacists in Belgium on which they are asked to state frankly their position, that of their families, the loss that they have sustained, and the amount of money necessary to enable them, at any rate, to tide over their existing terrible circumstances In estimating the validity of the claims the Belgian Committee has acted in consultation with the local medical societies throughout Belgium and with the Government inspectors of pharmacy, who also inspect the dispensaries of medical men Those who have been relieved include the widows of doctors and pharmacists who have fallen fighting, or who have been the victims of German ferocity It is noteworthy that such money as has been hitherto given has been given entirely to the country at large, although distributed from Brussels, in Brussels the better circumstanced doctors and pharmacists have supported the Fund for the relief of their poorer colleagues Many of the forms relating to the pharmacists have reached this country and have been submitted to the Executive Committee of the Belgian Doctors' and Pharmacists' Relief Fund, and it is hoped that we shall later receive the forms relating to the medical men, but enough evidence has been submitted to the Executive Committee to enable it to realise that immediate help in money ought to be sent as this now seems feasible With the coöperation of the banks concerned a sum of money is being sent immediately to Belgium to be distributed by the Aide et Protection aux Medecins et Pharmaciens sinistrés in accordance with the particularised needs which are now in the hands of that body, and it is proposed to send further sums from time to time as detailed reports from the Belgian Committee and other information at the disposal of the Executive Committee show that the money is being usefully expended Subscribers to the Fund will see that the Executive Committee has now embarked upon a definite scheme of large expenditure, and, generous as the responses have been to the appeal by British doctors and pharmacists, it will be necessary that further effort should be made, and even made with greater vigour than heretofore The Fund can do much with the money which it has in hand, but it is not possible to estimate how long the strain upon it may have to be maintained, and far greater resources than it possesses will be urgently required

THE GIFT OF INSTRUMENTS TO BELGIAN MILITARY HOSPITALS

It will be remembered that through the medium of Mr S Osborn a selection of the instruments, which have been received by Mr Meredith Townsend, the Master of the Apothecaries' Society of London, in response to the appeal of the Fund, was placed at the disposal of certain Belgian military hospitals Sir Rickman Godlee, the chairman of the Executive Committee, has received from Captain G Deffontaine, writing for the Belgian Military Command in Calais from the Hôpital de Passage, a cordial letter of thanks for the instruments, while Mr Osborn has reported to Mr Townsend that the instruments arrived at a particularly opportune moment, when a fire had burnt out the operating theatre of the Hôpital Jeanne d'Arc

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries begs to acknowledge with thanks the receipt of surgical instruments kindly contributed by Dr J Jones, of Leigh, Lancashire

THE WEEK'S SUBSCRIPTIONS

Owing to Easter THE LANCET went to press early, and the detailed list of subscriptions for the incomplete week will be published in our next issue

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THE QUEEN AND THE LONDON SCHOOL OF MEDICINE FOR WOMEN —The Queen, accompanied by Princess Alexander of Teck, paid an informal visit to the London School of Medicine for Women, Hunter street, W C, on March 24th, when Her Majesty was received by Miss L B Aldrich Blake dean of the school, Dr Mary Thorne, Mrs Scharlieb and Miss L M Brooks, secretary and warden Her Majesty showed great interest in the work of the students in the site for the new extension of the school, and in the plans for the new women's military hospital which will be opened in April in Endell street which its provisions have been locally complied with For example, whilst in Wandsworth the registered births exceeded by more than 2000 the births notified under the Act, the latter, on the contrary, were actually the more numerous in Finsbury and in some other districts

Comparative Mortality

The London death rate in 1913 was equal to 14 2 per 1000 living which is slightly above the rates of 1910 and 1912, but with these exceptions is lower than any previously recorded rate. For many years past the London health reports have contained diagrams in which the successive death rates are represented in relation to the mean of the rates obtaining in a long series of years In the present diagram the decline in mortality, which with few interruptions has been practically continuous since 1880, is represented by light shading It is possible that to the casual reader the graphic method may appeal more forcibly than does the usual array of figures, inasmuch as it shows at a glance the measure of the life saving accomplished in recent years As in previous reports endeavour has been made to obtain by appeal to life-tables an approximate estimate of the effects on the London community of fluctuations in mortality the method employed having been first introduced by Dr John F W Tatham in his reports on the health of Manchester The advantages of this method together with the formulæ employed are detailed in the London Health Report for 1901 With the help of the new London life-table the number of deaths occurring in 1913 is compared with the number that would have occurred had the death-rate prevailing in the preceding decennium been maintained in that year The number of lives gained in the latter period are also shown and the figures given express that gain in terms of "life capital" this being obtained by applying the mean future lifetime figures to the lives gained at each age group From the appended table we learn that in the year 1913, as compared with 1901–10 there has accrued a saving of 7847 lives representing a gain to the London community of 357 897 years of "life capital."

Loss of Life in Infancy

In the year under review the deaths below the age of one year were in the proportion of 105 per 1000 births against 91 per 1000 in 1912, the deaths in both years showing an encouraging decline from the high rates prevailing in the opening quinquennium of the century The report indicates that among metropolitan boroughs Shoreditch fared worst and Hampstead best in respect of infant mortality both in 1913 and in the preceding five years Systematic examination continues to be made of the infant mortality tables prepared by district health officers in accordance with instructions from the Local Government Board. With the aid of returns derived from the improved tables first issued in 1905 comparison is now instituted between the mortality in 1913 and that of the seven antecedent years. With respect to the diseases responsible for infant fatality we note that pneumonia is the only definite heading under which excessive loss of life is recorded in 1913 With the object of illustrating the influence of social condition on infant well being tables have been prepared in which the varying death rates in groups of districts are contrasted And here it must be explained that the standard adopted for determining the social condition of a district is the percentage of all children between the ages of 5 and 14 years scheduled by the Council for education purposes in the period 1905–07 The question of whether or not a child is to be scheduled depends upon circumstances which collectively form a measure of social condition The county has been divided into five groups representing different grades of social condition—the most favoured group consists of boroughs in which less than 82 per cent of the children were scheduled the least favoured group where the proportion exceeded 97 per cent From tables relating to the period 1905–12 it appears that in each successive trimester of the first year of life the difference in the mortality obtaining in the several groups of districts becomes generally more pronounced. As an extreme instance in 1913 it may be noted that if among infants aged 3 6 months the mortality in the most favoured districts is represented by 100 it will be equal to 272 in the least favoured districts

Principal Epidemic Diseases

The experience of London in 1913 under the Infectious Diseases Notification Act shows an increase in the number of cases of scarlet fever, diphtheria, and erysipelas, and a decrease in the number of cases of small pox, typhoid fever and puerperal fever

Scarlet fever —The notified cases of this disease exceeded by 6240 the number in the previous year but the type of disease continues to be mild and the mortality rate is comparatively low High incidence of attack is not confined to London, but has occurred in several other large towns. Mr G Millson, of Southwark, states that increased scarlet fever prevalence has generally been observed there in five year cycles The outbreak of 1913, however, followed on a quiescent period of seven years duration. He finds that the average age of the patients has not increased in Southwark, and concludes that if a child escapes scarlet fever up to the age of five years he stands a fair chance of escaping it altogether This question would repay attentive study

Enteric fever —The low level of enteric or typhoid fever prevalence maintained for several years has again been observed in 1913. For in that year, as also in 1909 and 1912, there was practically no autumnal increase. Reasons exist for the belief that the great majority of London attacks in these years were due to causes other than the drinking of polluted water In this connexion the recent important researches of Dr A. C Houston water examiner to the London Water Board, are discussed in considerable detail. In his report for 1913 this observer throws additional side-lights on the etiology of typhoid fever He has lately repeated earlier attempts to isolate organisms resembling the typhoid bacillus in raw Thames water In this attempt he has been successful in two instances only But on both these occasions he has demonstrated by rigorous tests the presence of microbes indistinguishable from the typhoid bacillus. Inasmuch, however as this result has accrued from the examination of not more than two or three dozen gallons of raw water, it is clear that the entire London water supply may at times contain large numbers of such bacilli. And yet no one ventures to suggest that drinking water seriously contributes to the amount of typhoid fever in London The principle is established that failure to demonstrate the presence of the bacillus in a particular specimen of water does not prove that the bacillus is not there Moreover, experience teaches that in any event the presence of the bacillus typhosus is by no means the same thing as its potential infectivity Dr Houston discusses two problems

Whether typhoid bacilli reach the consumer singly or in clumps, and whether one or a number are necessary to start the infective process"—problems which, as he says, are of "extreme interest to epidemiologists" He adds that "if a single typhoid bacillus ingested with a draught of water can conceivably infect with typhoid fever a susceptible individual this would be a serious matter but if as seems more probable, a number are always or usually required to start the infective process and they are present as individuals and not as clumps,' and are equally distributed through filtered water infection might seldom if ever take place " Recent study of the bacteriology of water would appear to indicate that the observer who maintains that the bacillus typhosus is the causal organism of typhoid fever will be obliged to assume either (*a*) that something must be conjoined with the bacillus if it is to be "effective" or (*b*) that no final deduction can be drawn from the presence of single bacilli and that insistence must be laid on the question of dosage

Tuberculosis

It is shown by a diagram that in both sexes a marked decline has occurred in London mortality from tuberculous phthisis, that males are more liable than females to fatal attack and that until recent years the decline has been most conspicuous among females A table is given showing phthisis mortality in 1913 in groups of London districts arranged in order of "social condition" If for example the London phthisis rate be taken at 1000 the rate in the more favoured districts will be represented by 547 and in the less favoured districts by 1339 A point of considerable importance showing the influence of the population movement on the phthisis death rate is this—that in areas of better social class a greater number of London residents of the better class than of the poorer classes die away from Greater London In his remarks on local variations of tuberculous mortality Dr Hamer compares its age incidence in this country with that of Ireland Prussia and the United States of America. Illustrative curves have been prepared which show a has thus caused no decrease in membership During the course of last year no less than 1100 new subscribers were enrolled, and the membership of the Southampton Public Medical Service now amounts to 8819

War Service Rendered by Civilian Doctors

When war was declared a large number of the officers of the Royal Army Medical Corps went with the Expeditionary Force to the continent. Thereupon the practitioners at Southampton were invited to volunteer for military service and many responded. One practitioner at Shirley went, but he had four or five colleagues living around his house to look after his practice during his absence Another sold his practice altogether, and a third has two partners to look after his interests while he is abroad Thus it will be seen that the work to be done near the fighting line has not disturbed, to any serious extent, medical practice at Southampton Of greater importance is the work that has to be done at home Netley Hospital was denuded just as the wounded were beginning to come over from the continent Consequently about ten Southampton practitioners and consultants went on duty at Netley for a short time As more surgeons were enrolled notably from London hospitals, to join the army some of them were sent down to Netley and the civilian doctors returned to their ordinary practice But the army surgeons at Netley are not likely to remain there long They will follow the new armies to the front, and the civilian doctors of Southampton may once again be called upon to attend the wounded at Netley Then there are many more wounded expected, and additional hospitals are being prepared to receive them New huts are being put up at Netley, and the large buildings recently constructed for the extension of University College at Highfield have been taken over and converted into a hospital. The new blocks of the Shirley Warren workhouse infirmary have been surrendered by the guardians for the care of the Belgian wounded, so there will be much work to be done for the war without leaving Southampton It should also be borne in mind that extraordinary precautions must be taken to prevent Southampton becoming the port of entry of infections, especially of exotic diseases There is plague in India and Egypt, while cholera has already spread to the Austrian army Therefore it is satisfactory to know that a large military isolation hospital is in course of construction at Southampton

The stress caused by the war has so far fallen lightly on the members of the profession practising at Southampton But the time is probably very close at hand when much more work and greater responsibility will be thrown upon them, while their numbers may be reduced by further departures for the front

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UNIVERSITY COLLEGE HOSPITAL —The annual general meeting of the corporation of University College Hospital, Gower street, W C, was held on March 25th, Captain the Hon. E S Dawson being in the chair The chairman said that the past year had been a most eventful one all over the country in all matters connected with hospitals In their hospital they had continued and extended their work The number of in and out-patients both showed small increases, yet, notwithstanding the general rise in prices and cost of living, there had been a slight dec ease in the average cost of patients To afford every possible help to naval and military medical departments not only had they reserved 100 beds for treatment of cases from the front, but all members of the staff who could be spared had in many cases at great personal sacrifice placed their services at the disposal of the Government In addition many students, and no fewer than 60 members past and present of the nursing staff, had also proceeded to the front The incorporation of the National Dental Hospital as a dental department of the hospital, the chairman continued had been one of the notable events of the year, and this department has rendered valuable service by the treatment, free of charge of no less than 2451 recruits for the new army All departments of the hospital continued in a high state of efficiency, trib financially, by the exercise of all possible economies, circul results of the year had been slightly more favourable [illegible] ey had expected. The Duke of Bedford was elected [illegible] of the corporation [illegible] eagues

Public Health.

REPORT FOR 1913 OF THE MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER OF THE ADMINISTRATIVE COUNTY OF LONDON [1]

Dr W H Hamer's annual report for 1913 has recently been presented to the London County Council It constitutes *Vol III of the* Council's general report, and has been issued under a separate cover for the convenience of readers In the medical officer s report for 1912[2] announcement was made of a complete reorganisation of the Central Health Department consequent on the decision of the Council to coördinate, under Dr Hamer's direction the whole of the medical work respecting public health and education for which that authority is responsible In that report, the first in his dual capacity, details were given of the administrative changes required by the Council s decision A second year s experience under the new régime appears to justify the action taken It further teaches that in similar cases wherever responsibility can be centred in one office more satisfactory results may be looked for than in those cases where responsibility is shared by separate departments

The present report, like its predecessor, covers a very wide range, and for this reason we can only touch on a few of the more important topics therein discussed in detail It bears abundant evidence of Dr Hamer s assiduity in dealing with the many complex problems that require his personal attention Having ourselves profited by its study, we earnestly commend this volume to the consideration of all those who are solicitous for the welfare of London's vast population Equally evident is the despatch with which the extensive administrative changes in the health department have been accomplished by the central staff, and this at a time of extraordinary pressure on their resources

Part I of this report, which relates to public health generally, is dealt with in the present article Administrative action for education purposes, as recorded in Part II, will form the subject of a future notice In our remarks on the several matters discussed the order adopted in the original will be followed

PART I —(A) VITAL STATISTICS

The loss of population by outward migration in recent years was alluded to in the annual report for 1912, and the subject is now more fully discussed. The population of London is still estimated to have exceeded 4½ millions in the middle of 1913 The composition of the population differs materially in the two areas into which the county is divided by the Thames By the year 1891 London north of the river had been so greatly over built that the rapidly increasing population could not be housed within the county boundary Consequently, there has been since that date a constant overflow of the London population into the adjoining counties of Essex and Middlesex. But, in 1891, so much of the area south of the river remained undeveloped that the outward extension has not overflowed the county boundary to the same extent The modifying effect of these variations on the age and sex constitution of the aggregate London population is explained in the text.

London Birth rate

In the year under notice the ratio of live births to population was the same as in 1912—namely, 24 5 per 1000—and thus, for the first time in ten years no decline is recorded This fact might conceivably be attributed to the effect of the National Insurance Act, but it is noteworthy that a similar pause in the fall of the birth rate is reported in Paris, Amsterdam, and Stockholm among foreign capitals. In England and Wales as a whole the birth rate increased from 23 8 in 1912 to 23 9 in 1913 In the metropolitan sanitary areas the usual wide differences persist, the proportions ranging from 9 2 and 14 2 respectively in the cities of London and Westminster to 31 0 in the borough of Bermondsey and 32 0 in Poplar Of the success achieved under the Births Notification Act details are given in a table which shows marked differences in the extent to maximum incidence of mortality at ages 20–35 in Ireland, at 35–45 in England, and at 60–70 in Prussia, while the American curve exhibits two periods of high incidence—viz, at about the fortieth and seventieth years These differences are discussed at some length in relation to fashion in nomenclature, to migration, and to varying degrees of urbanisation in the countries compared, and the conclusion is drawn that the very variable connotation of the expression "tuberculous" at different times and in different countries largely accounts for reported differences of age incidence In support of this view attention is called to the fact that the American curve is suggestive of a blending of the English and Prussian curves, and the fact that a considerable proportion of America is of German origin is suggested as a partial explanation of this phenomenon

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[1] Published by P S King Limited London price 2s 6d

[2] A notice of this report appeared in THE LANCET of April 18th 1914 p 1137

I —(B) ADMINISTRATION

Tuberculosis schemes —Under this heading Dr Hamer gives account of the preliminary arrangements already in progress under the National Insurance Act for the treatment of tuberculosis Briefly stated the scheme contemplates the provision and maintenance of dispensaries by the borough and city councils aided by grants from the County Council The complete scheme for coördinating the work of the various agencies for the treatment of tuberculosis was only in draft at the end of 1913 The administrative action already taken will be summarised in the report for the ensuing year

Health visitors —Under the provisions of the London County Council Act of 1908 considerable progress has been made in securing a supply of suitably qualified women to give advice as to the proper nurture and management of young children The Act makes provision for the payment of Exchequer grants in supplement of the salaries of health visitors The Council holds that the status of health visitors should be equal to that of sanitary inspectors, and in determining the amount of subsidy they will take into account whether or not the salary proposed by the sanitary authority is commensurate with such status

Vermin inquiry —Increasing attention is now paid to the cleansing of verminous persons A diagram has been prepared showing the seasonal prevalence of three kinds of vermin during the last five years Distinct improvement has been secured

Homeless persons —The censuses of homeless persons taken in February and in late October show a large reduction on the numbers previously discovered In fact, the number recorded last February was less than one quarter of the number recorded in February, 1910, when the highest number was found

(*To be concluded*)

VITAL STATISTICS

VITAL STATISTICS OF LONDON DURING FEBRUARY, 1915

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan areas With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the 10 diseases specified in the table was equal to an annual rate of 7·4 per 1000 of the population, estimated at 4 516 612 persons, in the three preceding months the rates were 12 5, 9 2 and 7 4 per 1000 respectively The lowest rates in February were recorded in Paddington Kensington, Chelsea Stoke Newington and Poplar, and the highest rates in Bethnal Green Stepney, Deptford Greenwich and Woolwich Seven cases of small pox were notified during the month, of which 6 belonged to Fulham and 1 to Kensington 5 small pox patients remained under treatment at the end of the month in the Metropolitan Asylums Hospitals The prevalence of scarlet fever showed no variation from that recorded in the previous month this disease was proportionally most prevalent in Hammersmith Fulham Bethnal Green Deptford Greenwich and Woolwich The Metropolitan Asylums Hospitals contained [illegible] scarlet fever patients at the end of the month, against [illegible] [illegible] and 3609 at the end of the three preceding months the weekly admissions averaged [illegible] against 601 [illegible] and 317 in the three preceding months Diphtheria was slightly more prevalent than it had been in the [illegible] the greatest proportional prevalence of this disease was recorded in the City of Westminster the City of London Bethnal Green Stepney Bermondsey and Woolwich The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals, which had been 1630, 1663, and 1621 at the end of the three preceding months, had further declined to 1562 at the end of the month, the weekly admissions averaged 172, against 247, 177, and 160 in the three preceding months Enteric fever was much more prevalent than it had been in the preceding month, the greatest proportional prevalence of this disease was recorded in Hackney, Wandsworth, Deptford, and Woolwich The Metropolitan Asylums Hospitals contained 64 enteric fever patients at the end of the month, against 63, 68, and 50 at the end of the three preceding months, the weekly admissions averaged 13 against 8, 10, and 6 in the three preceding months Erysipelas was proportionally most prevalent in Paddington, Fulham, Hackney Shoreditch, Bethnal Green, Southwark, Deptford and Woolwich The 23 cases of puerperal fever notified during the month included 3 in Fulham 3 in Islington, 3 in Camberwell, 2 in St Pancras, 2 in Bethnal Green, and 2 in Lambeth The 65 cases of cerebro-spinal meningitis included 15 in Woolwich, 7 in Camberwell, and 4 each in Kensington, Wandsworth, and Greenwich, and the cases of poliomyelitis belonged respectively to Bethnal Green Battersea, and Wandsworth

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided, the death rates from all causes are further corrected for variations in the sex and age constitution of the populations of the several boroughs During the four weeks ending Feb 27th the deaths of 7187 London residents were registered, equal to an annual rate of 20 7 per 1000, in the three preceding months the rates were 14 6, 16 7, and 19 6 per 1000 respectively The death rates during the month ranged from 15 8 in Hampstead, 16 1 in Wandsworth 18 2 in Lewisham, 18 4 in St Marylebone, and 19 1 in Camberwell to 23 0 in Fulham and in Poplar 23 2 in the City of Westminster, 23 7 in the City of London, 24 4 in Southwark, and 24 8 in Bermondsey The 7187 deaths from all causes included 578 which were referred to the principal infectious diseases, of which 3 resulted from small pox, 280 from measles, 36 from scarlet fever 70 from diphtheria, 110 from whooping cough, 16 from enteric fever, and 63 from diarrhœa and enteritis among children under 2 years of age The lowest death rates from these diseases in the aggregate were recorded in Chelsea, St Marylebone, Hampstead, Finsbury, and Greenwich, and the highest rates in Paddington, Fulham the City of London, Bethnal Green, and Bermondsey The 3 fatal cases of small pox all belonged to Fulham The 280 deaths from measles were 116 in excess of the corrected average number in the corresponding period of the five preceding years, this disease was proportionally most fatal during the month in Paddington, Fulham, Stoke Newington the City of London, Bethnal Green, Southwark, and Bermondsey The 36 fatal cases of scarlet fever were 20 above the corrected average number and included 5 in Fulham 4 in Islington, 4 in Stepney, 3 in the City of Westminster, 3 in Camberwell and 3 in Lewisham The 70 deaths from diphtheria were 23 above the corrected average number, this disease was proportionally most fatal in Paddington Kensington, Islington Stepney, Battersea, and Woolwich The 110 fatal cases of whooping cough were 16 below the corrected average number the highest death rates from this disease were recorded in Paddington, Fulham, Bermondsey, Battersea, and Deptford The 16 deaths from enteric fever were 5 in excess of the corrected average number and included 2 each in Islington Hackney Wandsworth and Camberwell The mortality from diarrhœa and enteritis among children under 2 years of age was proportionally greatest in the City of Westminster Finsbury Shoreditch, Bethnal Green and Southwark In conclusion, it may be stated that the aggregate mortality in London during the month from the principal infectious diseases, excluding diarrhœa, was 41 5 per cent above the average

THE SERVICES

ROYAL ARMY MEDICAL CORPS

To be Temporary Majors —Dated March 8th James Arthur Devine D S O Dated March 9th William Thomas Prout C M G

The undermentioned Temporary Lieutenants to be Temporary Captains —Dated March 25th Charles S Cato late Captain R A M C and Walter P [illegible]

The undermentioned to be Temporary Captains —Dated March 1st Charles Edward Waller Dated March 10th Robert Fielding Ould

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING FEBRUARY, 1915

(*Specially compiled for* THE LANCET)

CITIES AND BOROUGHS	Estimated population in the middle of 1914	NOTIFIED CASES OF INFECTIOUS DISEASE: Small pox	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever	Other continued fevers	Puerperal fever	Erysipelas	Cerebro-spinal meningitis	Poliomyelitis	Total.	Annual rate per 1000 persons living	DEATHS FROM PRINCIPAL INFECTIOUS DISEASES: Small pox	Measles	Scarlet fever	Diphtheria.*	Whooping cough	Enteric fever	Diarrhœa and enteritis (under 2 years)	Total	Annual rate per 1000 persons living	Deaths from all causes	Death rate per 1000 living †
LONDON	4,516,612	7	1337	741	—	73	1	23	303	65	3	2553	7·4	3	280	36	70	110	16	63	578	1·7	7157	20·7
West Districts																								
Paddington	142 055	—	22	16	—	3	—	—	12	3	—	56	5·1	—	14	1	4	8	—	1	28	2·6	238	21·7
Kensington ..	170 817	1	25	24	—	1	1	—	6	4	—	62	4·7	—	12	1	5	4	1	2	25	1·9	270	20·5
Hammersmith	124 750	—	58	15	—	1	—	—	6	1	—	81	8·5	—	6	2	1	2	—	2	13	1·4	187	19·3
Fulham ..	158,849	6	66	11	—	1	—	3	16	—	—	103	8·5	3	23	5	1	8	1	2	43	3·5	270	23·0
Chelsea	63,791	—	15	4	—	1	—	—	1	1	—	22	4·5	—	—	1	—	—	—	2	3	0·6	104	20·3
City of Westminster ..	152,346	—	56	33	—	3	—	—	3	3	—	98	8·4	—	3	3	—	3	—	6	14	1·2	257	23·2
North Districts																								
St Marylebone ..	112 892	—	36	2	—	2	—	1	8	—	—	49	5·7	—	2	1	—	—	—	1	4	0·5	156	18·4
Hampstead	86 731	—	18	12	—	2	—	1	1	3	—	37	5·6	—	2	—	1	—	—	1	4	0·6	99	15·8
St Pancras ..	212,497	—	56	30	—	3	—	2	15	3	—	109	6·7	—	7	—	2	7	—	2	18	1·1	374	22·8
Islington	324 764	—	83	55	—	3	—	3	24	1	—	179	7·2	—	5	4	9	10	2	5	35	1·4	652	21·6
Stoke Newington	50 454	—	14	5	—	—	—	—	1	—	—	20	5·2	—	4	2	1	—	—	—	7	1·8	80	19·7
Hackney ..	223,724	—	43	33	—	5	—	—	19	2	—	102	5·9	—	13	—	2	2	2	3	22	1·3	331	19·4
Central Districts																								
Holborn	45 881	—	9	8	—	1	—	—	1	1	—	20	5·7	—	3	—	1	1	—	1	6	1·7	78	22·3
Finsbury	83 212	—	19	9	—	—	—	1	5	1	—	35	5·5	—	2	—	—	2	—	2	6	0·9	147	22·7
City of London	17 129	—	4	8	—	—	—	—	—	—	—	12	9·1	—	3	—	1	—	—	—	4	3·0	30	23·7
East Districts																								
Shoreditch	108,869	—	28	13	—	2	—	1	14	—	—	58	6·9	—	1	—	1	4	1	3	10	1·2	171	21·2
Bethnal Green ..	127,662	—	63	52	—	2	—	2	20	1	1	141	14·4	—	23	2	3	5	1	4	38	3·9	212	22·5
Stepney ..	273 265	—	91	104	—	3	—	—	21	—	—	219	10·4	—	13	4	7	1	—	3	28	1·3	408	20·3
Poplar	160 222	—	27	20	—	2	—	—	13	1	—	63	5·1	—	14	—	1	2	—	2	19	1·5	285	23·0
South Districts																								
Southwark ..	188 941	—	37	29	—	—	—	1	16	3	—	86	6·0	—	29	—	3	1	—	6	39	2·7	349	24·4
Bermondsey	124 213	—	44	30	—	2	—	1	9	1	—	87	9·1	—	11	—	3	15	—	2	31	3·3	237	24·8
Lambeth ..	296,724	—	75	41	—	3	—	2	16	7	—	144	6·3	—	20	1	6	6	1	2	36	1·6	498	21·6
Battersea ..	167,338	—	52	26	—	1	—	—	12	2	1	94	7·3	—	10	1	6	7	1	3	28	2·2	274	21·5
Wandsworth	338 998	—	79	34	—	11	—	1	12	4	1	142	5·5	—	23	2	3	6	2	2	38	1·5	417	16·1
Camberwell	262 020	—	68	33	—	3	—	3	16	—	—	123	6·1	—	19	3	4	1	2	4	33	1·6	387	19·1
Deptford	109 182	—	57	20	—	8	—	—	11	2	—	98	11·7	—	5	—	—	7	—	1	13	1·6	185	21·8
Greenwich ..	96 037	—	94	18	—	—	—	1	7	4	—	124	16·8	—	2	—	—	3	1	—	6	0·8	149	19·9
Lewisham	172 433	—	36	28	—	1	—	—	7	2	—	74	5·6	—	6	3	1	3	—	1	14	1·1	245	18·2
Woolwich	122,836	—	52	28	—	8	—	—	11	15	—	114	12·1	—	5	—	4	2	1	1	13	1·4	107	21·4
Port of London	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup † The death rates are corrected for variations in sex and age constitution of the populations of the several boroughs the population of England and Wales being taken as the standard

met with any cases which were followed by such intense symptoms of arsenical poisoning, and the only conclusion I can arrive at is that, though chemically the substitutes for salvarsan may be identical with the original preparations, from the clinical point of view they differ in a remarkable manner Not only is their toxic effect, *qua* arsenic, much more intense, but their local effect on the veins is more irritating, as was manifested by several cases of thrombosis of the injected vessel following on the use of kharsivan, even when diluted with 200 c c of distilled water

It is impossible to estimate the duration of the present war, but when it does come to a conclusion there will inevitably ensue a considerable increase in the incidence of venereal diseases, and in my opinion some measures should now be organised to ensure that adequate provision is made for their treatment I am given to understand that Messrs Burroughs, Wellcome and Co at the present moment are experiencing some difficulty in meeting the demand for kharsivan, and if there is any great increase in the prevalence of syphilis a considerable proportion of the sufferers will be unable to obtain what is now universally acknowledged to be the best treatment for that disease—viz. salvarsan, or, failing that, one of its substitutes Though all departments of the Government must now be working at high pressure, I venture to think that the inevitable increase in venereal diseases at the termination of the war is a subject worthy of the attention of those to whom the health of the nation is entrusted

I am, Sir, yours faithfully,
J ERNEST LANE, F R C S Eng,
Surgeon to the London Lock Hospital
Queen Anne-street W March 28th 1915

SHOULD MEN WORK SIX DAYS OR SEVEN?

To the Editor of THE LANCET

SIR,—At the present time, when there is urgent necessity that munitions of war should be turned out with the greatest possible rapidity, it is very important that men engaged in their manufacture should be able to do the maximum amount of work with the minimum of harm to themselves In relation to this question I think that an experiment made many years ago by my friend, the late Lindsay Russell, Surveyor General of Canada, is of great interest Along with Professor Pearce who represented the United States, he surveyed the boundary line between the United States and Canada so exactly that I believe its accuracy has never been called in question On this expedition or some of his other surveying journeys he and his men had to pass over great spaces where there was neither game nor fishing, and were therefore obliged to take their provisions with them The forts at which these could be replenished were generally placed about 40 days march from each other and as the surveying party on account of the weight only took sufficient provisions for the distance and no more they were obliged to cover it in a given time for fear of starvation On some occasions he had men and horses and on others men and dog trains Necessity obliged him to work his men and animals as hard as they could for seven days a week and six weeks at a time Under this strain the horses usually gave out about the twentieth day, but the men and dogs seemed to be uninjured and only to grow harder and harder On other occasions, however, when there was no necessity for such extreme exertion he worked his men only six days a week and allowed them to rest completely on the seventh As he was engaged in surveying operations he knew exactly how many miles his party had travelled in a day, he knew how many pounds weight each man carried, and was thus able to calculate exactly in foot-pounds the amount of every man's daily work On reckoning it up he found, to his astonishment, that the number of foot pounds done by the men working six days a week was almost the same as when they worked seven days a week Although the men were able to work seven days a week to their utmost capacity all day in the open air, and sleeping in the open air all night for seven days a week without harm, it is unlikely that men working under much less favourable conditions in a factory will stand continuous work in the same way as the surveying party In all probability if the men work at their full capacity for six days it will be better both for them and the work they turn out that they should rest on the seventh

I am, Sir, yours faithfully,
T LAUDER BRUNTON
De Walden Court, W, March 29th 1915

LOUIS DANIEL BEAUPERTHUY AND MOSQUITO-BORNE DISEASES

To the Editor of THE LANCET

SIR,—Regarding the discussion between Dr Andrew Balfour, Dr H Seidelin, and myself on this subject in THE LANCET of March 6th and 27th, no one wishes to deprive Beauperthuy of all the "respect and reverence" due to him as a man and a physician, but whether he was "a very great and far seeing physician" on the strength of his hypothesis on insect-borne diseases is the question at issue We cannot deny that he was one of those who adhered to the idea that insects are in some way connected with diseases, but, as I have said, this old hypothesis dates from the time of the Romans My point is that his explanation of this connexion was a wrong one—that is, he thought that diseases are caused by the venom of insects and not by their capacity to carry the virus from one person to another Moreover, from what I have seen of his writings, he seems merely to have advanced the speculations in a non scientific manner—that is, as so many prophets do, in the form of a categorical imperative I much prefer King s work because, in Dr Balfour s words, "he marshalled his theories in a more logical and careful fashion" That is the whole point One appears to me to have been a dreamer (though more careful studies of his work may correct this impression of mine), while Dr King appears to me to have been a man of science Moreover, King did not think that mosquitoes cause disease merely by their venom, but evidently supposed (see p 656 of his paper) that they transmit a Bacillus malariæ—a much more rational hypothesis Beauperthuy s hypothesis was, as I have said, contrary to reason. I am glad that Dr Balfour agrees with what I maintained about the difference between speculation and careful research work, and that is why I mentioned the case of Beauperthuy It has become quite a profitable art nowadays to confuse the two, though anyone can indulge in unlimited armchair speculation, while research means much toil

Whether Beauperthuy s "zancudo bobo" was really the Stegomyia fasciata is another question, and I hope that Dr Balfour will let us know what

The undermentioned to be temporary Lieutenants —Dated Feb 28th Arthur Wellington Matthew Dated March 3rd George Joseph Adams Dated March 7th Frederic Percy Joscelyne Dated March 8th George Stanley Deane, Henry Hawes Elliot, Roy Henry Rollinson Whitaker, Alan Filmer Rook, John Sullivan, Harold Saunderson Sugars, Francis Gordon Bell, Frederick Orlando Clarke, James Keenan, Sydney Granville Tibbles, John Henry Tomlinson, Robert Lacy Kitching, Alexander Stanger Seabrooke, John Thomas Heffernan, Horace Fitzgerald Blood, and Eric Morse Townsend Dated March 9th Arthur Bloom and Hubert Lewis Clifford Noel Dated March 10th Oswald Herbert Edwards, Francis Irvine, Walter Smithies, Henry Harvard Davis, Walter Charles Campbell Kirkwood, Charles Ernest Sundell, John Dugald MacEwen, John Rodney Slack, Alfred Wallace Harvey, Timothy Sheehan, Alan Wiley, Francis Swanson Hawks, James Anderson Hutchinson, John Helby Wilkinson, Frederick Henry Rudge, Norman Gerald Horner Dated March 11th Douglas Compton Taylor

SPECIAL RESERVE OF OFFICERS

Supplementary to Regular Units or Corps Royal Army Medical Corps —Lieutenant Owen G Parry-Jones is confirmed in his rank

ROYAL NAVAL VOLUNTEER RESERVE

The following appointments have been notified —Surgeon Probationers G E Mullins to the *Ruby*, G B Lowe to the *Defender*, W F R Castle to the *Panther*, T C Wakefield to the *Owl*, J T Wylie to the *Shark*, F A V Denning to the *Garland*, A McA. Scott to the *Lennox*, and C Suffern to the *Contest*

TERRITORIAL FORCE

Army Medical Services

The appointment of Lieutenant Colonel Henry G Falkner as Assistant Director of Medical Services, with the temporary rank of Colonel, bears date Feb 3rd

Royal Army Medical Corps

South Wales Mounted Brigade Field Ambulance Major James MacK. Harrison to be Lieutenant-Colonel Lieutenant Josiah Browne to be Captain (temporary)

3rd East Anglian Field Ambulance Captain John R Pooler to be Major (temporary)

3rd London (City of London) Field Ambulance Alfred Norman George Jeans to be Lieutenant

1st North North Midland Field Ambulance Frank Pearce Sturm to be Lieutenant

3rd Southern General Hospital Captain Robert L Gamlen resigns his commission on account of ill health

3rd Home Counties Field Ambulance William Cummings to be Lieutenant

3rd London General Hospital Captain Sidney M Smith is seconded.

1st London Casualty Clearing Station Alexander Urquhart to be Lieutenant

South Midland Casualty Clearing Station Alexander Watkin Nuthall (late Captain, 5th Battalion, Royal Warwickshire Regiment) to be Captain

2nd South Midland Mounted Brigade Field Ambulance Captain Henry G Magrath to be Major (temporary)

2nd East Anglian Field Ambulance Captain Alister C Young is seconded

1st Home Counties Field Ambulance Francis Seymour Jackson to be Lieutenant

4th London Field Ambulance Transport Officer and Honorary Captain Alfred J Messent resigns his commission

2nd Eastern General Hospital Cyril Casson Messiter to be Lieutenant

Attached to Units other than Medical Units —Lieutenant Alfred J Gibson to be Captain To be Lieutenants Lieutenant Lionel G Pearson (from the 4th London Field Ambulance), Lorton Alexander Wilson, and Frank Jeffree

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SOCIETY OF MEDICAL OFFICERS OF HEALTH

SCHOOL MEDICAL SERVICE GROUP —A meeting of the group will be held on Saturday April 10th at 3 30 P M, at the society s offices, 1 Upper Montague-street Russell square London, W C The annual meeting, postponed on account of the war will be held at 3 30 P M and the general meeting immediately after tea at 4 P M Several items of very considerable importance to officers in the service brought up by members or referred to the group by other official bodies will be considered Communications should be made to the honorary secretary of the group, Dr A. Ashkenny 2, London road, Basingstoke

Correspondence.

"Audi alteram partem."

THE WAR AND SYPHILIS

To the Editor of THE LANCET

SIR,—One of the results of the war which is already making itself felt is the difficulty of obtaining salvarsan or neosalvarsan, and the small stock of these preparations in this country must very shortly be exhausted At the Lock Hospital in Dean street, W, the demand for injections of these substances has recently been considerable, and is now far in excess of the supply which can be obtained by that institution The average number of injections given weekly has up to recently been about 50, whereas it is now reduced to half that number, and in some instances one full dose has been divided between two cases Consequently the institution has recently been compelled to have recourse to some of the substitutes for salvarsan, and though the results have been fairly satisfactory I am bound to say that they do not compare favourably with those obtained by the original preparations of Ehrlich In proof of this I will mention two instances which have recently come under my observation.

CASE 1 —A patient with a secondary syphilide, who had been treated with weekly injections of "grey oil" from Oct 31st to Dec 12th, was found to have such symptoms of mercurialism as to render any further treatment with that drug inadvisable Accordingly on Jan 2nd he was given an injection of novarsenobenzol "Billon," a French preparation which is said to be identical with neosalvarsan and is recommended for its innocuousness The injection was followed by only a slight immediate reaction but at his next visit to the hospital on Jan 9th the patient was found to be suffering from an acute dermatitis of the shoulders and hands which in the following week was so severe as to necessitate his admission into the wards of the hospital The dermatitis was then generalised and universal, the mucous membranes of the nose, mouth, and conjunctiva were intensely inflamed his feet were œdematous but there was no irritation of the intestinal tract and the urine was normal The dermatitis was followed by most extensive desquamation so much so that large flakes of epidermis could be removed from the sheets of his bed literally in handfuls. He suffered from a severe purulent conjunctivitis and intense photophobia his eyelashes were almost completely shed as was also the hair at the back of his head. At the present time, 12 weeks after the injection, there remains an extensive xeroderma and erythema of the skin with pustular dermatitis of the lips and hands His condition, which at one time gave rise to the gravest anxiety is now improving, and the prospects of his ultimate recovery are favourable.

CASE 2 —A patient suffering from secondary syphilis was admitted into the hospital on March 9th and given an injection of kharsivan "a preparation of Messrs Burroughs Wellcome and Co which is said to be identical with salvarsan, this was followed by no reaction and he was given a second injection on March 17th. On March 19th the patient experienced severe aching pains all over the body, conjunctivitis and œdema of the eyelids and lips, diffuse and universal desquamative dermatitis, and biliuria These symptoms are now subsiding

My experience of these two cases leads me to think that the substitutes for salvarsan differ in their effects so far from the original preparations as to necessitate the greatest care in their employment The two cases I have alluded to were such perfectly healthy subjects that no ill effects could possibly have been anticipated from salvarsan treatment In the course of an experience of this treatment extending over five years, I have never retching, eructations of gas, and vomiting? Through what mechanism can impressions emanating from the myocardium cause vaso constriction in systemic arterioles and an elevation of blood pressure? Without an appeal to a disordered central nervous system can any disease of the heart cause instant death? Even in complete heart block the ventricle, if robust, still bears the burden of rhythm.

It may be replied that disturbance of myocardial function causes hyper irritability at segmentary centres of the thoracic cord, and as a result of this morbid condition the symptoms indicated above appear But apart from the fact that dendritic connexion between the myocardium proper and segments of the thoracic cord is not open to proof, this statement merely affirms that the predisposing cause of the seizure really lies in the central nervous system, and that the remote cause of the seizure is to be found in the myocardium The hypothesis that the myocardium is the seat of the predisposing cause is therefore an absurdity The same method of argument is applicable to all the other alternative propositions A confirmatory symptom is present during seizures and at intervals between them—viz, patches of algesia are found in the distribution of intercostal and spinal accessory nerves Strands of the brachial plexuses in the posterior cervical triangle and branches of the plexuses in the arms are tender upon pressure This symptom appears in regions where pain is never felt and at seasons when the patient is at rest and when seizures are in abeyance In a certain case examinations have been made by me on frequent occasions during an illness of three years duration, and in no instance has this symptom been entirely absent But algesia shifts its ground from day to day—patches appear in a zonal area, remain in evidence for a few hours, disappear and reappear Charts showing the distribution of patches of algesia are never found alike upon two days in succession Precisely the same characteristics are noticed even at intervals when no seizures are occurring It is evident that it is not the seizure which makes the patch, but that neurosis of segmentary centres determines both patch and seizure Hence we are in a position to infer that a state of neurosis at segmentary centres is the predisposing cause of seizures and that vagal inhibition is the cause of death

This conclusion is important because segmentary neurosis is the predisposing cause of diseases belonging to the class of the paroxysmal spasmodic disorders associated with the musculature of the alimentary canal In members of this class seizures occur in connexion with food taking and gastro œsophageal hypertonus, they also occur from mental and emotional excitement and from muscular effort in them both visceral and parietal layers of muscle are engaged in spasm Consequently they resemble the anginal seizure in other features besides that of predisposing cause A neurosis attended by intercostal hyperalgesia ensues when dendritic fibres belonging to the affected centre traverse pressure zones of hyperplasias aneurysms new growths and pericardial and pleuritic adhesions Hence these diseases as well as gastric disorders may be regarded as potential remote causes of anginal pains and seizures

I am Sir yours faithfully

[illegible] S.W. [illegible] H WALTER VERDON

INFLUENZA OR EPIDEMIC CATARRH

To the Editor of THE LANCET

SIR,—As a bacteriologist I often have to suffer mental pain at the misuse of the term "influenza," and therefore I should like to record my cordial agreement with the general principles laid down in your leading article on this subject in THE LANCET of March 6th, at the same time apologising for the belatedness of this letter I must, however, say that my experience of this epidemic appears to entirely negative the doubt expressed in the article as to the existence of a definite epidemic due to Pfeiffer's bacillus My experience was as follows Up to Jan. 19th I had seen no cases of recently contracted influenza infections for some months, and it would appear that at that time I was not alone in that experience, for we, at St Mary's Hospital were a few days prior to that date asked for a culture by the Lister Institute and were not immediately able to supply it It was however, supplied from a culture isolated from a case of bronchial catarrh I saw on Jan 19th From that date to March 1st I isolated Pfeiffer's bacillus from 14 more cases, and from March 1st to date I have isolated five more strains The cases were not hunted for, they came in the ordinary routine of practice, and vaccines were made, or will be made, in each case but one, where a lady apparently contracted the infection from her husband and his vaccine was deemed appropriate Other two of the cases were those of husband and wife

My general impression has been that the epidemic, though widespread, has not produced many severe cases Moreover, I think that the organisms have been a degree more difficult to cultivate than in former epidemics I may say that I rely only to a slight extent on the initial impression gained by the microscopical examination of a film, and indeed I find that nothing short of the employment of an agar plate, rich in fresh blood, gives one any confidence in giving an opinion This, I imagine, is the experience of every competent bacteriologist The recently existing epidemic was so general that I think one was quite justified in exploiting stock vaccines of Pfeiffer's bacillus for the treatment of acute catarrhs of upper respiratory passages, to discount the delay entailed in making exact diagnosis by cultural methods

But, Sir, if THE LANCET be doubtful as to the bacterial cause of a widely spread and definite epidemic, what expectation can there be that the profession at large is in possession of approximately accurate knowledge on the subject? It would seem that there is urgent need of some kind of bulletin for issuing information as to the bacterial cause of prevailing epidemics of catarrh

I am, Sir, yours faithfully,

Wimpole-street W March 2[illegible]th 1915 JOHN MATTHEWS

CERTAIN PECULIAR CRYSTALS FOUND IN CEREBRO-SPINAL FLUID

To the Editor of THE LANCET

SIR—Dr W W D Thomson has contributed an article to THE LANCET of March 27th under the above heading and has taken considerable pains to describe and have examined by Mr A R Dwerryhouse certain crystals which he found mingled with the pus in a case of septic meningitis I am afraid he has been led astray and fallen badly into he thinks on this point when he has read the original papers I wish that someone could find the papers on the mosquito theory (*a*) by John Crawford, called Mosquital Origin of Malarial Disease, *Baltimore Observer*, 1807, and (*b*) by J C Nott on the Origin of Yellow Fever, *New Orleans Medical and Surgical Journal*, 1848 I have not been able to obtain either of them All these theories are of considerable psychological interest They were all partly right and partly wrong, and the true story now known to us shows how much more clever nature is than the wisest of us

I am, Sir, yours faithfully,

Cavendish square W , March 27th, 1915 RONALD ROSS

STOMACH V HEART IN RELATION TO PRÆCORDIAL PAIN AND SUDDEN DEATH

To the Editor of THE LANCET

SIR,—Certain persons suffer from discomfort and pain in the præcordial region when they walk, especially uphill and soon after eating, but the moment they throw off gas from their chests or stand still their discomfort vanishes Persons thus affected are prone to sudden death The pain and the sudden death, when it occurs, are commonly, but erroneously, ascribed to functional or organic disease of the heart The following case is a typical example of the class —

The patient, aged 48 years, had always had good health except in the matter of his digestion Sweet foods turned sour on his stomach and distended it with gas He was a "windy" subject but looked robust and in good flesh A few weeks before visiting me he became conscious of a disability which seemed likely to prevent him from following his occupation, for when he walked, particularly if soon after eating, he was seized with a most disagreeable sensation in the chest, merging into pain No evidence of cardiac disease was detected There was no increase in the area of cardiac dulness, no abnormal cardiac sounds, dyspnœa or œdema, no abnormality in pulse rate or rhythm About five weeks after this examination, after a hearty afternoon meal, the patient left the house When about 200 yards from his own door he fell down and was picked up dead No lesion accounting for death was found at the necropsy All his organs were healthy The cardiac valves were normal and the myocardium thick and free from disease The coronary arteries were sound, save for one or two small foci of commencing ossification Their pathological condition was such as might be expected in persons dying at the same age from indifferent complaints [1]

The manner in which seizures affected this patient is thus described in his own words —

> When I leave home in the morning I usually feel quite well, but after walking 100 paces or more I am conscious of an uncomfortable sensation at the stomach and a desire to expel gas from the chest I have also a feeling as if a piece of crust had become lodged in my gullet, pain creeps up from the pit of the stomach to the chest and spreads all over it sometimes reaching the armpits shoulders, and back, and even extending to the neck and jaws Water gathers in my mouth and runs out upon my chin , it is neither retched nor coughed up, but comes into my mouth on its own My eyes fill with tears , sometimes urine dribbles away from the bladder in spite of my efforts to prevent its escape If at this time I can break wind from the chest all this discomfort vanishes in a second So every now and then I stop and retch and throw gas from my chest, and when all is thrown off I can walk as well and as far as I ever did before But sometimes the gas is hard and will not come up and then a dreadful feeling comes over me , it is as if my head swims and my chest is gripped and held tight, and all strength is going from my limbs, but even when no gas comes up if I stop walking and *remain* for a few seconds standing still the seizure passes off

When asked what distance he had walked upon any occasion just after the occurrence of seizures, the patient said

> *On* Bank Holiday, soon after starting from home in the morning, I was taken with a seizure which was followed by two others, but after I had stood still for a few seconds and broken up wind I walked on without having to stop again and *visited* a *friend* living five miles away That *morning I* walked ten miles, counting the journey there and back again, without being troubled with any pain whatsoever , indeed, I never felt better in all my life than during that walk.[2]

The fact that the patient walked ten miles just after three seizures indicates that exhaustion of reserve power of the function of contractibility is not the causal agency of these seizures

From a consideration of the description of this seizure, and seizures of a similar kind which have occurred in other patients under my notice, it is to be remarked that segments of the medulla and cord, secretory glands, and parietal, visceral and cardio arterial layers of muscle, take part in the manifestations of the seizure Consequently symptoms constituting the syndrome are divisible into five groups (1) The central nervous group comprises referred pain felt in the distributory areas of the brachial plexus and the second, ninth, and intermediate intercostal nerves, and algesia affecting scattered patches of the integuments and deeper structures of the thoracic wall and adjacent parts , (2) the secretory group comprises a voluminous flow of watery saliva and increased secretion of lacrymal glands with probably also increased urinary secretion, (3) the parietal muscular group comprises contractions of facial, intercostal and abdominal muscle, the latter contractions producing a sensation of pressure over the thoracic wall described by some as fixation or tightness of the chest walls , (4) the visceral muscular group comprises nausea, retchings, and eructations resulting from contractions of the gastro œsophageal sheet and diaphragm, and (5) the cardio arterial muscular group comprises vaso constrictions, elevation of blood pressure, abnormal deviations in pulse rate and disturbances of rhythm and sometimes total inhibition of cardiac function

The seizure consists of the associated manifestations of these several groups of symptoms The muscles and secretory glands which produce groups 2 to 5 inclusive are not in functional communication with one another except through the central nervous system Hence the central nervous system furnishes the link that connects in a unity of expression the several activities that produce the seizure The central nervous system must therefore be regarded as the seat of the predisposing cause, otherwise the activities producing the seizure would fail to combine in unitary expression For if the heart be the seat of the predisposing cause, how are symptoms witnessed during seizures to be accounted for ? If segmentary centres be healthy can impressions from the myocardium cause cramp in the recti abdominis muscles or agonising pain in the distributory regions of intercostal nerves ? Can impressions generated in the myocardium cause nausea, overflow of saliva, to readjust existing conditions to present needs It is announced that candidates from hospitals of 50 beds will be accepted if suitable in other respects Candidates between the ages of 35 and 45 who are accepted will serve for a year either at home or abroad, but for home service this age limit will be extended, especially for the higher posts Women outside the ranks of fully or partially trained hospital nurses will be accepted in certain hospitals as probationers for a month, and if found suitable may sign on for a year or for the duration of the war The age limits are from 23 to 38 It is estimated that some 3000 carefully chosen certificated women will be required

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[1] At the necropsy made upon the 'unknown" by John Hunter and described by Heberden the vessels were found healthy and the heart sound and vigorous —Medical Transactions of the Royal College of Physicians

[2] Cases in which long walks are taken after seizures are not infrequent Dr Mackenzie refers to cases of this kind in the Oliver-Sharpey lectures

The need for nurses has also brought home to the public the circumstance that nurses who have suffered, or may suffer, from attendance upon the sick and wounded during the war have no adequate provision made for them in return The originating of a Fund for this purpose has occurred to Miss Swift, matron in chief of the joint committee of the Order of St John of Jerusalem and the British Red Cross Society, and an appeal has been issued, accompanied by a promise of £1000 from the Red Cross Society, and of a similar sum from the Order of St John of Jerusalem The patrons] of the Fund are Queen Mary and Queen Alexandra, and the committee includes many who have a practical knowledge of nursing The address of the Fund is 15, Buckingham street, Strand London, W C, and cheques may be made payable to Sir Everard Hambro, the chairman and treasurer, and crossed *the Bank of England*, or they may be sent *to the* Bank of England *to be* placed to the credit of the Fund Nurses on the staffs of the Navy and Army and in the Reserve and Territorial Forces are already provided for, but no provision has hitherto been made for civil nurses, while the risks which they run of being incapacitated from work are extremely great, for many are working in hospitals where, in *addition to* the dangers from shot and shell, the perhaps greater dangers resulting from insanitary environment are added We are glad to learn that the public is responding well to the call for help in this direction

No special generosity to nurses at the present moment must, however, be allowed to interfere with a careful investigation of the question of their payment We feel sure that under the Royal patronage which it commands, and with the able judgment of a strong committee, the new Fund will receive all the support which it requires to carry out its beneficent work but it is necessary, also, that we should face the whole question of the pay of nurses fairly and squarely

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Kitchener's Indian Hospital—There has been established at the old Brighton Poor law Institution a large Indian *general hospital*, known as Kitchener's Indian Hospital This is in *addition* to the Indian hospitals at the Dome and York place School The hospital is situated on an open elevated spot in the town adjoining the racecourse and close to the open downs The staff of the hospital is mainly derived from members of the Indian Medical Service with a number of native Indian medical officers assisting The officer in command is Colonel Sir Bruce Seton of Simla honorary surgeon to the Viceroy The medical and surgical wards which contain altogether about 1700 beds vary in size the smallest holding eight the largest about 50 They are well arranged and comfortably appointed There are separate huts for infectious cases and a special ward for all tuberculous patients where open air treatment is available There is also a ward for lunatics which is fitted out with all modern improvements including padded cells wire gauze windows and protected radiators and electric lights There are three operating theatres, with sterilising rooms adjacent, but up to the present not *many operations* have been performed Now that many cases of bullet wound are being admitted, the number will rapidly increase

The electrotherapeutic department is fitted out with every requirement for this branch of medicine There are 12 Dowsing radiant-heat beds and smaller apparatus for the treatment of limbs and joints in this way Many cases of trench rheumatism and frost-bite have been thus treated with very satisfactory results There are also a universal machine for galvanism, faradism, sinusoidal current, light, cautery and vibratory massage, a high frequency apparatus, and a Schnee's four cell bath for hands and feet, which can be used for galvanism, faradism, and sinusoidal currents The pathological department has all the modern apparatus required for the pathological examination of urine, blood, sputum, and cerebro-spinal fluid, the preparation of vaccines and sera, and the various pathological tests, such as Wassermann's and Widal's, an autoclave electric centrifuge, *hot-air steriliser*, and incubators The pathological work of all the Indian hospitals in the town is carried out here The X ray department is similarly equipped with all the latest instruments necessary for diagnosis and treatment As a *matter of* routine every bullet wound is examined here, and when one remembers *that on* one day 500 cases of this nature were admitted, it will be realised how busy the officers of this department are kept The nursing is all done by men, either Royal Army Medical Corps or native Indian *orderlies* As all these were untrained on enlistment it is as gratifying as it is *surprising* that the nursing has so far, on the whole, been considered satisfactory both by the medical staff and the patients When the more serious cases are admitted, such as enteric fever, pneumonia compound fracture of the lower *extremity*, gunshot wounds of the spine, abdominal operations, and such like, it will *then probably* be found absolutely necessary to add some highly trained and fully qualified nurses to the hospital equipment At present no women are employed in the hospital in any capacity whatever

There is everything within the hospital to make it self-contained—a steam laundry, a barber's shop, a dry canteen three linen disinfectors, a linen store, a pack store, even cells for prisoners, a rifle range, a gymnasium, recreation rooms for the men, a hut village for the staff capable *of* holding 400, special quarters for wounded *native officers*, with their own nursing staff and cooks In fact, little if *anything has been* omitted which *could* possibly have been included in the equipment *of the institution* All records, whether of admissions, of deaths, of special treatments, such as X ray examinations, pathological treatment, and *so forth*, are *kept on* the card index system, and thus the record *of* all patients can be traced with the minimum of trouble All the sanitary arrangements are made to comply as far as practicable with native customs, and the same applies to the burial of the *dead* So far there have been very few deaths only three *in the* total admissions, which number 1200 The diet of the patients is naturally quite different from that of our own men The ordinary diet consists of 8 ounces of meat, with *atta* or rice, *dhall* or peas, butter or *ghee*, *potatoes*, *fresh* vegetables, fresh fruit onions, tea, *gur* or sugar, chillies, turmeric, garlic, salt, and milk There are three meals—*breakfast*, mid-day meal, and supper

The convalescent patients are kept fit by light duties and daily route marches and every care is taken of them whilst out for walks or going to places of entertainment They always go under escort When it is known that races so different as Sikhs, Gurkhas Pathans, Punjabis, Dograhs, Garhwalis, Afridis Baluchis, and Mahrattas are among the admissions it will be seen that a good deal of management is required to make all the arrangements satisfactory Colonel Sir Bruce Seton is to be heartily congratulated on the success that has attended his *efforts to* convert the *Poor-law* Institution into one of the most up-to date and best *equipped military* hospitals in the kingdom

Voluntary Aid Detachments, British Red Cross—We are asked to state that the Voluntary Aid Detachments Selection Board of the British Red Cross Society has moved from 83, Pall Mall, to Devonshire House, Piccadilly The hours for interviewing candidates are 10 to 1 every day and 2.30 to 4 30, with the exception *of* Wednesdays and Saturdays.

one of the numerous traps set for the pathologist The crystals he describes have been deposited from the water in which the bottle or syringe has been boiled for purposes of sterilisation I would suggest that Dr Thomson verifies this by boiling some tap water in a test-tube for a short time, let it cool, and then examine the deposit

Some years ago these crystals gave me trouble by obscuring to a certain degree the scanty deposit of cells found in tabetic and many tuberculous cases, especially the latter In films stained with carbol fuchsin for tubercle bacilli the crystals retain some of the stain, and so may cause confusion Since that time I have always used test tubes sterilised by boiling in *distilled* water or, better, in a dry oven Dr Thomson does not state whether the staphylococci were numerous on the agar tube or whether they were Gram positive Nor does he indicate whether the colonies were white or yellow It is a pity the streptothrix was not more fully investigated

I am, Sir, yours faithfully,

Harley street, W, March 28th 1915 ERNEST H SHAW

A NEW TYPE OF FRACTURE OF THE ANKLE

To the Editor of THE LANCET

SIR,—The important injury referred to under the above heading in an annotation in your issue of March 27th was fully described by Etienne Destot in his book "Traumatismes du Pied et Rayons X," published in 1911 Dr F J Cotton's advice to treat this posterior marginal fracture of the lower articular surface of the tibia by fixing the foot in the fully dorsiflexed position I can endorse from experience I emphasised this point in an article[1] last year When the backward displacement of the foot cannot be wholly corrected by dorsiflexing the foot under an anæsthetic, and in cases in which the proper treatment has not been carried out in time, open operation is necessary In the *Polyclinic* of August, 1913, was recorded a case in which I fixed the tibial fragment by a Lane's plate This fracture so often complicates Pott's fracture, bi malleolar fracture, and other common injuries at the ankle that I suspect its presence until contrary proof is afforded by good radiograms

I am, Sir, yours faithfully,

J JACKSON CLARKE

Portland place, W, March 29th 1915.

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[1] Open Operations in the Treatment of Fractures and Dislocations, Universal Medical Record 1914

NURSE-MIDWIVES IN CORNWALL —At the annual meeting of the friends of the Cornwall County Nursing Association, held last week, it was suggested that the Local Government Board would help to establish qualified nurse midwives in scattered country districts where there was no resident midwife, and often no doctor, and where it was impossible to provide locally sufficient funds for the maintenance of a nurse

ROYAL GLOUCESTERSHIRE INFIRMARY — The annual meeting of the subscribers to this institution was held on March 25th, under the presidency of Colonel Curtis Hayward The medical report stated that during the year 1619 in patients, including 133 soldiers, were admitted—the largest number of admissions on record 7381 out-patients including 786 soldiers, were treated an increase of 300 compared with 1913 The financial statement showed an unfavourable balance of £1144 at the close of 1914

The War.

HONOURS LIST

Lieutenant Edmund Hume Moore, R A M C, attached to the 2nd Battalion the Leicestershire Regiment, has been appointed D S O for distinguished gallantry on Feb 23rd near Richebourg L'Avoue, in going with another officer (Captain N A Morgan, 2nd Battalion of the same regiment, also appointed to the Order) and a stretcher bearer to within 150 yards of the enemy to attend to a wounded soldier The stretcher bearer was also wounded, and both wounded men were successfully carried to the rear On the next day Lieutenant Moore again dressed a wounded man under the direct aimed fire of the enemy and was himself wounded —Lieutenant T W Clarke, R.A M C, has been awarded the Military Cross for conspicuous gallantry and great devotion to duty during six months On March 5th, when the 14th Field Ambulance was destroyed by a shell, killing one officer and five men and wounding 19, Lieutenant Clarke continued to attend to the wounded though wounded himself, until he collapsed

THE CASUALTY LIST

Since our last issue the casualties reported in our Expeditionary Force include the names of Captain H S Cormack, I M.S, Lieutenant H M Mackenzie, R A M C, Lieutenant R F Wilkinson, R A M C, and Lieutenant J W Cannon, R.A.M C, all wounded

Dr J C Fox, a medical missionary, whose name was included in the official list of missing from the roll of the *Falaba*, is announced to have been saved

THE INCREASED PREPARATIONS FOR THE WOUNDED

The need for a greatly increased supply of nurses, to which we referred in these columns last week, has since been emphasised by the appeal of the Director General of the Army Medical Service to civil hospitals with training schools After gratefully acknowledging the great help which these hospitals have already given, Sir Alfred Keogh asked them to still further assist the country by making every effort to train for three or six months as many probationers as possible, so that they may be available for work later under supervision in military hospitals The appeal under present circumstances is fully justified, though the scheme will undoubtedly require careful organisation in order to overcome difficulties which existing conditions present

The London Hospital has already anticipated a brisk demand for nurses with only a short training, and the authorities at St Bartholomew's Hospital have expressed their willingness to accept immediately pupils for a short course of practical nursing, but other training schools have not yet seen their way to adopt the course suggested at present Lack of adequate accommodation for those who are undergoing complete training no doubt presents very real difficulties in some institutions already working at full pressure There can be no doubt, however, as to the necessity for providing a sufficient number of trained women to look after our sick and wounded, and mutual goodwill should not find it difficult

Dijon), and the day express time is shortened by two hours, while extensions to Geneva and to Grenoble, Modane, Turin and Rome of the Paris-Lyons service facilitate communication with Switzerland and Italy These changes came into operation on March 23rd

A NEW RED CROSS HOSPITAL FOR HONITON (DEVON) —At Honiton last week the Mayor formally opened the Voluntary Aid Red Cross Hospital provided by the district It contains two wards, with 30 beds, operating theatre, &c.

Medical News.

VICTORIA UNIVERSITY OF MANCHESTER.—At examinations held recently the following candidates were successful —

THIRD M B AND CH.B EXAMINATION

F R. Gilmore J B Leigh and B L Lloyd

SECOND M B EXAMINATION

Frances G Bullough James Charnley R. S Paterson and H. T Savage

DIPLOMA IN PUBLIC HEALTH.

T F Bamford A. G Bryce D I Daleyne, H H. Proudfoot, and D M Wilson

DIPLOMA IN DENTISTRY (THIRD EXAMINATION)

W L. Leres and Hemant Paparlan

DIPLOMA IN DENTISTRY (SECOND EXAMINATION)

Dental Mechanics —B C Bett Roland Critchley John Green James Kershaw H A. Parkinson George Stirling A. C Tattersall and C H Travis.

Dental Materia Medica —B C Betts and James Kershaw

DUBLIN UNIVERSITY SCHOOL OF PHYSIC, TRINITY COLLEGE.—At the recent Hilary examinations the following candidates were successful —

PRELIMINARY SCIENTIFIC EXAMINATION

Chemistry and Physics —Patrick Casey and Athanas Bagoff
Botany and Zoology —William Swirles Allardyce

INTERMEDIATE MEDICAL EXAMINATION

Part I Anatomy and Institutes of Medicine (Physiology) —Patrick Bernard Moloney Thomas Scannel McDonald Herbert James Wright Thomas Edward Hill Thomas Molock Bentley Wilfred Vincent Pellissier Arthur Isaac Steyn, Harry Bank William Andrew Bryn Fleetwood William Porter Sullivan, Meta Grace Jackson William Joseph Hamilton and John Edmund Hill

Part II Applied Anatomy and Applied Physiology —William Robert Fearon Edward D Arcy McCrea, Stanley Cyril Mitchell Andrew Hope Davidson Alexander Richard Barlas, Edward Oswald Mark George William Bernard Shaw William Petrus Louw Henry James Rice Alan Glynn Wright Frederick Joseph Smith Joseph Ignatius Brennan Bryan Austin McSwiney Michiel Dippenaar [illegible] Henry Patrick Park Robert Wallace Nesbitt Charles Leverral Chambers William James McClintock Hirsh Bell, Philip Hall Joseph Godfrey Bird Eileen Gertrude Gwynn and Marie Annette Baxter

FINAL EXAMINATION

Part I Materia Medica, Jurisprudence and Hygiene and [illegible] —Charles Owen James Young Arthur Hubert Watson [illegible] John Murphy Collis Bayne Berli William Lionel [illegible] John Thorp Westby Edward Lipman [illegible] and Harry [illegible] and [illegible] Henry Stephen [illegible] (Medical Jurisprudence and Hygiene) and [illegible] Harvey Montgomery [illegible] John Armstrong Chandler Hill Thomas Edward Ben[illegible] and William [illegible] and [illegible] Lesturne Murphy [illegible]

Part II [illegible] —John Stearns Herbert [illegible] William Daniel Eugene [illegible] William [illegible] Todd George Santon Edward [illegible] Le Strange [illegible] Marguerite [illegible] Henry [illegible] Walker

Part II [illegible] —John Stearns Francis [illegible] Arthur Cyril Bateman [illegible] William [illegible] Norman [illegible] Geraldine Murphy [illegible] Henry Crans[illegible]

Part II [illegible] —William [illegible] George William [illegible] James D[illegible] Oliver [illegible] Chester [illegible] William Acheson and [illegible]

[illegible] DENTAL EXAMINATION

[illegible] John Henry James [illegible] and Henry

[illegible] DENTAL EXAMINATION [illegible]

[illegible]

[illegible] FIRST EXAMINATION

[illegible] and Harry [illegible]

Experimental Physics —Frederick William Robertson James Sinclair Quin, Joseph Cecil Gillespie John Gerard Holmes, Richard Connihan Thomas Madill Richard William Shaw Ivan Wakefield Beatty John Henry Brunell Crosbie, Patrick Joseph Duggan, Cecil Emrys McQuade John Charles Joseph Callanan William Joseph Orr Derrick Haughton Gardiner Fishbourne Richard Wood Power Johannes Tobias Mynhardt, Cecil Joseph Quinlan Gerald Fitzmaurice Keatinge Henry Allman Lavelle William Joseph Hogan Richard Dominick Murphy Albert Hugh Thompson, William Swirles Allardyce John Cecil St George Earl, Gertrude Rice Read Abgar Aldin Herbert Birney Leo Vincent Clifford John Henry Coolican Albert Victor Foster Becker Fitzjames Haythornthwaite Noelle Long Edward Henry Montgomery George Francis Thomas Saunders John Farnsworth Sheppard Jacobus Frederik Van Staden and Thomas James Russell Warren

UNIVERSITY OF DURHAM FACULTY OF MEDICINE —At examinations held recently the following candidates were successful —

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE.

Samuel Eric Hill Anderson John Maurice Brydson (second-class honours) Sujan Raj Chatterji, Iris Marjorie Cheeseright Eskander Girgis Ibrahim Girgis, Mary Isabel Allerne Grimmer Gabriel Jonas Downons Hammond, Reginald Arthur Hickley Donald Falconer Hocken James Richard Hughes (second-class honours) Louis Lavine David Levinstein Ahmed Saleh Hans Wilhelm Walther and George Roebuck Woodhead

THIRD EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE

Materia Medica Pharmacology and Pharmacy Public Health Medical Jurisprudence Pathology and Elementary Bacteriology —Norman Alexander Martin George Nathaniel Metzger and Alfred Smirthwaite

DEATH OF MR FRANCIS ARTHUR KNOX STUART, B A L S A. LOND —A promising career was prematurely ended by the untimely and tragic death on March 9th of Mr Francis Arthur Knox Stuart at a Chichester nursing home whither he was removed following a serious motor accident While riding a motor-cycle to which a side car was attached on the Chichester—Arundel road on Feb 23rd he accidentally collided with a motor-car belonging to an Arundel medical man and sustained a compound fracture of the right leg He never recovered from the shock, the limb was amputated and death occurred on March 9th Born on Sept 27th 1875 Mr Stuart studied at Cambridge where he took the B A. degree and at St. Mary's Hospital, London, becoming L S A. Lond in 1907 At Cambridge he won distinction as a cycle-track rider and gained many trophies while he was also an enthusiastic golfer At the time of his death he was the senior medical officer of the West Sussex Mental Hospital at Graylingwell Chichester Those associated with Mr Stuart at the hospital express profound sorrow at the untimely end of one who was held in the highest esteem in the cathedral city and district The funeral took place at Chichester on March 12th, a service in the chapel on the hospital estate preceding the interment

RESIGNATION OF DR. R A BIRDWOOD —Dr Birdwood who has just retired from the post of medical superintendent of the Park Hospital Hither Green after 37 years service under the Metropolitan Asylums Board has been responsible for many reforms in the working of the service He carried out the scheme by which small pox patients were taken direct from their homes to ships moored down the river and he initiated diet scales which have resulted not only in a lessened mortality but also in a decrease of expenditure His views were not always supported in the beginning but experience proved to be on his side

LIVERPOOL REFORMATORY FOR GIRLS —Owing to an outbreak of infectious disease among the inmates of this institution the Home Secretary has certified that the premises at 36 Canton road Tranmere Birkenhead, are fit to afford temporary accommodation six months from the date of the certificate March 3rd for not more than 90 girls of the reformatory

SOCIETY FOR THE STUDY OF INEBRIETY —The annual meeting will be held in the rooms of the Medical Society of London 11 Chandos street Cavendish square, W on April 13th at 4 P.M. Dr H Crichton Miller will open a discussion on Dual Personality and Intemperance Each member and a [illegible]

Dr Philippe Bru[illegible] of the University of [illegible] has been appointed house surgeon at the Dover [illegible] Hospital

We regret to announce the death of Mr [illegible] F R C S, which took place on March 23rd.

The Medical Plight of Serbia —The plight of Serbia in the grip of typhus fever is serious, and unless the other nations come to the aid of this gallant little State disease will finish off what the more immediate brutalities of war have spared We have heard through the press what Sir Thomas Lipton saw there, and on March 22nd a large meeting was held at the Mansion House in support of the Serbian Relief Fund, whose headquarters are at 55, Berners street, W Various units have been at work in Serbia Lady Wimborne sent out 4 medical men and 42 orderlies and nurses on behalf of the Serbian Relief Fund, while Lady Paget, who is in charge of another unit at Uskub, is herself down with typhus fever there Miss Hankin Hardy is in charge of a hospital at Kragnevatz where she has 600 patients with only one Serbian lady doctor, no nurses, and four Austrian prisoners as orderlies The death from typhus fever of Dr Elizabeth McB Ross, of the Scottish Hospital at this place, was recorded in our issue of March 20th The American Red Cross has a hospital at Belgrade under Dr Ryan and one at Gevgelija the chief of which, Dr Donnelly, died there from typhus fever, with two of the nurses About 100 French doctors are said to be *en route* to Serbia to assist in stamping out typhus, and we learn that 25 officers of the Royal Army Medical Corps, under Colonel Hunter, have recently arrived in Serbia for duty The hospital accommodation, where it exists, is of the most meagre and is filled to overflowing, and there appears to be none at all save in the most important towns, so that the patients lie out, often untended, in the streets Stores also are deficient, not only drugs and dressings but bedding, clothing, and all the necessary equipment for satisfactory hospital work Typhus fever, owing to poverty the impossibility of isolation, and overcrowding is occurring in tens of thousands of cases, and it is to be feared, unless adequate preventive measures can be initiated, that with the advent of the warm weather cholera may succeed it Not only on the score of humanity and present international ties through a common cause should every assistance in personnel and material be given to our courageous little ally, but even on the ground of self interest, having in view the method by which migration of troops spreads disease, it is highly important that we should come to their aid

Among the passengers on the Admiralty ship *Saidish*, which leaves immediately for Salonica, will be the advance guard of a hospital unit, sent by the Wounded Allies Relief Committee Sardinia House, Kingsway, W C This advance guard will consist of two doctors and two nurses, armed with medical stores Both the doctors are Belgians who have seen service in the war, while one of the nurses is a Russian lady, who is acquainted with the Serbian language and who has been doing valuable work at the Ambulance Jeanne D Arc at Calais The work of these forerunners will be to prepare the building provided by the Serbian Government, so that on the arrival of the rest of the unit work will begin at once

The committee of the Wounded Allies Relief Fund asks for subscriptions towards this work, and any such will be welcomed by the honorary treasurers the Hon Mrs Fredk Guest, 26, Park lane W , and Mr T O Roberts, manager, London County and Westminster Bank, 217, Strand, W C The Fund will shortly open a temporary resting place for homeless Belgian soldiers in premises which have been lent them for the purpose

Vacancies for Medical Officers —We are asked to state that a vacancy exists for a Surgeon Lieutenant (Attached) to Kent (F) Royal Engineers, to replace medical officer detailed to take charge of an ambulance train (railway) The appointment could be for the period of the war or otherwise The headquarters, the station of the surgeon, are near Chatham Correspondence should be addressed to Major H F Stephens, O C , K (F)R E Head Quarters, Pier road Gillingham —There are vacancies for two medical officers in the 2nd Line Welsh Border Mounted Brigade Field Ambulance Pay and allowances as in the Regular Army, also a grant for outfit and camp kit Further particulars can be obtained on application to Major D C Leyland Orton, R A M C (officer commanding) Thomas street, Chester —Two medical officers are required at once for the 1st North Midland Field Ambulance Applications should be sent to the Officer Commanding, R A M C Depôt, 91 Siddals road, Derby

Russian Medical Students Specialising for the War —A correspondent informs us that, in view of the urgency for increasing the medical service, both for the army and for civil life, it is found to be necessary to interrupt the regular studies of medical students and in all universities to give them special courses in military field surgery and attention to the wounded, in the knowledge of internal complaints common in war, in military field hygiene, and in dealing with epidemics These studies are to continue till May The regulation examinations will be delayed so that the students may give undivided attention to these special studies

The Duchess of Connaught Hospital —Among the many benefits to the wounded for which this country is partly indebted to the Canadian Red Cross Society, is the hospital at Cliveden, Taplow, constructed in the covered tennis courts at Cliveden generously given by Major and Mrs Waldorf Astor Early in the autumn the owners of Cliveden placed these courts at the disposal of the Canadian Red Cross Society who have now equipped the hospital, which has 100 beds, and have supplied a staff of medical officers, nurses, and orderlies, undertaking at the same time to defray the working expenses All the beds are now occupied by wounded British and Canadian troops The staff consists of Lieutenant-Colonel Charles Gorrell, of the Canadian Army Medical Corps, the officer commanding, with 10 other medical officers and 20 nurses, besides orderlies, of whom 32 are medical men and 1 a dentist The situation of the building on the heights above the Cliveden woods is admirably airy, and, the courts being covered in by a glass roof, the whole building is very light The hospital is fully equipped with an X ray room laboratory and offices, and it is intended by the Canadian Red Cross Society to make provision for as many as 500 beds, enlarging the staff proportionally

Queen Alexandra's Hospital for Officers, Highgate —A hospital for officers was opened last week in Millfield lane Highgate It adjoins Brookfield House, which affords quarters for the staff The hospital is composed of specially constructed temporary wooden huts, affording a separate room for each of 20 patients, and has an operating theatre, X ray room, &c The patients rooms open on to a balcony, so that they can be wheeled out into the air The construction cost £5000, the plans having been given free by the architect, Mr C W Ferrier The cost of upkeep will amount to about £700 a month, of which Sir Alfred Mond, who also contributed £3000 towards the cost of building, has guaranteed £200

Russian Enterprise Circulating Country Houses —The Governor of the Kieff district, we learn from a correspondent, is organising a system of circulating country houses along the Dnieper river zone for sick and wounded soldiers For a beginning about 70 barges will be equipped, with comfortable quarters for invalids, and suitable medical supplies for them and the staff The barges will be towed by steamers to the most suitable spots on the course of the river or of its navigable tributaries, there to remain for the periods of time judged expedient

Australia and the Shortage of Doctors —On the request of the War Office about 100 Australian medical men left Melbourne for England on March 22nd, and will soon be followed by a complete hospital unit

Sir Lambert H Ormsby, senior surgeon to the Meath Hospital and County Dublin Infirmary, past-President of the Royal College of Surgeons in Ireland late examiner in surgery appointed by the War Office for R A M C examinations, has been appointed honorary consulting surgeon to the New Zealand Expeditionary Force with the rank of Lieutenant-Colonel Sir Lambert Ormsby is a New Zealander by birth, although of Irish parents

Travel in France —It is interesting to note that the temporary disorganisation of railway travel in France that resulted from the outbreak of war has now been overcome at any rate so far as the route to the South is concerned The P L M night express between Paris Marseilles and the Riviera has resumed its former route and gained three hours on the whole journey Carriages branch off at Tarascon to serve the Nismes-Montpellier-Cette district, a new night express runs between Paris and Lyons (viâ

STOKE-ON-TRENT COUNTY BOROUGH.—Female Medical Officer Salary £250 per annum.

TAUNTON AND SOMERSET HOSPITAL, Taunton —Senior House Surgeon. Salary £120 per annum with board lodging and laundry

VENTNOR, ISLE OF WIGHT ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST ON THE SEPARATE PRINCIPLE.—Assistant Resident Medical Officer unmarried. Salary £150 per annum with board and lodging

WAKEFIELD CLAYTON HOSPITAL —Female Junior House Surgeon. Salary £120 per annum all found

WARRINGTON INFIRMARY AND DISPENSARY —Junior House Surgeon Salary at rate of £120 per annum with board apartments and laundry

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS AND EPILEPSY 73 Welbeck-street, W —Honorary Registrar Also Clinical Assistants to Out patients Physicians

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford E —Junior House Surgeon Salary at rate of £100 per annum with board, residence, and washing

WEST RIDING OF YORKSHIRE.—Temporary Dispensary Tuberculosis Officer Salary £[illegible] per annum

WESTON-SUPER-MARE HOSPITAL.—House Surgeon. Salary £120 per annum, with board residence, and laundry

Births, Marriages, and Deaths.

BIRTHS

EVANS —On March 23rd at Fairfield Mount Chesterfield, the wife of Thomas R. Evans M.D of a daughter

SUCKLING —On March 2[illegible]th at 5. Marine Terrace Margate the wife of John Jerome Suckling M.B B.S Lond., of a son.

SWAN —On March 2[illegible]th at Wimpole-street the wife of R. H Jocelyn Swan M S Lond F R.C S Eng of a son

WHITNEY —On March 27th at High View Maldon Essex the wife C Underwood Whitney L.R C P M R.C.S., of a daughter

MARRIAGES

MARTIN—HUNT —On March 22nd in Scotland Gerald Noel Martin Surgeon R N to Agnes Margaret third daughter of the Rev R G Hunt vicar of St Mark's Wolverhampton.

TYLECOTE—BODDAN —On March 27th at St. James's Church Birkdale Frank Edward Tylecote M D D P H Vict., M R.C P Lond Captain R.A M C (T) to Charlotte Dora, only daughter of Mr and Mrs Boddan of Hutton Dene, Heaton Mersey and York-road Birkdale.

DEATHS

MACFIE.—On March 25th at his residence St George's road Bolton Charles Macfie M D aged 65 years

MCKERROW —On March 23rd George McKerrow M B C.M., at Barns street Ayr aged 65 years

N B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

BOOKS, ETC , RECEIVED

ALLEN GEORGE AND UNWIN London
Is it to be Hate? An Essay in War Time By Harold Picton With a Foreword by J A. Hobson Price 3d. net.

ARNOLD EDWARD London
A Practical Handbook of Surgical After Treatment By Allan H Todd B Sc M.S Lond., F R C S Eng Price [illegible] 6d net
An Introduction to School Hygiene By W B Drummond M.B C M F R C P Edin Price 3s 6d
A Surgeon in Belgium By H S Souttar F R.C S Assistant Surgeon West London Hospital Price 8s 6d net

BAILLIÈRE ET FILS Paris CONSTANT TARIN Lausanne
La Cure de Soleil By Dr A Rollier Price 20 francs

BIBBY J., AND SONS Liverpool
Bibby's Book on Milk Section II Fourth edition Price [illegible] net.

BLACK A AND C London
Radiography X ray Therapeutics and Radium Therapy By Robert Knox M D Edin M R C S Eng L R C P Lond., Honorary Radiographer King's College Hospital Captain R.A.M C (T) 4th London General Hospital (in Charge of X Ray Department) Price [illegible] net

DANIEL C W London
Key to Health and Long Life By F W Mitchell I S O Price 3s 6d net

GARDEN CITY PRESS Letchworth
[illegible] Medical Annual [illegible] By A S Wise M.B B.S. B Sc Lond D P H M R C S Eng L R C P Lond Price 5s

GRIFFIN CHARLES AND CO., LIMITED London
[illegible] of Medical Jurisprudence and Toxicology for the Use of Students and Practitioners By W A Brend M A B Sc M B B S Lond Barrister at Law Second edition Price [illegible]
[illegible] to Midwifery a Handbook for Medical Students and [illegible] By Archibald Donald M A M D C M Edin M R C P Lond Seventh edition Price [illegible]

[illegible] AND CO LIMITED London
[illegible] By [illegible] F R.C S Price [illegible]

[illegible]
[illegible] Year Book [illegible] By H F W Deane M.A. [illegible] M.A. Price [illegible]

Notes, Short Comments, and Answers to Correspondents.

HEALTH OF UGANDA.

SIR F J Jackson, G C M G , C B Governor of Uganda, has forwarded to the Colonial Office for presentation to Parliament a report on the Blue book of that Protectorate for the year 1913–14 The report states that the population in March, 1914, was estimated at 2 909 122, including 1017 Europeans, (761 males and 255 females) and 3651 Asiatics Amongst Europeans in 1913 there were 4 marriages, 25 births, and 9 deaths The health of European officials was, on the whole satisfactory The average number resident during the year was 289, amongst whom there were 485 cases of illness and no deaths as compared with 395 cases and 5 deaths during 1912 Of the admissions to hospital 155 were due to malaria, 4 to blackwater fever, and 101 to digestive diseases The number of officers invalided since 1905 (inclusive) has been 32, the principal causes of invaliding being nervous and mental diseases (9 cases) blackwater fever (5 cases) circulatory affections (5 cases) and general debility (6 cases) A large number of cases of illness amongst the general European population are treated at the central hospital of the Church Missionary Society at Mamirembe and statistics relating to these are not available At Government Hospitals there were 955 cases treated the principal disease being malaria (325 cases) and digestive diseases (196 cases) The special report on blackwater fever which relates to all hospitals shows 19 cases with 2 deaths as against 9 cases and 3 deaths in 1912 The number of blackwater fever cases has increased during the last five years, but this is believed to be due entirely to the rapid increase in the susceptible population which has outstripped the suitable housing accommodation It was noticed that amongst Government officials who as a body, are comparatively better situated as regards housing mosquito protection and general condition of living there was no increase of incidence and the death rate was lower.

Returns of births and deaths amongst natives are not obtainable but in certain districts approximate figures are supplied by the native chiefs In the districts concerned these show a birth rate of 24·93 per 1000 and a death rate of 22 41. The highest birth rate (44 6) occurs in Busoga district and the lowest (12 87) in Buganda district The diseases which call for special attention in the native population are plague sleeping sickness, tick fever, and leprosy Plague prevails mainly in the Eastern province, though it occurs also in Buganda and in the districts west of the Nile The number of deaths from this cause was 3734 in 1911 3100 in 1912, and 3292 in 1913 Of the latter total 2154 occurred in the Eastern Province There is no doubt that the disease has spread further afield in this Province, more particularly in the districts north of Lake Kioga It is probable that the establishment of the cotton industry which is instrumental in bringing very large numbers of natives together at the cotton markets has been partly responsible for this Moreover, it is believed that seed cotton is very well adapted to the harbouring of plague fleas, though there is some difference of opinion on this point Preventive measures adopted are inoculation of contacts and of the population in epidemic areas with Haffkine's serum and the destruction of rats for which a small reward is offered The movement of seed cotton is also regulated to minimise, as far as possible the danger from this source and the erection of cotton ginneries in the thickly populated areas within the limits of townships is not now permitted During 1913 there was no very serious local epidemic but at the time of writing the report the disease had appeared in epidemic form in the port of Jinja The population to be dealt with is spread over a very wide area and consists mainly of somewhat "raw" tribes amongst whom it is extremely difficult to ensure that even the most elementary precautions will be taken upon the appearance of an outbreak To combat this difficulty "native inspectors" have been appointed whose duty it is to report immediately the appearance of suspicious cases and to educate the village chiefs in the precautionary measures which can be taken by them

The decrease in the number of cases of sleeping sickness continues and is believed to be general though it is less marked in Busoga and in the districts surrounding Lakes George and Edward The deaths attributed to this disease in combined native and official returns numbered 703 in 1913 as compared with 932 in 1912. In 1905 the deaths in the Buganda province alone numbered 8003 Although the spread of this disease has been kept in check, this is entirely due to preventive measures, and the conditions

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication*

Harris, John Henry M D Durh M R C S L S A D P H Cantab Major R A M C (T) has been appointed Specialist in Surgery to the 4th Wessex Brigade R F.A, whilst temporarily stationed in India

McDade C E M D R U I, has been appointed Medical Officer of Health for the Borough of Battersea during the absence of Dr G Q Lennane

Oates G E M D Lond D P H Cantab, has been appointed Medical Officer of Health for Ilford

Scott W Macargur L A H Irel L M L P S has been appointed Medical Officer for the West Division of Liverpool

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Barrow in Furness North Lonsdale Hospital.—House Surgeon Salary £150 per annum with residence board and laundry

Bath Royal United Hospital.—Resident Medical Officer

Birkenhead Borough Hospital.—Senior House Surgeon Salary £120 per annum with board and laundry Also Junior House Surgeon Salary £100 per annum, with board and laundry

Birmingham General Dispensary—Resident Medical Officer unmarried Salary £250 per annum with apartments attendance &c

Birmingham and Midland Hospital for Skin and Urinary Diseases—Clinical Assistant for three months Salary at rate of 52 guineas per annum

Birmingham, Romsley Hill Sanatorium for Consumptives—Assistant Resident Medical Officer unmarried Salary £250 per annum with board, apartments and laundry

Birmingham Yardley Road Sanatorium and the Anti Tuberculosis Centre—Third Assistant Medical Officer Salary £200 per annum with board and residence

Bootle Borough Hospital.—Senior and Junior House Surgeons Salary £150 and £130 per annum respectively, with residence board and laundry

Bournemouth Royal Victoria and West Hants Hospital.—Three House Surgeons for six months Salary £100 per annum with board lodging and washing

Breconshire County Council.—Temporary Assistant School Medical Officer Salary at rate of £300 per annum

Bridgwater Hospital.—House Surgeon unmarried Salary at rate of £125 per annum with board lodging and washing

Bristol Education Committee.—Female Assistant School Medical Officer Salary £300 per annum

Bristol Royal Infirmary—Three House Surgeons Two House Physicians and One Obstetric and Ophthalmic House Surgeon Salary at rate of £120 per annum with board apartments and laundry

Burnley County Borough.—Temporary Assistant Medical Officer of Health Salary at rate of £400 per annum

Bury Infirmary—Senior House Surgeon and Junior House Surgeon Salary £175 and £150 per annum respectively with board residence and washing

Canterbury Chartham Asylum—Locum Tenens Assistant Medical Officer Salary £7 7s per week, with board, lodging and washing

Canterbury Mental Hospital.—Assistant Medical Officer unmarried Salary £250 per annum, with board, lodging washing and attendance

Chesterfield and North Derbyshire Hospital.—Second House Surgeon Salary £150 per annum, with board apartments and laundry

City of London Hospital for Diseases of the Chest Victoria Park E—Tuberculosis Officer Salary at rate of £400 per annum with lunch and dinner Also Gentleman to supply the place of Members of the Out-patient Staff of Physicians who are on service in H.M Forces

Croydon Borough Hospital.—Assistant Resident Medical Officer Salary £150 per annum with board residence and laundry

Derby Derbyshire Hospital for Sick Children—Female Resident Medical Officer for six months Salary £200 per annum

Dudley Guest Hospital.—Senior Resident Medical Officer Also Assistant House Surgeon for six months Salary £150 and £120 per annum respectively, with board residence, attendance, and washing

Dumfries Crichton Royal.—Temporary Assistant Physician unmarried Salary at rate of 5 guineas a week with apartments board laundry and attendance

Edinburgh Royal Edinburgh Asylum Morningside.—Assistant Medical Officer Salary £175 per annum with board rooms &c.

Halifax Royal Infirmary—Second and Third House Surgeons unmarried Salary £120 and £100 per annum respectively, with residence board and washing

Hampshire County Council.—Assistant County Medical Officer of Health Salary £300

Hull, Victoria Children's Hospital, Park-street.—Resident House Surgeon and Resident Assistant House Surgeon. Salary £60 and £50 per annum respectively with board and laundry Also Resident House Surgeon Salary £100 per annum with board and laundry

Kensington Dispensary and Children's Hospital.—Resident Medical Officer Salary £100 per annum with board, apartments, and washing

Kent County Council.—Tuberculosis Officer Salary at rate of £[illegible]00 per annum

Lancashire County Council Elswick Sanatorium near Kirkham.—Medical Superintendent Salary £300 per annum with board, apartments and washing

Liverpool, Township of Toxteth Park—District Medical Officer and Public Vaccinator for No 1 District of the Township Salary £500 per annum

London Lock Hospital, Harrow road W—House Surgeon for six months Salary at rate of £130 per annum with rooms full board and washing

Luton Borough of—Acting Medical Officer of Health. Salary at rate of £500 per annum

Macclesfield, Cheshire County Asylum, Parkside—Second Assistant Medical Officer Salary £300 per annum, with rooms, board washing, &c

Maidstone Kent County Asylum—Assistant Medical Officer unmarried. Salary £250 per annum, with board quarters, attendance washing &c.

Manchester Children's Hospital, Gartside-street—Assistant Medical Officer for Out-patient Department for six months. Salary £100 per annum

Manchester Children's Hospital Pendlebury—Resident Medical Officer, unmarried, for six months Salary at rate of £100 per annum

Manchester, County Asylum Prestwich—Assistant Medical Officer unmarried Salary £250 per annum with board, apartments, attendance and washing

Manchester Hospital for Consumption and Diseases of the Throat and Chest—Assistant Medical Officer and Pathologist Salary £60 per annum

Manchester Northern Hospital for Women and Children, Park place Cheetham Hill road.—House Surgeon. Salary £120 per annum with apartments and board

Middlesbrough North Ormesby Hospital.—House Surgeon Salary £150 per annum with board washing and attendance.

Mile End Old Town Infirmary—Two Assistant Medical Officers. Salary £275 per annum with board lodging and washing

Miller General Hospital for South East London, Greenwich-road, S E—Senior House Surgeon for six months Salary £100 per annum with board residence and laundry

Newport (Mon) Royal Gwent Hospital.—Resident Medical Officer Salary for first six months at rate of £100 per annum second six months £125 and third six months £150 with board, residence and laundry

Northampton County Borough Education Committee.—Dental Surgeon Salary £250 per annum

Northampton General Hospital.—House Surgeon Salary £120 per annum with apartments board washing, attendance, &c

Norwich Jenny Lind Hospital for Sick Children—Female Resident Medical Officer for six months Salary £150 per annum, with board apartments and laundry

Notts Education Committee.—Female Assistant School Medical Officer Salary £300 per annum

Oldham Royal Infirmary—Surgeon to Ear Nose, and Throat Department. Salary £50 per annum

Paddington Green Children's Hospital.—Female House Physician for six months Salary at rate of £80 per annum with board, residence and washing

Queen's Hospital for Children Hackney road Bethnal Green E—House Physician and House Surgeon for six months Salary £100 per annum with board residence and washing

Royal Hospital for Diseases of the Chest City road E.C—House Physician for six months Salary at rate of £75 per annum with board lodging and washing Also Tuberculosis Officer Salary £420 per annum

Royal National Orthopædic Hospital, 234 Great Portland street W—Resident House Surgeon. Salary £100 per annum all found.

Royal Waterloo Hospital for Children and Women S E—Senior and Junior Resident Medical Officers Salary at rate of £150 and £100 per annum respectively with board and washing

St Mary's Hospital for Women and Children Plaistow, E—Junior Resident Medical Officer for three months Salary at rate of £90 per annum, with board residence and laundry

Salford Royal Hospital.—Junior House Surgeon and Casualty House Surgeon for six months. Salary at rate of £100 per annum each with board and residence

Salisbury General Infirmary—House Surgeon and Assistant House Surgeon unmarried Salary £100 and £75 per annum respectively with apartments board lodging and washing

Salvation Army Mother's Hospital, Clapton N E—Female Resident Medical Officer

Scarborough Hospital and Dispensary—Senior and Junior House Surgeons Salary £100 and £80 per annum respectively, with board residence &c

Sheffield City Hospitals—Infectious Diseases and Tuberculosis Medical Officer Salary £250 per annum, with board lodging and washing

Sheffield Royal Hospital.—Assistant House Surgeon and Assistant House Physician

Sheffield Royal Infirmary—House Surgeon and Assistant House Physician Salary £100 per annum with board and residence Also Assistant House Surgeon and Assistant House Physician.

Sheffield University—Joseph Hunter Chair of Pathology

Shoreditch Infirmary Hoxton street, N—Senior Assistant Medical Officer Salary £280 per annum with board apartments and washing

Shrewsbury Royal Salop Infirmary—House Physician Salary at rate of £110 per annum, with board and apartments

South Shields Ingham Infirmary and South Shields and Westoe Dispensary—Junior House Surgeon Salary £115 per annum, with residence board and washing

South Shields Union—Medical Officer of Harton Institution, Infirmary and Cottage Homes at Cleadon Salary £350 per annum with rations apartments, and attendance. Also Assistant Medical Officer Salary £250 per annum, with rations apartments attendance and laundry

Stockport Union Stepping Hill Hospital.—Resident Assistant Medical Officer Salary £250 per annum, with apartments rations, The mean monthly temperature in 1913-14 was 78 5° F, the maximum being 80·5° in September and the minimum 73 3° in January The rainfall for the year was 82 3 in rain fell on 247 days and the maximum fall in 24 hours was 3·40 in on Oct. 24th Except in August and September, when the atmosphere is un comfortably hot, although not even in those months insalubrious the climate may be regarded as most healthy for both Europeans and coloured persons Malaria is hardly known while yellow fever has proved itself to be a disease of the past "St Vincent," adds the Administrator, "is one of the beauty spots of these West Indian Islands With its exquisite scenery, its lovely drives rides and walks its healthy climate, it cannot fail at the conclusion of the great and fearful war which at present envelopes Europe to attract to its shores some of the numerous tourists who in winter seek warmth and sunshine and an escape from the colder northern climes"

F G P—The Section in question of the Medical Act applies to New Brunswick, Nova Scotia, Prince Edward Island and Quebec Ontario has made a move which should lead to Canadian reciprocity as the example of Ontario will probably be followed by Manitoba and Western Canada It is an anomaly that we have not yet attained to general reciprocity with Canada and one that has proved inconvenient in supplementing our medical service with the Expeditionary Forces.

COMMUNICATIONS not noticed in our present issue will receive attention in our next

Medical Diary for the ensuing Week.

SOCIETIES

WEST LONDON MEDICO-CHIRURGICAL SOCIETY Society's Room West London Hospital Hammersmith road W

FRIDAY —8 P M Clinical Meeting Cases will be shown by Dr F S Palmer Mr McAdam Eccles Dr G Pernet Dr H Morton, Mr O Addison and Dr A Saunders

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

POST GRADUATE COLLEGE West London Hospital, Hammersmith road W

TUESDAY —2 P M Medical and Surgical Clinics, X Rays Mr Baldwin: Operations Dr Davis Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin.

WEDNESDAY —10 A.M Dr Saunders: Diseases of Children. Dr Davis: Operations of the Throat Nose and Ear 2 P M Medical and Surgical Clinics X Rays Mr Pardoe Operations Dr Simson: Diseases of Women Mr Gibb: Diseases of the Eye

THURSDAY —9 A.M Dr Bernstein: Bacterial Therapy Department. 2 P M Medical and Surgical Clinics. X Rays. Mr D Armour: Operation Mr B Harman Diseases of the Eye

FRIDAY —10 A M, Dr Simson: Gynæcological Operations 2 P M, Medical and Surgical Clinics. X Rays Mr Baldwin: Operations Dr Davis: Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin

SATURDAY —10 A M Dr Saunders Diseases of Children Dr Davis Operations of the Throat Nose and Ear Mr B Harman: Eye Operations 2 P M Medical and Surgical Clinics X Rays. Mr Pardoe Operations

THE THROAT HOSPITAL, Golden-square W

MONDAY —5 15 P M Special Demonstration of Selected Cases

THURSDAY —5 15 P M Clinical Lecture

For further particulars of the above Lectures &c see Advertisement Pages

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITOR, and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention should be given to this notice

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It is especially requested that early intelligence of local events having a medical interest or which it is desirable to bring under the notice of the profession may be sent direct to this office

Lectures original articles and reports should be written on one side of the paper only AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS. not used

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423 Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

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THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows —

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SOLE AGENTS FOR AMERICA—MESSRS WILLIAM WOOD AND CO, 51, Fifth Avenue, New York, U S A.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m by Steward's Instruments)

THE LANCET Office March 3[illegible] h 1915.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks
Mar 2[illegible]	29 [illegible]	S	[illegible]	7[illegible]	5[illegible]	53	50	51	Overcast
25	3 01	N E	0 10	[illegible]	47	[illegible]	45	46	Raining
[illegible]	[illegible] 93	N	[illegible]	63	[illegible]	[illegible]	35	[illegible]	Cloudy
[illegible]	29 75	N E	...	57	48	[illegible]	33	[illegible]	Fine
[illegible]	[illegible] 73	N E	[illegible]	[illegible]	41	33	32	3[illegible]	Cloudy
[illegible]	[illegible]	[illegible] E	...	[illegible]	41	23	31	32	Fine
3[illegible]	29 [illegible]	N E	...	43	35	31	31	33	Fine

The following magazines journals, &c. have been received — Public Health [illegible] British Journal of Dermatology [illegible] Pacific Medical Journal [illegible] Albany Medical Annals, Archives of [illegible] Birmingham Medical Review Journal of State Medicine [illegible] Journal of Nervous and Mental Diseases [illegible] Office International d'Hygiène Publique [illegible] British Review Annali [illegible] *favouring* its transmission are still in existence During the year Miss M Robertson, protozoologist, reported the presence in the Bunyoro district of a trypanosome not previously observed, resembling *morphologically* the T rhodesiense, which is responsible for this disease in *Rhodesia* and *Nyasaland* It is important to ascertain whether this trypanosome is, or is likely to become, pathogenic to man, and investigations on this point are now proceeding So far the balance of evidence is against the conclusion that this or any other form of trypanosome infecting cattle or game in this area is a new introduction, and there is no evidence that any human being has been infected with this trypanosome

The number of admissions to hospital on account of spirillum fever has decreased, and it is hoped that the *improvement* may be maintained The disease is transmitted by a tick which finds its habitat in mud walls and in old grass huts It is therefore especially common at wayside camps and markets where carriers gather in considerable numbers The increase in mechanical transport has, *no doubt, been partly responsible* for the decrease European travellers, by the exercise of a little care, can usually avoid contracting this disease An attempt was made to arrange for the segregation of lepers in special settlements under the supervision of the local *chiefs, but this has not proved* satisfactory, and the experiment of segregating them in their own villages is now being tried There is no reason to suppose that leprosy is on the increase Several local outbreaks of small pox occurred, but there was no serious epidemic The deaths from *this* cause numbered 637 *in* 1910, 1044 in 1911, 519 in 1912, and 337 in 1913 The number of vaccinations in 1913 was 4535 The best results were obtained with local lymph made in Nairobi

The laying out of townships and the type of building permissible *have formed the special object* of the sanitary authorities' attention The general policy adopted *is the reservation of a zone of* 300 yards between the business and residential quarters and of a *further* zone of *300* yards between the European and Asiatic quarters In new *townships* this is a fairly simple matter, but there is great difficulty in applying *the scheme to townships where long* leases have been granted and permanent buildings erected Anti malarial gangs are now employed at all the principal stations, who visit all compounds in search of empty tins and other receptacles likely to contain larvæ and examine *gutters* and *water barrels* and *report* the existence of breeding places of mosquitoes Much improvement has also been effected *by the planting of short* grass and removal of jungle and scrub near the stations

The average rainfall at 37 stations for the last 10 years is given as 43 21 inches In the year 1913 the highest rainfall was registered at Kumi, in the Teso district, and totalled 60·20 inches, *distributed over 100 days the wettest month* being May, when 12 49 inches fell The lowest rainfall was at Mbarara, which showed 20 93 inches falling on 85 days The rainfall at Entebbe was 56 43 inches registered in 149 days There is great local variation from year to year and considerable *difference* in the rainfall at stations not many miles apart The 'rainy seasons are by no means regular in their *occurrence, but,* generally speaking heavier rains may be expected to occur between the end of March and the middle of June, and again between the beginning of September and the end of November The highest temperature recorded during 1913 was 104° F at Masindi *in November, and the lowest* 47° F at Fort Portal in October The mean maximum for the year at Entebbe was 79 7° and the mean minimum 62 7°

CHEMICALS IN RUSSIA

RUSSIA has for a number of years chiefly made fuming sulphuric acid, sulphur salts, superphosphates, potash, alum, sulphate of soda (largely used in the glass works), muriatic acid, *nitric acid*, and on a small scale tin salt lead salt, nitrites, a number of earth and other colours, tartaric acid oxalic acid, tartar emetic, and prussiate of potash During the last 12 years Russia *has* also introduced the production of toluol trinitro toluol, nitro-*benzol* benzol, liquid oxygen, carbide of calcium, lactic acid, acetone, iodides of potassium and sodium, *bromides of potassium* and sodium, other iodine and bromine preparations peroxide of hydrogen, chloroform, a series of new aniline dyes, *chemically pure* sulphuric muriatic and nitric acids, sulphide of carbon, gold and platinum salts, antimony salts, and salicylic acid The Russian *chemical* industry is very irregularly distributed over the country, but the chief centres are Petrograd Moscow, Odessa and *some of the* Western Provinces Sulphur is found in the south-east (Caucasus) and the north east (Ural) *Phosphates are plentiful* in the south west, and are in great demand for manures The Russian Department of Agriculture has allowed the importation duty free of certain chemicals to help farmers in the *eradication of field pests, namely* Schweinfurth green, blue copperas, bird lime, and bisulphide of carbon Aniline oil *and salts have been* produced, but the aniline dye industry has progressed very slowly Soap and *Russian* soda products are much dearer than in Germany and England

A WARNING

Messrs. E and S Livingstone of Edinburgh inform us that *they have had complaints that* medical men in Kent and Surrey have been induced by a man calling himself Johnstone to order and pay for one or more volumes *of a* book entitled "International Medicine," or "International Clinics," which he stated was published by "Livingston and Co ," of Teviot-*place Edinburgh Messrs. Livingstone* have put the matter in the hands of the police, and write *to warn medical* men *that* they employ no canvassers and do not publish a work with such a title The canvasser is described as tall, thin, fair, with moustache, about 45 or 50 years of age He carried a bag containing *printed* pages purporting to be samples and was shabbily dressed

INFLUENZAL LARYNGITIS, MORBILLAR BRONCHO PNEUMONIA, VERMIN IN THE TRENCHES AND ELSEWHERE

IT is both *curious* and *instructive to note how old methods* arrive again as novelties A lay correspondent writing *from Manchester concerning* the treatment of influenzal laryngitis gives us as a result of his own personal experience that "a gargle, consisting of one drop of iodine in a wineglass of water, swallowed after gargling, three times a day, has cured the above complaint in a couple *of days* " A *gargarisma iodi used to be contained* in many hospital pharmacopœias and possibly is now A sherry coloured solution of tincture of iodine in water was frequently recommended, both as a dressing and as a gargle, the latter to be swallowed after gargling One drop of the tincture is a rather small dose—two or three would perhaps be better—in a wineglassful of water, *but we are quite prepared to believe* that the treatment mentioned would prove of service.—Mr R Bazett also writes to call our attention to "an obvious line of treatment" which he has always used in measles, a disease now more or less epidemic *in London and elsewhere* The *method* is to paint the tonsils with a mixture of 5 to 10 minims of liquid carbolic acid with the same *quantity of* the old tinct iodi in half an ounce of glycerine He has never had broncho pneumonia supervene in a case in which this treatment has been used from the start The treatment has had considerable advocacy already —Finally, Mr *John Frederick Briscoe* calls attention to the danger of toxic effects attendant on the resuscitated practice of powdering the clothing with mercurial *salts as a* preventive of vermin, not only in the trenches but anywhere He considers sulphur preferable as being well *tried* and *of* known utility against the epizoa (THE LANCET, Feb 20th, p 416), useful also against rheumatism, and when mixed with grease *for scabies*, *while for pediculi capitis* the white precipitate ointment is still the best

HEALTH AND CLIMATE OF ST VINCENT

THE Hon C Gideon Murray (Administrator), in his report *for the year* 1913–14, states that the population of the island of St Vincent is now estimated at 46,605 The births during the year numbered 1766, 61 32 *per cent* of which were illegitimate, and the deaths totalled 801 The causes of death were —General diseases (including syphilis 95, tubercle, 51, tetanus, 10, malarial fever 1, dysentery, 11), 211, diseases of nervous system, 32, of circulatory system, 24, of respiratory system, 51, and of digestive system 156, parasites, 20, age, 88, stillborn, 111, other diseases, 108 During the year there were 842 cases treated in the Colonial Hospital, the death rate being 3 92 per cent of the total cases The medical *officer* is greatly assisted in his work by the presence of an efficient European nurse matron, selected by the Colonial *Nursing Association* There were 9 inmates in the leper asylum on March 31st, 1914 Under the *Public* Health Ordinance, 1910, provision is made for the *compulsory* segregation of pauper lepers The colony's paupers are housed in the old military buildings at Fort Charlotte. *They* numbered at the close of the year 79 Chronic tertiary syphilis accounts for the vast majority of cases to *whom* this *institution offers* asylum for the closing stages of their life In the towns the authorities are realising more and more the importance *of stricter* sanitation and are taking steps accordingly In the villages, however, sanitary matters are still on a *primitive basis*, although the Government, through their district sanitary and medical officers, spare no pains to impress upon *the population* generally *the* necessity for care in this direction.

An Address

ON

WOUND INFECTIONS

AND ON

SOME NEW METHODS FOR THE STUDY OF THE VARIOUS FACTORS WHICH COME INTO CONSIDERATION IN THEIR TREATMENT

Delivered before the Royal Society of Medicine on March 30th,

By COLONEL SIR A. E. WRIGHT, M.D., F.R.S.,

A CONSULTING PHYSICIAN TO THE EXPEDITIONARY FORCE.

(From the Research Laboratory attached to No. 13 General Hospital, Boulogne-sur-Mer.)

THERE are a number of quite elementary problems which must be solved before we can arrive at any effective treatment of wound infections. A very brief consideration of the facts will bring us face to face with the questions to which we have to find an answer.

EVOLUTION OF WOUND INFECTIONS.

In this war practically every wound is heavily infected. The chain of cause and consequence seems to be as follows. The clothes and skin of the soldier on war service become contaminated with all manner of filth containing pathogenic organisms and spores; the projectile takes these with it and it implants them far beyond the reach of any prophylactic applications of antiseptics.

A cultivation medium is now provided by the blood and lymph which are poured out into the track of the projectile; and we find in the wounds—I have in view here wounds examined immediately after arrival at the front—a mixed infection of a streptococcus with microbes derived from the fæces. This fæcal infection is a special outstanding feature in this war.

Among many species of intestinal microbes which have been found in wounds two have a quite special importance. One is the *gas phlegmon bacillus*, or *Bacillus aerogenes capsulatus* of Welch—a large Gram-staining anaerobic and actively gas-forming microbe. It is found both in infiltrated superficial wounds and in deep wounds, and is particularly abundant in the frothy and offensive fæcal-looking discharges which anaerobic wounds furnish. The other is the tetanus bacillus. It is more rarely encountered and is also much less abundant in the discharges. Sometimes, however, it may show up in every field of the microscope.

The presence of the streptococcus and these two fæcal microbes makes the first period of the wound infection—the period of imprisoned discharges—a specially critical time for the patient. During this [illegible] streptococcus may invade the tissues and set up a cellulitis or more rarely erysipelas. Or the tetanus bacillus may find opportunity to grow [illegible] form its poison and induce tetanus. Or the bacillus of Welch may make its way into the blood and set up a gas phlegmon in the region round [illegible] the wound and an obstructive gangrene in [illegible] portion of the limb. Or again the bacillus of Welch and the streptococcus may join [illegible] in conjunction produce the gas [illegible]

[illegible] a free outflow has been provided and [illegible] have been established in the wound, its bacterial flora changes. The ordinary pyogenic infection which has, up to this, been in abeyance, now gains the upper hand, and instead of an "*infection of the imprisoned discharges*" or, as the case may be, "*an infection of tissues*," we have now an "*infection of the granulating wound surfaces, and of the flowing discharges*." The chief bacterial agents here at work are the streptococcus and staphylococcus, and bacillus proteus.

This pyogenic infection may, after lapse of time, subside, the wound healing up when this occurs; or the mixed infection may narrow itself down to a streptococcic infection and become chronic, the wound in this case remaining open indefinitely in the form of a discharging sinus. Or lastly, when there is an obstructed outflow the infection may go from bad to worse, until the patient succumbs to continued suppuration and septicæmia.

SOME FUNDAMENTAL CONSIDERATIONS IN REGARD TO TREATMENT.

Those are in very brief summary the facts with regard to the evolution of wound infections, and I would venture, in passing on to discuss with you their treatment, to remind you that the ideal we ought to approximate to is the healing of the wounds by *first intention*—that is without sensible interference by bacterial infection, and that we are so far from the attainment of that ideal that nearly all our wounded are suffering from bacterial infections, that very many are ill of these infections, and that not a few are, through these, in danger of their lives.

We have at disposal for the treatment of these wound infections three different therapeutic measures. Let me enumerate them to you in the order in which they would naturally suggest themselves to you.

First in that serial order would come *treatment by antiseptics*. After this would come what I would propose to call *treatment by physiological methods*. I mean procedures such as the opening and draining of the wound—which bring the antibacterial powers of the blood to bear on the infecting microbes. And, lastly, would come the reinforcement of the antibacterial powers of the blood—i.e., *treatment by vaccine therapy* and similar methods. I believe it is really beyond all question that of these three the second is beyond all comparison the most important, and I would submit that, all loud talk about antiseptic treatment notwithstanding, this is at best an ancillary method of treatment. And, of course, the same applies also to treatment by vaccines.

Let me also here suggest to you another quite fundamental consideration. It is this. It will be clear that we cannot apply physiological treatment aright, nor can we apply any antiseptic or vaccine to best advantage in wound infections, unless we first understand the physiological processes which go on in the wound. We do not understand these yet even in outline.

It will therefore be necessary to address ourselves to the task of discovering what goes on in the wound and of following out its biological evolution. And the only way of doing this will be to formulate to ourselves in clear terms the questions which want answers, then—for merely looking at the wound will not help—considering how to set to work to get our answers, and finally taking cognisance of the results which the experimental methods which I am about to describe to you have already yielded.

Communications, Letters, &c, have been received from—

A.—Messrs Allen and Hanburys, Lond., Dr Armly Ashkenny Basingstoke Dr Henry J Alford Taunton

B.—British Drug Houses Lond, Bishopstone House, Bedford, Medical Superintendent of, Messrs Butterworth and Co, Lond; Burnley Corporation Clerk to the Bread and Food Reform League Lond Belgium Town Planning Committee, Lond Mr H. Bazett, Lond. Dr W Cecil Bosanquet, Lond Messrs W H Bailey and Son Lond. Dr D C Balfour Rochester U S.A. British Thomson Houston Co, Lond. Mr H *Butterfield Northampton* British Red Cross Society, Lond Secretary of, Bristol Education Committee Secretary of Bury Infirmary, Secretary of Messrs Burroughs Wellcome and Co *Lond.* Birmingham Education *Committee*, Secretary of, Dr D Bower Bedford Messrs Bourner, Bullock, Andrew and Co Lond.; Birmingham *General* Hospital House Governor of Sir Lauder Brunton, Bart. Lond British Hospitals Association, Lond. Hon. Secretary of Mr J Brown Lond. British Dentists' Hospital, Lond.

C—Mr J Cæsar, Ilchester; Crichton Royal Dumfries, Medical Superintendent of Cheshire County Asylum Macclesfield Clerk to the Countess of Dufferin's Fund, Central Committee, Delhi Assistant Secretary of Mr W J Cant, Lincoln Mr J F Cunningham Lond.; Cornwall County Council Truro, Acting County Medical Officer of Major A. Cochrane I M.S Lotni, Bhowali Captain T J Crean R.A.M.C, Lond Chesterfield Hospital, Secretary of Mr J Jackson Clarke, Lond.

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E.—Dr G N Edmondson Newcastle-under Lyme E G H H, Egypt, Ministry of Interior, Department of Public Health, Cairo Dr N Erian Cairo

F—Messrs Fairchild Bros and Foster Lond. *Dr J M Fortescue-Brickdale* Clifton Mr George Foy, Dublin; Dr Leonard Findlay, Glasgow

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H—Mr H C *Hocken* Carmarthen Dr Campbell Highet, Worcester Hulme *Dispensary*, Manchester, Secretary of Dr G W O Hollist, Windsor Messrs C J Hewlett and Son Lond. H W

I.—Dr S T Irwin, Newcastle, Co Down.

J—Mr W Jones, Liverpool *Jenny Lind Infirmary* for Children, *Norwich* Secretary of Mr W Jacob, Lond.

K.—Dr W Kennedy Calcutta Messrs H S King and Co, Lond Messrs. C Knight and Co., Lond.

L.—Mr H K. Lewis, Lond Luton Borough, Town Clerk of *Dr C W B Littlejohn Lond* Mr John Lomax Lond. Messrs E and S Livingstone Edinburgh *Local* Government Board Lond, *Secretary of Mr J Ernest Lane*, Lond. Messrs Lee and Nightingale, Liverpool.

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N—Notts County Council Nottingham Clerk to the; Captain S Neave R.A M C Ingatestone New Saughton Hall Polton Medical Superintendent of Norfolk and Norwich Hospital, Secretary of

O—Oldham Royal Infirmary Secretary of, Ophthalmological Society Lond Hon. Secretary of Sir Lambert Ormsby *Dublin* Messrs Oppenheimer Son, and Co, Lond.

P—Mr W H. Plows Lond; Paris Lyons and Mediterranean Railway *Lond* Pharmaceutical Society of Great Britain, Lond., Secretary of

R.—Sir Ronald Ross *Lond.* Mr F Robertson Nuneaton *Dr J D* Rolleston, *Lond*; Röntgen Society, Lond.; Royal United *Hospital*, Bath, Secretary of.

S.—Mr F B Smith Harrogate Messrs. G Street and Co, Lond., Dr C P A. Stranaghan Folkestone *Mrs Scott*, Selkirk Messrs W H Smith and Son Birmingham St Andrew's Hospital Northampton, Clerk to the *St Paul Medical Journal* St Paul, Manager of Society for the Study *of* Inebriety Lond Hon *Secretary of* Mr Ernest H Shaw Lond. School of Physic in Ireland Dublin Registrar of Dr P A. Hjalmar Sellden Tranos Sweden Mr E A. Shirvell Padstow; Lieutenant A. Stokes R.A.M.C; Professor W Stirling Paris; Dr A. J Simey, Rugby Dr H E Symes Thompson, Lond. Société Européenne de Publicité Paris Fleet-Surgeon H W B Shewell, R.N Messrs. Saward Baker and *Co* Lond. Salvation Army Lond. Standish with Langtree Urban District Council, Medical Officer of Health of

T—Mr Thomas Thatcher Clifton Major Sir Francis Trippel, Lond., *Dr* Leslie Thorne Thorne Lond., Dr G Grey Turner Newcastle upon Tyne.

U—University of Durham College of Medicine Newcastle-upon Tyne Secretary of Examinations of.

V—Messrs J W Vickers and Co., Lond Victoria Hospital, Burnley, Secretary of.

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Letters, each with enclosure, are also acknowledged from—

A.—Mr E Arnold, Lond.

B—Mr H. Beattie, Banbury; Mr G H. Barton Market Rasen *Dr L. J J* Barnes Erith Mrs Butterly Liverpool Blackburn and East Lancashire Infirmary *Secretary of*

C—Dr C Clarke Lond.; County Asylum Rainhill, Clerk to the Dr A. Chandbury Chapia India *Chester Courant*, Manager of Canterbury Mental Hospital, Clerk to the.

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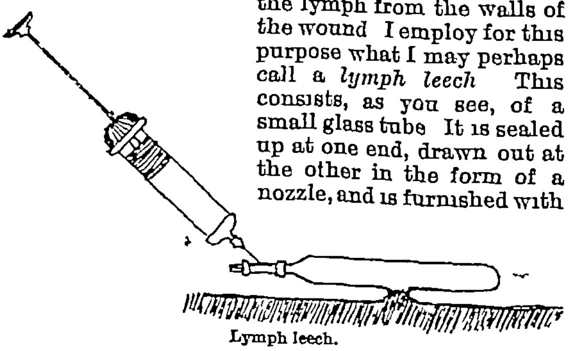
microbes appear to be inhibited in undiluted normal serum, and when they put in an appearance it is only after fairly heavy sowings with pus, and comparatively late.

Out of these facts would come what we shall presently see to be a practically important classification of pyogenic microbes—a classification into, on the one hand, *Serophytes*, and, on the other, *Sero-saprophytes*. The serophytes would be those which, presumably because they find their foodstuffs ready made in the blood fluids, are at home there, and can in the absence of phagocytes grow and multiply there without restraint, or practically without restraint.[1] The sero-saprophytes would be those which cannot grow and multiply in the blood fluids until a change which we may, pending nearer investigation, call simply a degenerative change, has passed over those fluids.

What holds true of the blood fluids themselves might perhaps justifiably be assumed to hold true also of the lymph which pours into the wound. None the less, it will be well specially to investigate this point.

2. *Does the lymph which pours into the wound provide a favourable nutrient medium for the microbes which have been growing in that wound?*

FIG 4



Lymph leech.

To pose this question is already to go a long way towards getting an answer to it. For we can, by the aid of a very simple device, obtain the lymph from the walls of the wound. I employ for this purpose what I may perhaps call a *lymph leech*. This consists, as you see, of a small glass tube. It is sealed up at one end, drawn out at the other in the form of a nozzle, and is furnished with a lateral mouth with a raised rim, the whole being very easily made out of a piece of glass tubing or small test tube. To the nozzle we fit a piece of fairly thick walled rubber tubing, and this is blocked at the end with a piece of glass rod. When we want to obtain the exudate from a wound we bring down the lateral opening of the lymph leech upon a granulating surface, and then, transfixing the rubber tube with the needle of a hypodermic syringe, we draw out the air and make a negative pressure. It will be appreciated that the lymph leech is in principle merely a small cupping glass, and that it will, by means of the vacuum, be established in it, hold on tight for whatever period may intervene between dressing and dressing, and furnish an exudate free from all contamination with residual pus left behind in the wound. We can now proceed to compare the fluid in the cavity of the leech with the fluid in the wound outside, or, in connexion with work on antiseptics, to compare the contents of leeches applied respectively to treated and untreated surfaces in the same wound.

And lymph leeches can also be put to other uses. We can introduce for this purpose with a syringe any fluid we may select into the lymph leech, investigate the effect that fluid exercises upon transudation and emigration. Again, where the nature of a deep lying infection of a mucous or other surface remains uncertain the application of a lymph leech might clear up the difficulty. We can also, in the case where we are testing the effect of a vaccine upon a wound, take to our aid the lymph leech. For the effect of a vaccine would probably show itself in the exudate in the cavity of the leech long before it would manifest itself in the outside wound. And, lastly, by the application of a lymph leech to the site of inoculation might perhaps help to resolve the problem as to whether or no protective substances are then developed.

But it will be realised that for us at the moment that which is of chief interest is the comparison of the fluid in the cavity of the leech with the fluid in the wound outside.

When, after washing out a heavily infected wound with an antiseptic or simple saline solution, we apply a lymph leech to the walls and then at the next dressing compare the contents of the lymph leech with the fluid outside, we think at first that there must be some mistake. Outside we have an opaque exudate presenting all the ordinary physical characters of pus, containing leucocytes in all stages of degeneration, and swarming with all manner of pyogenic organisms. Inside we have a transparent and slightly blood stained exudate containing streptococci in practically pure culture, and in addition a few leucocytes, all of which are actively phagocytic. Except in this latter respect, we have, in fact, identically the same result as when we made our thin implantations of pus into normal serum.

The problem now stares us in the face—What is it that makes all this difference between the contents of the lymph leech and the contents of the wound? How has the lymph, which gives in the cavity of the lymph leech a culture of streptococcus, been converted in the wound outside into a fluid which is ideally favourable to the growth of a great number of different species of micro-organisms?

3. *What is the cause of that "corruption of the lymph" which converts it into a favourable nutrient medium for sero-saprophytic microbes?*

The proper way to go to work upon a problem of this kind is to keep it unremittingly before the mind. For then some hypothesis will in the end suggest itself. That found, there will invariably come to notice a certain number of accepted data which the hypothesis will fail to explain. These must then be carefully re-examined to see whether they will stand fast and discredit the hypothesis, or whether they also will come in and support it. And finally, before launching our theory, we ought to think out all its consequences, and then take each of these and verify it.

At any other time one would wish, before promulgating a far reaching hypothesis, to have verified it at every point. But we have on our hands in Europe, I suppose, already 2 or more millions of wound infections, and every other consideration must give way to that of accelerating the researches, which we must look to to guide us in treating these infections.

I will, therefore, before completing its verification, venture to put before you what is, I believe, the solution of the problem of the corruption of the lymph in the wound.

---

[1] I introduce this qualifying clause because I have on several occasions found the serum of the infected patient to give cultures of streptococcus with a planting of his pus much smaller than that which was required to give a culture in the serum of a normal man.

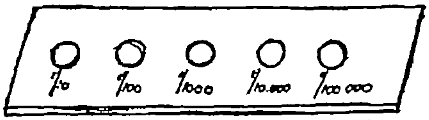
Our first question can be formulated thus

1 *Can the microbes which are found in wound infections live and multiply in the unaltered blood fluids ?*

In other words, if I take pyogenic microbes from the wound and implant these into the normal undiluted serum, will this give me a satisfactory amount of growth ? If we are going to carry out this experiment, and to carry it out repeatedly, and deal with a number of different bloods, and if we are going to cultivate directly from the pus, we shall evidently have to work in capillary tubes with very minute quantities of pus and very small quantities of undiluted serum The technique which I have arrived at for fulfilling these requirements is a very simple one I may call that technique the *wet wall method*

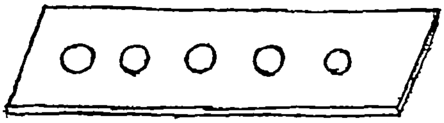
Method of Making Cultivations of Pus in Serum

FIG 1 (Slide I)



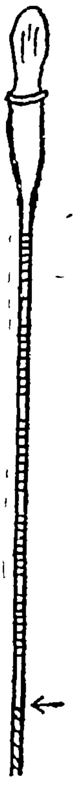
Graduated dilutions of pus arranged on slide

FIG 1 (Slide II)



Volumes of serum implanted with the above dilutions of pus.

FIG 2

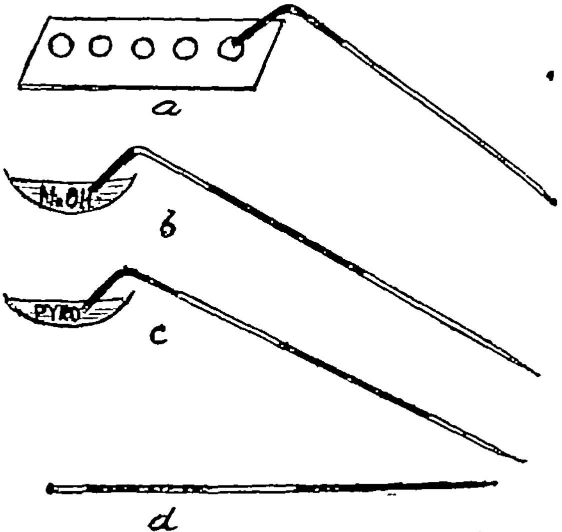


Capillary pipette filled in with five unit volumes of serum, and one unit volume of the last dilution of pus

The first step in the procedure to make by the technique I described in my book on "Technique," a graduated series of dilutions of pus, using for this purpose any indifferent diluting fluid, and arranging the successive dilutions on a slide in the form of a series of drops. I then take in hand a clean capillary pipette fitted with a teat make a mark upon the stem, and then draw up into it a series of unit volumes of serum, one unit volume of serum for every dilution of the pus This done, I commence with the highest of these dilutions—that is, the one containing the smallest number of microbes—and draw it up into the stem of the pipette, stopping off exactly at the fiducial mark I then expel this column, leaving, of course, as I do so the walls wet with a quantum of microbial suspension—a quantum which would correspond roughly to that which would be left on the outside of a platinum wire of similar stoutness dipped into the suspension I now expel from my capillary tube my first volume of serum—this in passing over the wet wall will take up its charge of microbes—and I receive this as it issues on to a clean slide I repeat these manipulations with the next lower dilution of pus and the next unit volume of serum, and so on, until I have implanted my series of volumes of serum with my series of bacterial dilutions At the end I find myself with a series of drops of serum, containing graduated charges of microbes, ranged in order upon a slide, and I have in my hand a pipette which is contaminated up to the point indicated by my fiducial mark I get rid of this contaminated segment of my capillary stem by resecting this just above the fiducial mark and I now proceed to draw up into my pipette, separating off by bubbles of air, the whole series of drops of serum, beginning with that implanted with the fewest microbes After sealing up the distal end of the pipette, and closing the butt end by bringing it down upon a bed of plasticine, the pipette placed in the incubator After an interval of 6 to hours it is taken out, and the series of unit volumes are now, for purposes of microscopic examination or culture, expelled from the pipette in the order in which they have been taken up—that is, in succession from the lightest to the heaviest implanted. This is effected by cutting through the proximal end of the stem of the pipette and then the distal end, and afterwards luting the latter airtight into the truncated end of the pipette The luting is done by rolling a little plasticine into a ball, pressing the capillary stem into this pellet as we hold it between finger and thumb, doubling over the plasticine round the stem, and then invaginating the neck of the pipette into the plastic mass We can now with a teat expel our series of unit volumes of serum on to a slide, obtaining them in the serial order which avoids the contamination of the lighter implanted with the heavier implanted

Method of Making Anaerobic Cultures in Capillary Tubes

FIG 3



Method for making anaerobic cultures in capillary tubes

When we desire to make anaerobic serum cultures we do not employ the capillary pipette used for the original implanting operations as a receptacle for our series of serum cultures, but employ instead a separate capillary cultivation tube for each unit volume of serum The capillary cultivation tubes here in question are made as follows We take a portion of capillary stem, say some 8 cm long, draw it out at one end in the flame of a by pass into a hair fine tube and then break it off leaving a certain length of throttle attached. We now introduce the other end of the capillary stem into the flame of our Bunsen, and let gravity bend it round into a syphoning curve

Taking one of these capillary cultivation tubes we bring down the syphon end upon our drop of serum, and let this run in, afterwards tilting the tube so as to take in, as a rear guard, a good sized dividing bubble of air This done we fill into our tube, by syphonage, from watch glasses placed conveniently to hand first a small quantity of pyrogallic acid, and then without dividing off, a small quantity of caustic soda. We now further incline the tube, and let the contained fluids gravitate down towards the distal end until the serum begins to enter the throttle At that point we arrest it by sealing the tip, and we finally also seal up the butt end, leaving the mixed pyrogallic acid and caustic soda to do their work, and absorb all the oxygen from the dividing bubble air

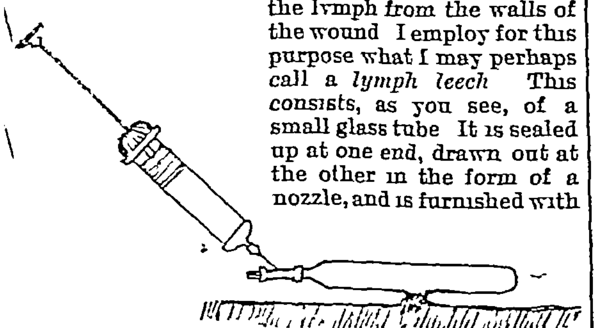
Serum cultures made by this method furnish a very striking and uniform result We obtain in the cultures implanted with the higher dilutions of the pus a pure culture of the streptococcus, and in the cultures more heavily implanted with the pus the streptococcus mixed with a certain number of other microbes, in particular a few staphylococci and an anaerobic wisp like diphtheroid bacillus, which often is abundant in pus, being found both intracellularly and extracellularly All the other pyogenic microbes appear to be inhibited in undiluted normal serum, and when they put in an appear nce it is only after fairly heavy sowings with pus, nd comparatively late

Out of these facts would come what we shall presently see to be a practically important classifi ion of pyogenic microbes—a classification into, on he one hand, *Serophytes*, and, on the other, *Sero aprophytes* The serophytes would be those which, presumably because they find their foodstuffs ready made in the blood fluids, are at home there, and an in the absence of phagocytes grow and multiply here without restraint, or practically with estraint[1] The sero saprophytes would be those which cannot grow and multiply in the blood fluids until a change which we may, pending nearer nvestigation, call simply a degenerative change, has passed over those fluids

What holds true of the blood fluids themselves might perhaps justifiably be assumed to hold true also of the lymph which pours into the wound None the less, it will be well specially to investigate this point

2 *Does the lymph which pours into the wound provide a favourable nutrient medium for the microbes which have been growing in that wound ?*

FIG 4



Lymph leech.

To pose this question is already to go a long way towards getting an answer to it For we can, by the aid of a very simple device, obtain the lymph from the walls of the wound I employ for this purpose what I may perhaps call a *lymph leech* This consists, as you see, of a small glass tube It is sealed up at one end, drawn out at the other in the form of a nozzle, and is furnished with a lateral mouth with a raised rim, the whole being very easily made out of a piece of glass tubing or small test tube To the nozzle we fit a piece of fairly thick walled rubber tubing, and this is blocked at the end with a piece of glass rod When we want to obtain the exudate from a wound we bring down the lateral opening of the lymph leech upon a granulating surface, and then, transfixing the rubber tube with the needle of a hypodermic syringe, we draw out the air and make a negative pressure It will be appreciated that the lymph leech is in principle merely a small cupping glass, and that it will, by means of the vacuum, be estab lished in it, hold on tight for whatever period may intervene between dressing and dressing, and furnish an exudate free from all contamination with residual pus left behind in the wound We can now proceed to compare the fluid in the cavity of the leech with the fluid in the wound out side, or, in connexion with work on antiseptics, to compare the contents of leeches applied respec tively to treated and untreated surfaces in the same wound

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3 *What is the cause of that "corruption of the lymph ' which converts it into a favourable nutrient medium for sero saprophytic microbes ?*

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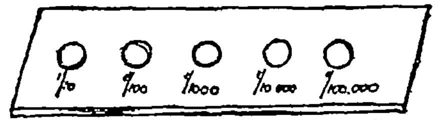
FIG 1 (Slide I)

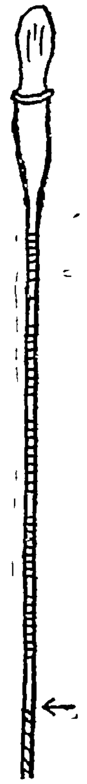


Graduated dilutions of pus arranged on slide

FIG 1 (Slide II)

Volumes of serum implanted with the above dilutions of pus

FIG 2

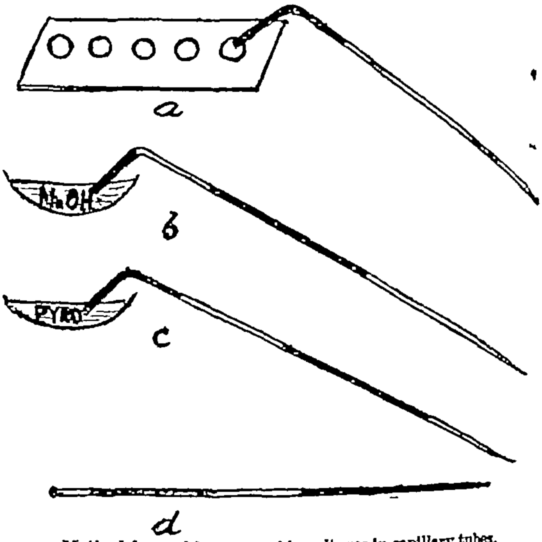


Capillary pipette filled in with five unit volumes of serum and one unit volume of the last dilution of pus

Method of Making Anaerobic Cultures in Capillary Tubes

When we desire to make anaerobic serum cultures we do not employ the capillary pipette used for the original implanting operations as a receptacle for our series of serum cultures, but employ instead a separate capillary cultivation tube for each unit volume of serum The capillary cultivation tubes here in question are made as follows We take a portion of capillary stem, say *some 8 cm* long, draw it out at one end in the flame of a by pass into a hair fine tube, and then break it off, leaving a certain length of throttle attached. We now introduce the other end of the capillary *stem* into the flame of our Bunsen, and let gravity bend it round into a syphoning curve

FIG 3



Method for making anaerobic cultures in capillary tubes.

Taking one of these capillary cultivation tubes we bring down the syphon end upon our drop of serum, and let this run in, afterwards tilting the tube so as to take in as a rear guard, a good sized dividing bubble of air This done, we fill into our tube, by syphonage, *from* watch glasses placed conveniently to hand, first a small quantity of pyrogallic acid, and then without dividing off, a small quantity of caustic soda We now further incline the tube, and let the contained fluids gravitate down towards the distal end until the serum begins to enter the *throttle* At that point we arrest it by sealing the tip, and we finally also seal up the butt end, leaving the mixed pyrogallic acid and caustic soda to do their work, and absorb all the oxygen from the dividing bubble air

Serum cultures made by this method furnish a very striking and uniform result We obtain in the cultures implanted with the higher dilutions of the pus a pure culture of the streptococcus, and in the cultures more heavily implanted with the pus the streptococcus mixed with a certain number of other microbes, in particular a few staphylococci and an anaerobic wisp like diphtheroid bacillus, which often is abundant in pus, being found both intracellularly and extracellularly All the other pyogenic perhaps look in this direction for an explanation of the non specific benefit which has been observed to follow upon the inoculation of bacterial vaccines It is clearly not impossible that the inoculation of a bacterial vaccine might contribute both to active and passive defence—to the active defence of the body against a particular microbe by calling forth a production of specific bacteriotropic substances and to the general passive defence of the organism by calling forth a production of antitrypsin And these two forms of immunising response would not necessarily be linked together The production of specific bacteriotropic substances would no doubt depend upon the quantum of bacterial antigen incorporated, while the production of antitrypsin might perhaps depend upon the breaking down of phagocytes and the liberation of their trypsin.

(*To be continued*)

ROYAL MEDICAL BENEVOLENT FUND —At the last meeting of the committee 28 cases were considered and grants amounting to £252 were voted to 22 of the applicants An annuity of £26 was also voted to one applicant The following is a summary of a portion of the cases relieved —

Daughter aged 54 of M.R C S Eng who died in 1893 and practised at Manchester Was able to earn her living as a clerk until her health broke down. Only income a pension of £15 per annum from her old employers. The Manchester branch of the Guild have assisted with clothes. Voted £14 in 13 instalments.—Widow aged 55 of L.R.C S Edin. who practised at Dulwich Husband's long illness absorbed all savings One daughter who is being educated by a relative Applicant suffers from varicose veins and quite unable to work. Voted £10 and referred to the Guild.—L.R.C.P & S Edin aged 65 who practised at Walthamstow suffering from aphasia and quite unable to do anything Until recently acted as locum tenent Married no children. Voted £16 in 12 instalments —Widow aged 61 of M.D McGill Univ who practised at Waterloo Liverpool and had a very long illness Five children ages from 30 to 38. Two sons away from home unable to help and only income from a daughter who is a clerk earning 30s per week. Other two daughters invalids and require constant nursing Voted £18 in 12 instalments and referred to the Guild —Daughter aged 49 of M.D Glasg who practised at Bawtry Has managed to earn a bare living by taking boarders but has had none since last autumn owing to the war and is now in great distress Voted £10 in two instalments and recommended to apply to the Local War Relief Fund.—M.B., C M Edin who practised at Kings Heath, Birmingham Is married with one daughter aged 15 Applicant's health and his wife's very unsatisfactory Has lost nearly all his ordinary and panel patients since the war and is in great financial straits Voted £10 and recommended to apply to the local branch of the Prince of Wales Fund.—Daughter aged 38 of M R C S Eng who practised in London. Has earned her own living as governess until health broke down and an operation was necessary a few months ago Hopes when strong again to resume her work. Voted £5 to take a holiday.—Widow aged 45 of M B C M. Edin who practised at Glasgow Has seven children ages 6 to 25. Husband was ill for two years before his death and was unable to provide for his family Son who used to help to keep the home recently disappeared Earns a little by taking in lodgers and has £12 a year from another charity Previous relief £52. Voted £20 in 12 instalments —Widow aged 60 of L.R C.P Edin who practised at Dumfries Has two sons both of whom have joined the army and two daughters whose total earnings are 18s per week. Previous help six times £50. Voted £12 in 12 instalments —Widow aged 42, of M.D Aberd. who practised in South Africa. Applicant is suffering from abdominal tuberculosis Has an annuity of £15 from a charity for incurables total income only £18. Has two children ages 14 and 15 both of whom are kept by relatives Relieved three times £57 Voted £12 in 12 instalments —Daughter aged 66 of M.R C S Eng who practised at Tonbridge Only income derived from one boarder and £10 per year from a friend and finds it impossible to make ends meet Previous relief eight times £95 Voted £12 in 12 instalments —L S A. Lond aged 82 who practised at West Kensington and is now blind, and son who lives with him also nearly blind Other son only able to help slightly Has a pension of £20 from another charity also old age pension Previous relief three times £20 Voted £12 in 12 instalments.—Daughter aged 37 of L.R.C.P Edin who practised in co Cavan Earned her living and was able to assist her mother and invalid sister until she had recently to undergo an abdominal operation Previous relief some years ago £10 Voted £10 in one instalment for her convalescence.—Daughter aged 63 of M.R C S Eng who practised at Bath Health very bad and the little capital left by her father spent in endeavouring to get well Only income an annuity of £31 Relieved four times £42 Voted £5.—Daughter aged 51 of M.R.C S Eng who practised at Holland Park Health very bad and unable to work Income only £15 per year and a little assistance from friends Relieved four times £37 Voted £12 in 12 instalments —Daughter aged 6[illegible] of M R.C.S Eng who practised at Great Malvern Has been able to earn a living as a teacher of elocution but owing to the war has lost practically all her pupils. Hopes to obtain a paying guest shortly which will greatly help her Previous relief twice £22. Voted £12.

Contributions may be sent to the honorary treasurer, 11, Chandos-street, Cavendish square, London W

WAR AND CHOLERA[1]

BY W J R SIMPSON, C M G , M D ABERD., F R.C P LOND ,

PROFESSOR OF HYGIENE, KING'S COLLEGE, LONDON

AFTER a reference to the remarkable fierceness of the battles, the unfavourable weather conditions, the remarkable absence of scurvy, dysenteries, and epidemic diseases that had so far characterised the present war, Professor Simpson pointed out that the armies of Germany and Austria would be in a very different physical, mental, and material condition in August and the autumn of 1915 or 1916 from what they were in 1914, when victory appeared assured to them Should epidemics then arise they would not be confined to the particular armies that are first stricken, nor would the civil population in the devastated areas escape He continued —

Let us glance for a moment at some of the conditions that will be favourable for the development and spread of epidemic disease Scarcity of food will add to the hardships of the civil population that have the misfortune to be within the fighting zone, for in this great siege war the destruction of crops and cattle will place large areas much in the position of besieged towns in olden days, while the rise in the price of foodstuffs all round, from the disturbance of ordinary economic conditions and from the fewer people left to till the ground, will weigh heavily on the poor in every country engaged in the war The many millions of men in arms must be fed Their main supply will come from their own country, but they will also take what they can get from the invaded countries

This generation in Europe has been so accustomed to regular supplies from overland or sea by the quick transit afforded by steam power and undisturbed agricultural pursuits, supplemented by a world commerce, that the famines, dearths, and scarcities of an earlier period have been forgotten. Now Central Europe is back, more or less, to a time of isolation plus war on a gigantic scale The effects of droughts and floods, which assumed importance in times of greater isolation of countries, have under modern conditions been counterbalanced by an inrush of produce from other lands, so that the third partner of soil and seed—viz., meteorology—has been assigned of late a very secondary position, which could only continue while each country has the world to draw on When this ceases, as it has done for some parts of Europe, meteorology assumes its old sway The winter, so far as it has gone, has been a particularly wet one, not only at the seat of war but outside of it In one respect this has been an advantage, because of filling the wells, but the wet season and the purposely flooded lands of Flanders will render the conservation of foodstuffs more difficult than under other circumstances will accentuate the dearth of food in Europe, and add to the threatening destitution and want The severe earthquake in Italy, with its 24,000 deaths in one district, will not be without its effect on the physical and mental condition of those in the immediate outskirts of this disaster and who have been subjected to the shock

A combination of war, flood and earthquake, ending in famine in some localities and in scarcity of food in others is calculated to be a powerful force favouring in due season the manifestation

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[1] Abstract of a paper read at the Society of Tropical Medicine and Hygiene Feb 19th, 1915.

Let me take my departure from those facts which we were considering a moment ago, relating to the culture of pyogenic microbes in the blood fluids You will remember that I suggested in connexion with serophytic microbes that these must find all the food materials they require ready formed in the blood fluids, and in connexion with sero saprophytic microbes that for these no nutrient substances would be available until the albuminous substances of the blood had undergone some sort of preparatory transformation

I conceive that that transformation could come only by a digestive process Now, supposing this to be so, there would in the serum come into account a counteracting influence For we have there an antifermentative, or, as we usually style it, an antitryptic element, which would directly counteract any digestive element which might be struggling to come into operation And it is clear that microbes which were dependent for their sustenance upon the products of digestive action could establish themselves in the blood fluids only on condition that this antitryptic influence was overborne

This hypothesis furnishes, as it seems to me, an explanation for certain striking facts relating to the cultivation of microbes on blood fluids, and to bacterial infections It, as it seems to me, explains the finding that heavy sowings of microbes into serum are effective in giving cultures, while light sowings are not only ineffective, but lethal to the implanted microbes For it would be only natural that the resistance offered by the antitryptic power of the blood should be overcome by the mass effect of a number of microbes operating upon a restricted or—and this would come into consideration in localised infections—a mechanically isolated quantum of blood And, again, it would be only natural that the mass effect of a large volume of antitryptic serum could not be overcome by the digestive activities of a very few microbes, and also, I think, in accordance with what we know, that microbes deprived of access to foodstuffs should perish of inanition

Our hypothesis would also make intelligible, in connexion with infections by sero saprophytic microbes, that frequent and heavy sowings into the blood should be required before a septicæmia can supervene upon a local infection And, again, our hypothesis makes it comprehensible that there should be serious difficulty in obtaining hæmo cultures, even when the microbes have gained a footing in the blood stream

And, lastly, our theory brings home to us that, in considering the defence of the body against bacterial infection, we have to take into account not only *active defence* in the form of phagocytes and bacteriotropic substances which make a direct attack upon micro organisms, but also *passive defence*—that is, protection against infection obtained by preventing microbes converting to their uses the nutrient substances of the blood fluids

These, however, are general considerations with applications far beyond the sphere of wound infections, and we must return to the particular problem of the corruption of the lymph in the wound

When, after treating a wound with antiseptics and leaving it clean, we find it a very few hours afterwards teeming with microbes, we are in presence of something which, in my view, urgently stands in need of explanation. For our findings both in the lymph leech and in serum cultures made with the wet-wall method from pus would seem to teach us that the sowing of microbes left behind cannot be nearly heavy enough to produce the voluminous culture found in the wound, nor yet to account for the rapidity with which the sero saprophytes have started to grow And, moreover, consideration will bring out that another powerful factor must constantly come into operation in the wound. The factor in question is the tryptic ferment which is elaborated in the phagocytes, and which is, when these break up, discharged into the surrounding medium This tryptic ferment will come into operation under two different conditions It will come in whenever a residue of pus—for this would contain free trypsin—is left behind in or afterwards makes its way into the wound Trypsin will again come into account whenever, after the washing of the wound, leucocytes once more begin to emigrate and phagocytose and break down

I see in the reduction of the antitryptic power of the lymph thus effected the prime cause of its corruption Before attempting to obtain confirmation of this from crucial experiments there was a set of findings to be cleared up I had found in connexion with pus implantations made into serum that when this was heated to 60° C for ten minutes one no longer obtained the same differential growth of streptococcus as with unheated serum, but obtained instead mixed cultures of streptococcus with sero saprophytes, in particular staphylococcus and the wisp like diphtheroid bacillus already made mention of It seemed at first sight as if this could not possibly be related with a reduction in the antitryptic power of the serum, for it has, in view of the high quality of Opie's work on this question, been generally accepted from him that the antitryptic power of the serum is unaffected by exposure to heat until a temperature approaching the coagulation point of serum is reached In reality, however, when this is re investigated quantitatively[*] it emerges that the antitryptic power of the serum is reduced by one third to one half when we subject the serum to a temperature of 60° C for ten minutes

That difficulty having been removed out of the way of our hypothesis, we may proceed to take cognisance of the results of the crucial test experiments—experiments in which graduated additions of trypsin are made to serum as a preliminary to the implantation of sero saprophytic microbes The event of these experiments can be summed up in a sentence When we add trypsin in quantities sufficient to reduce appreciably the antitryptic power but insufficient to give us any free trypsin, the serum is converted into an eminently favourable nutrient medium for sero saprophytic microbes

Our hypothesis is thus very strikingly confirmed. It will be necessary hereafter to follow it into all its consequences For the present it will, however, suffice if we ponder on the following points The antitryptic power of the blood would appear to be increased in every case of severe wound infection. We have perhaps here a defensive reaction of the organism directed against a possible invasion of the blood by sero saprophytes And we may infection, endowed with greater virulence and capacity for spreading than that of 1913 and 1914

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[*] The quantitative method here employed was in essentials that described in my "Technique of the Teat and Capillary Glass Tube" It was varied only in the respect that the series of trypsin serum and calcified milk mixtures which are employed in that method were taken up not into a many-stemmed pipette, but into a long unmounted wide-bored capillary stem which had, for the purpose of convenient filling in, been bent round at one end in the flame of a Bunsen into a syphoning curve

Moving armies are much in the same position as pilgrims and other crowds travelling from place to place In the Indian armies the long voyage, the excellent ships they come in, and the sanitary precautions taken, reduce the risk of importation by sea to a minimum, but even here carriers of cholera infection are not totally excluded when thousands have to be transported. The same favourable conditions do not exist on the land routes in Persia and Asia Minor, or wherever the Asiatic troops of the Turks may march Their condition approximates more to that of the pilgrims The one hopeful feature against the chances of fresh importation on a large scale is that there are at present no signs of an advancing epidemic from the East On the contrary, the indications are rather that if there had been no Balkan War, cholera would have disappeared from Europe for a time, as it has done in former invasions That, however, does not justify neglect of precautions and in not being thoroughly prepared for every contingency

Modes of Transmission of Cholera

One of the most potent factors in the dissemination of cholera from place to place and country to country in times of peace, is the movement of crowds connected with commerce, labour, and religion The great Hindu pilgrimages in India, and the great Mahommedan pilgrimages to Mecca and other sacred shrines, are active agents in the spread of cholera in epidemic form Many Indian investigators have demonstrated their influence Some of the exceptional festivals are attended by millions from nearly every part of India, but even the smaller ones are powerful in disseminating the disease, especially those held in the endemic area, such as at Calcutta and Puri I remember the great outburst at the Ardhodoya Jog, in Calcutta, in 1891 It is a festival that occurs every 37 years Cholera broke out at the festival and on the return journey of the pilgrims I was able to trace the spread of cholera from village to village through which the pilgrims had passed, and the setting up of local epidemics in the villages on the return of the pilgrims to their homes No disease has had its extension from place to place so thoroughly traced to the lines of human intercourse as cholera The influence of the Mahommedan pilgrims from different parts of the world to Mecca is well known Mecca has played a part in most epidemics as a great disseminating centre In 1883 I had the opportunity of demonstrating that two factors had played the chief role in the outbreak of cholera at Damietta, the first town attacked by cholera in Egypt in the epidemic of that year One was the importation of the disease by pilgrims returning from the Hedjaz, and the other contamination of the river water from which the inhabitants drew their drinking water The investigation merely confirmed the discovery of Snow in 1849 and 1854 as to the mode of spread in England and that it was applicable also to Egypt

So much is known to day regarding the transmission of cholera that it will hardly be realised that 30 years ago there were acute controversies on the subject

[Professor Simpson then summarised the history of the cholera controversy from 1886 when Bryden s earth borne and wind disseminated theory was in the ascendant, and dwelt on Koch s confirmation in India of his discovery in Egypt of the comma bacillus Referring to an investigation made by himself and Haffkine, he continued]

In a paper at the Indian Medical Congress, held in Calcutta in 1894, we demonstrated that out of 46 tanks around which cholera existed, comma bacilli were found in 42, or 91 3 per cent , and out of five tanks where cholera had disappeared a month to six weeks previously, comma bacilli were not found in any This latter conformed to a common experience that if a tank was guarded for three weeks or a month, and further contamination with cholera dejecta prevented, the water was safe to drink Of 15 wells examined, nine of which were in cholera infected houses, comma bacilli were found in only one, other agencies were at work here The air of infected rooms was examined and no commas found, even when the body of the deceased had not been removed and the floor of the hut had been soiled with cholera excreta. In a flour shop, a man attacked with diarrhœa had washed his clothes in a tank behind the premises, and we discovered his clothes still wet lying on a portion of flour exposed for sale From the flour we obtained a culture of the comma bacillus Cholera bacilli were also found in the surface drains inside infected houses and also in the drains leading to tanks

But comma bacilli were not confined to the waters of the Hooghly or Tolly's Nullah, or the canal in the suburbs of Calcutta, or to tanks or drains I had frequently observed a marked coincidence between outbreaks of cholera with diarrhœal disease among calves in the neighbourhood of tanks This led us to examine cows and calves suffering from diarrhœa in the vicinity of cholera outbreaks, with the result that commas were found in the intestines of fatal cases, especially of calves We also found comma bacilli in the cesspools connected with the cowsheds in which animals were suffering The exact connexion of these commas to cholera in man we had no opportunity of determining Further, in some fish examined by me, I found comma bacilli Similar observations were subsequently made by Cunningham, Remlinger, and Nouri

That flies can transport cholera bacilli, which become adherent to the surface of their bodies, was demonstrated by Grassi, Catani, Tizzoni, and Simmonds at an early period. The experiments of Samtchenko, in 1893, in the Kiew laboratory showed that cholera micro organisms could live and multiply within the bodies of flies Both observations suggested the possibility of contamination of food and the indirect spread of cholera by flies In 1894 there was an outbreak of cholera in the Gaya jail, and Dr Macrae, of the Indian Medical Service, traced it to the drinking of milk contaminated by flies from a neighbouring latrine Haffkine isolated the comma bacillus from the milk

Since the epidemic of 1892, at Hamburg, it has been frequently observed that persons who have been in contact with cholera patients, or living in infected localities, may have cholera bacilli in their intestinal discharges although they are perfectly well and never have had cholera. They are in the same position as persons who have been in contact with diphtheria and get lodged in their throats the diphtheria bacillus, which is harmless to them but dangerous to others A certain percentage of those attacked with cholera become chronic carriers Early observers have examined the bile of fatal cases and established the fact that the cholera bacillus in a certain percentage of cases is to be and spread of epidemic disease, whether it be typhoid or typhus fever, small pox, cerebro spinal disease, cholera, dysentery, malaria, or plague, should the germs of these be present and be conveyed from place to place by any of the armies or refugees

Cholera Invasions of Europe

Although cholera is not an endemic disease in Europe, its visitations in the nineteenth and twentieth centuries have destroyed millions of the population There have been nine invasions of Europe in a little over 90 years They have varied considerably in their duration, power of diffusion, and severity, the more lengthy ones being distinguished by important recrudescences Certain localities in Russia, in the neighbourhood of the Caspian Sea, have been so frequently attacked that it is a question whether the disease has established an endemic centre there as it has done in the Far East, in Java, Indo China, and the Philippines Although these endemic centres are in themselves a potential danger, it is doubtful whether any of them have hitherto given rise to any considerable diffusion of the disease beyond their own boundaries The source of the nine invasions in Europe, which have corresponded with similar invasions of the countries in the Far East, has generally been traced to India, though not directly but indirectly, by spreading by land and sea eastwards through the neighbouring countries On nearly every occasion there has been more than one avenue into Europe, the disease travelling along the chief trade or pilgrim routes in the Near East and radiating in many directions, but there has generally been one principal gateway by which the epidemic has entered Europe, although almost simultaneously there were often others The interesting and informing reports of the late Dr Netten, Dr Radcliffe, and Dr Barry, and now of Dr Bruce Low, of the Local Government Board, form a valuable record of the later epidemics

Professor Simpson then briefly described the nine European invasions of cholera, and epitomised them in the table given below

European Wars have generally been Free of Cholera

Notwithstanding the number of invasions of cholera, there have been only three wars in Europe *coincident* with its presence in the area of hostilities Cholera was unknown in Europe until a period well after the Napoleonic wars The first was the Russo Polish War in 1831 Cholera was very virulent among the troops, and was believed, by the medical men at the time, to have been materially assisted by the war in its dissemination over Europe The second was the Crimean War, when cholera prevailed over the whole of Europe, and the third was the Balkan War Cholera was conveyed to the Crimea in transports from France, but it already prevailed in the Russian and Turkish armies Both the French and the English armies suffered, and it also affected the fleets The *Timandra*, carrying sick from the Crimea to the Bosphorus, lost 20 the first night from cholera, and between 40 and 50 *en route* The *Britannia* lost 150 men from cholera in ten days The most important manifestation in the Balkan War was the outbreak behind the Chataldja lines, where it is estimated there were about 18,000 cases It was conveyed there into the Bulgarian army, which spread it among the civil population, through which it passed, and finally the Greek and Serbian armies were affected

European Invasions of Cholera

Epidemics in Europe	Principal entrance gate into Europe	Interval between each invasion in years	Number of years continued in Europe	General characters
1823	Astrakhan	—	Less than a year	Did not travel farther west than Astrakhan The Persian and Turkish armies which were at war with one another, suffered severely
1830-37	Astrakhan	7	7	Severe and widespread Very virulent among the Russian and Polish troops The war was believed to be the great cause of the rapid propagation of cholera in Europe Great epidemic among the pilgrims at Mecca
1847-52	Astrakhan	10	6	Severe and widespread Invaded a larger area of the world s surface than that of 1830-37 and more deadly Epidemic at Mecca
1852-59	Astrakhan	Nil	8	More severe and widespread than previous epidemics On its way through Persia it attacked violently troops of the Shah. Cholera affected the troops in the *Crimean* War In 1859 it attacked the French troops in *Algeria* and the *Spanish* troops in Morocco
1865-68 Lingered in Russia till 1874	Constantinople and Southern ports of Europe	6	10	Severe, but more limited in diffusive power
1884-87	Marseilles and Toulon	10	4	Less severe and limited
1892-93	Baku	5	5	Less severe and limited.
1905-12	Baku and Astrakhan	9	8	Comparatively mild and limited
1912	Constantinople	—	—	Mild and limited Prevailed among the Turkish Bulgarian Greek and Servian troops

Present Position of Cholera in Relation to the Armies

The danger of cholera prevailing in the zones of hostilities next August is not a remote one In Europe cholera prevailed in 1914, in Russia in the Province of Podolia, in Hungary in no fewer than 53 different centres, in Austria in 39 centres, in Germany in 10, and in Turkey in 2. In Asiatic Turkey there were two centres on the Black Sea There is no information about Persia or Arabia, but they are seldom free of cholera, especially during the seasons of the pilgrimages War will not stop the pilgrimages to Mecca and other holy places

There is every probability of the existing infections in Europe recrudescing, and although they possess the character of having stayed their time, had it not been for the wars of the past two years, yet there is a risk of them acquiring an exaltation in their strength and powers of diffusion by attacking a population enfeebled by hardship and destitution

There is also always the risk of Turkish, Russian, and Indian armies bringing from the East to Persia, Egypt, and Europe a new and more potent the inoculated, after the first four days, there was a period of over a year when there was almost an absolute freedom among the inoculated, while among the non inoculated in the same houses cases were occurring during the whole year, after 14 months cases began gradually to reappear among the inoculated as well as among the non inoculated Including the occurrences of cholera in the inoculated during the first four days the results for the whole period were as follows —654 uninoculated individuals had 71 deaths (10 86 per cent), while 412 inoculated in the same households had 12 deaths (2 99 per cent)

The figures show that notwithstanding the incomplete protective effect of the first four days, and the gradual disappearance of the resistance in those inoculated with doses of weak vaccines only, which a number of the inoculated people received in the earlier days of the experiment, the mortality among the inoculated compared with that of the uninoculated was in the proportion of 1 to 3 63, giving a reduction of mortality of 72 47 per cent, or in other words, where inoculations were performed and which were subsequently visited by cholera there occurred for every 11 deaths amongst the uninoculated three deaths among a similar number of inoculated

Even in regard to the first four days it was found that the mortality among the inoculated was 1·86 times smaller than among the non inoculated, and that after that period the inoculated acquired a protection which, for a year at least, rendered them 22 times safer than the non inoculated In Haffkine's pamphlet on Protective Inoculation against Cholera, which covers a larger number of observations in Calcutta and a longer period—viz, 33 months instead of 27—he found that the number of deaths among the inoculated during the first four days was 1·39 times smaller than among the non inoculated, and that during the period of immunity lasting 412 days or 14 months, the number of deaths among the inoculated was 15 79 times smaller than among the non-inoculated It was also noticed that in bustees, where large numbers were inoculated, and which usually suffered from cholera, there was in many instances an exceptional freedom from the disease

Gradually, as more experience was gained, the attenuated vaccine—Vaccine No I.—was given up and Vaccine No II., the fixed and strong vaccine, was used instead The latter was employed in the Durbhanga jail in April, 1896, during the progress of a very fatal epidemic The prisoners were paraded, and every second man or woman was inoculated The result was that after the inoculation, among a strength of 99 non inoculated, there were 11 cases (11 11 per cent), all fatal, while among 110 inoculated, there were 5 cases (4 55 per cent), with 3 deaths (2 73 per cent)

The strong vaccine was used on a large scale on coolies of the Cachar tea gardens who, inoculated and uninoculated, lived together in the same huts The results are recorded by Dr Arthur Powell — 6549 uninoculated had 198 cases (3 02 per cent) with 124 deaths (1 89 per cent), 6778 inoculated had 27 cases (0 47 per cent) with 14 deaths (0·24 per cent.)

The two vaccines with which the Indian experiments were made, and which established their protective value, consisted of live cultures Vaccine II was a strong vaccine fixed in strength by a process in the laboratory, into which I need not enter, but which is frequently erroneously called Kolle's method by those who are not familiar with the fundamental experiments made by Haffkine in India Vaccine I. was an attenuated preparation of Vaccine II

Experience with the inoculations indicated that the weak vaccine was not so protective as the strong, and that the strong vaccine, though it caused, when inoculated into a guinea pig without a preliminary inoculation of the weak vaccine, a necrotic swelling produced no such effect on man. In fact, the experiments on man brushed aside many of the theories and deductions formed from similar experiment on laboratory animals Another experience was that it is not safe to rely on the vaccine giving protection for more than 14 months, and, lastly, that though the weak and strong vaccine protected against attacks of cholera, they had not the same protective effect against death as the two strong vaccines when an inoculated person was attacked with the disease It was because of the experience gained with the cholera vaccine that a different mode of preparation of the vaccine against plague was adopted and because plague is a septicæmic disease the vaccine was devitalised. The value of the chemical product thus prepared and used as a prophylactic for plague, both in protecting against attacks of plague and reducing the chances of death when attacked, has been well established In cholera some devitalised preparations of vaccines were used in India, but no opportunity was offered for testing their efficiency It was the live cultures that were used, and it is generally agreed that they are more efficient than dead cultures Haffkine holds the view that similar experiments are needed to test the value of the devitalised vaccines of cholera, as those which were employed to ascertain the efficacy of the live vaccines of cholera and the devitalised vaccine of plague

There can be no doubt that devitalised vaccines, if efficient, are the best for administration on a large scale, and although there has been no scientific proof of their efficiency, based on researches on man, such as have established the value of the living vaccines of cholera and the devitalised vaccines of plague and typhoid fever, yet there are occasions on which they have been used in which evidence of a general character has indicated that they also are of great value and similar in character to those of typhoid and plague When visiting Kitasato's laboratory in Japan in 1902, I found the devitalised cultures of Vaccine II were being used with what was believed to be satisfactory results Over 70,000 people were inoculated with this vaccine Castellani has used the devitalised vaccines in Ceylon since 1905, combined with those of typhoid fever and paratyphoid A and B in one mixture[3] This is a combination which saves and eliminates an unnecessary number of inoculations and which at the same time does not produce any antagonistic effect The devitalised *preparations* were employed in Petrograd in 1908 and 1909 and in Batavia in 1910 and 1911, over 30,000 people being inoculated in each of these towns Similarly the devitalised preparations were employed on a large scale by the Greeks during their military operations in Macedonia in 1913 The appearance of the first cases of cholera at Chataldja in the Turkish army, and later in the Bulgarian army, decided the Greek authorities to begin a general vaccination of the army and of the civil population of that part of found in a pure culture in the bile Major E D Greig, I M S, in 1913, confirmed these observations by investigations he was making at Puri during the pilgrim festival there Out of 270 post mortem examinations he found cholera vibrios in the gall bladder in no fewer than 80 cases, and they were not only on the surface of the mucous membrane but also in the submucous tissue This fact brings cholera into the same category as typhoid fever as regards the production of chronic cholera carriers But cholera becomes even more closely allied to typhoid fever in its modes of dissemination when two very important facts, discovered and established by Major Greig, are taken into account The first is that out of 55 cases of cholera he found the comma bacillus in the urine of eight of his patients, and in two of these cases the bacillus was recovered during the stage of convalescence, when the persons were going about their work The other important fact is that he has found cholera bacilli in the lungs and other organs of some fatal cases of cholera [3]

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[3] Brit Med Jour, Nov 7th 1914

Preventive Measures and Anti cholera Inoculations

With cholera introduced into the war area, and its capability of spreading by carriers, by water, and by food or drink contaminated by infected stools or urine, by infected latrines and flies, contaminated boots, clothes, utensils, and hands, there is, when the season of the year and the condition of the population are favourable, a strong probability of much loss from this disease, and it is because of this probability that measures should at once be taken to prepare to combat this disease, and to protect the troops against cholera in Asia Minor, Egypt, and Europe

It is obvious that disinfection of the latrines and the protection of water supplies or purification of water are essential parts of any preventive measures So are the isolation of the sick and the retention of convalescents until free of cholera bacilli in the fæces and urine The disinfection of the latrines is necessary to prevent the contamination of flies which crowd to these latrines, and to prevent contamination of boots, &c But as the conditions of warfare often render this difficult, if not impossible, and what may be done in our army may not be done in another, so that the one that takes precautions may suffer owing to neglect on the part of the other, it is important that the soldiers should be also protected by inoculation against cholera if that inoculation renders them less susceptible of being attacked by the disease

There can be no doubt that the very extensive experiments with Haffkine's prophylactic against cholera, which were carried out in India on man and not on laboratory animals, 20 years ago, established the fact that these inoculations gave a very high protection against cholera attacks for at least one year The experience gained in the cholera experiments was the guide to the preparation of the well known Haffkine's prophylactic for plague, which has proved such a boon to communities attacked with plague As most of the cholera vaccines—except those used in Upper India—were prepared in my laboratory at Calcutta, and as I had to collect the statistics relating not only to the experiments in Calcutta, for which I was responsible, but also with reference to the inoculations in different parts of India, in order to report on the subject, I can speak from experience as to their value Haffkine and myself were ably seconded in the work by my medical assistants, more especially by Dr R Sen, Dr Jogendra Nath Dutt, Dr Sasi Bhusan Ghose, and Dr J J Chowdry The only disappointing result was connected with the first experiment, when, as a matter of caution, the soldiers of the East Lancashire Regiment were inoculated with only weak vaccine in small doses after the lapse of 14 months from the time they were inoculated cholera of a very virulent character attacked the regiment, but even under the unfavourable conditions mentioned—viz, 14 months since the inoculation, the use of weak vaccines and small doses, and the type of the attacking cholera particularly virulent—the inoculated suffered to a less degree than the non inoculated, thus 640 non inoculated soldiers had 120 cases (18·75 per cent) with 79 deaths (12 34 per cent), 123 inoculated soldiers had 18 cases (13 55 per cent) with 13 deaths (9 77 per cent)

As regards all the other experiments, whether among prisoners in jails, or coolies in camps or tea gardens, or among the general population in the bustees of Calcutta, the protection was of a most marked character But it was observed that, as a general rule, the period of immunity did not last for more than 14 months It would take too long to give you all the results recorded, but they are to be found in my annual report for 1896, and a much fuller account, with details, are given in Haffkine's paper on Protective Inoculation against Cholera, published in India in 1913 I shall give you those of Calcutta and of the Cachar tea gardens

7,690 persons were inoculated against cholera in 27 months, mostly in those bustees, or collection of huts, in which the poorer people lived, and which were usually visited by cholera year by year Every effort was made by persuasion to get half the members of the hut inoculated In some cases we were successful in this respect, in others not We inoculated in the huts and then waited events A complete register, with all details relating to each of the inoculated and the non inoculated in the hut, was carefully kept, and when a case of cholera was reported investigations were immediately made In the 27 months cholera visited 71 houses, in which inoculated and non inoculated persons were living in the same households, and the following table shows the days on which cholera occurred among the non inoculated and inoculated —

Amongst the uninoculated members, after — 1, 2, 3, 4, 5,
and among the inoculated of the same households, after 0, — 2, 3 4,

6, 9, 12 13 15 17 22, 34; 37, 44, 57, 62 63, 71 95 99 109

114 118 119 120 129 132, 139, 143 162 189 191, 203 — 240,
219

251, 271 281, 284, 300 309 318, 319 334 356 359, 362, 370 372,

378, 383 384 389 391, 393 394, 401 404 408, 416, — 433 446,
421

448 453 — 472 493, 498 — 673 — 720 723 724 730 —
459 512 688 735

and 738 days
and 738 days

During the first four days after the inoculation, cholera occurred among both the inoculated and non inoculated, though in a smaller degree among of the six cases reported it was present, in the remaining three it was absent Death occurred in every case with great rapidity, 48 hours being the average time, one case survived 80 hours The patient was always conscious to the end and in a state of "euphoria"

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[3] Indian Journal of Medical Research vol 1, 1913

It appeared probable from the great similarity of the symptoms and the invariable result in every case that there might be a common cause The presence of the bacillus of malignant œdema was suggested as the probable explanation An attempt to isolate the organism from the wounds having failed in two cases, it was thought that it might be found in the blood stream, and accordingly blood cultures were made in the series of cases reported In six cases a culture was obtained by this method of an organism which was indistinguishable from the bacillus aerogenes capsulatus The blood cultures were made in three cases immediately after death from the heart's blood, and in the three remaining cases the blood cultures were ante mortem Two patients died after a week in hospital from typical gas gangrene, the culture was negative in one case ante mortem and in the other post mortem The former case had been twice operated on in attempting to stay the spread of the gangrene, in the latter it was thought that the patient would not stand re amputation—in this case the culture was ante mortem, and gave a positive culture of staphylococcus aureus These two cases seem to make it probable that the series in which positive cultures of an anaerobic organism were obtained may be a separate and distinct condition The number of cases in which it was possible to verify the diagnosis of blood infection by culture is small, on the other hand, there were no negative cultures in cases which were regarded as typical of the condition The six cases in which blood cultures were positive were as follows —

Case	No of c c.	Place	Hours of survival after wound.	Time of blood culture	Projectile.	Wound
1	4	Braisne	50	P M	Shell	Compound femur
2	4	Poperinghe	40	P M	Shell	Compound femur
3	4	Poperinghe.	60	P M	Bullet	Compound humerus
4	4	Lillers	48	A M.	Shell	Compound humerus and femur
5	1	Bethune	80	A M	Bomb	Arm no fracture
6	4	Lillers	40	A.M	Shell	Compound femur

The technique adopted was the same in all the cases Shake cultures in glucose agar were made as soon as possible after the blood was taken, at the same time ordinary aerobic blood plates were made which in every case were negative at the end of 48 hours In the shake cultures bubbles of gas were observed in all the cultures on the next day In five of the positive cultures gas appeared with great rapidity, in two it was apparent in six hours, and in three it appeared in ten hours The culture was profuse and the formation of gas abundant, the agar being forced to the top of the tube Growth ceased within an inch of the surface of the medium and seemed most active about two inches from the surface The organism was a Gram positive bacillus, most of the bacilli taking the Gram stain well, a few individuals losing the stain, and a few showing a beaded appearance The bacilli varied a good deal in length, forms longer than anthrax being common and forms as short as B coli were found, it did not form spores in glucose agar and died out in one week in that medium In one culture (Case 4) capsules were stained, in the others they were apparently present, but it was not possible to stain the actual capsule The colonies were dense and opaque, and on McLeod's plates made with blood glucose agar they showed a distinct hæmolytic power The organism is non motile It was possible by making use of the hæmolysis to isolate the same microbe from two quite harmless wounds, one in the leg, the second in the thigh One culture (Case 4) killed a guinea pig in 15 hours, another culture (Case 5) made a pig very ill, but it did not die, these were the only cultures injected into animals There were a large number of cases presenting the same clinical picture in which it was not possible to do blood cultures to verify the diagnosis

From the very rapid onset of the symptoms it is probable that the infection of the blood stream is either at the time of injury or very soon after it

NOTE ON A CASE SHOWING

THE FREQUENT OCCURRENCE OF AN AURICULO VENTRICULAR RHYTHM ASSOCIATED WITH A LONG A-C INTERVAL

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IN describing the following case I shall assume it to be proved that under normal conditions the heart beats in response to a stimulus formed in the sino auricular node, and shall refer to this rhythm as the S A. rhythm I also shall assume it to be proved that, under certain conditions, the seat of the impulse formation in the mammalian heart may temporarily or permanently shift from its normal site in the sino auricular node to some other portion of the heart, more particularly to parts containing specialised tissue of the same nature as the sino auricular node

In addition to the sino auricular node the chief mass of this specialised tissue is the auriculo ventricular node of Tawara and the bundle of His Since the discovery of this tissue in the mammalian heart a large amount of experimental work has been carried out by Engelmann, Lohmann Hering, Rothberger and Winterberg, Ganter and Zahn, Kure, Meek and Eyster, Lewis, and others on the relations existing between the sino auricular and auriculo ventricular nodes

These investigators have shown that procedures which depress, injure, or extirpate the sino auricular node, such as cooling, cutting, clamping, burning, and poisoning with certain drugs such as formalin, bring on a condition in which the normal interval between auricular and ventricular contraction becomes markedly shortened or even negative, the contraction of the auricle following, instead of preceding, the ventricular contraction An exactly similar condition is produced by procedures which stimulate the auriculo ventricular junction such as left accelerator stimulation

Most authorities are now agreed that in these circumstances the sino auricular node has ceased to act as the pace maker of the heart, and that the auricles and ventricles then respond to a rhythmical stimulus originating in some part of the auriculo ventricular node, which stimulus throws the

Macedonia occupied by the Greek army For this purpose two anti cholera ambulances were attached to each division of the army One was a rapidly travelling section containing a well equipped laboratory and disinfecting stove, under the direction of a medical bacteriologist, and the other a stationary section, under the direction of a medical man, equipped with material necessary for transport and treatment of 25 cholera patients Some 50 bacteriologists were employed, of whom 35 were civil and 15 military, and the inoculations were performed by the regimental medical officers and the civilian doctors in different localities, who were supplied with material and printed instructions The organisation and administration of the anti cholera campaign, both in the army and civil population, was placed in the hands of Professor C Savas working in conjunction with M Manoussos, the principal medical officer of the army Professor Savas gives in the *Bulletin of the Office International d'Hygiène Publique*, of October, 1914, a very full account of the measures taken to carry out anti cholera inoculations in the army and civil population in the infected area, and the effect they had in checking and suppressing the epidemic

Approximately half a million persons were inoculated This included about 150,000 soldiers, 350,000 civilians and refugees in Macedonia, and about 150,000 civilians and refugees in Salonika. In ten divisions, consisting of 114,803 soldiers, which took part in the Græco Bulgarian War, there were only 2192 cases of cholera (19 per 1000) The incidence on inoculated and not inoculated was as follows —

2 vaccinations	91,224 soldiers had	644 cases	= 7	per 1000
1 vaccination	14,613 ,, ,,	618 ,,	= 42	,,
Not vaccinated	8,968 ,, ,,	634 ,,	= 93	,,

Those vaccinated only once had six times more cholera cases than those vaccinated twice, and those not vaccinated had 14 times more If to the non vaccinated be added 96 fulminating cases which are stated to have occurred among them, the ratio rises to 103 per 1000

It was reported by the principal medical officers of divisions that as soon as the vaccination of these were finished, cholera disappeared as by enchantment, and only remained sporadic among soldiers sent to fill up vacancies, and who had not been vaccinated, and this though the soldiers remained in localities where cholera was prevailing amongst the civil population and the refugees

Further, in the first division, specially in which the first cases of cholera occurred, and in which the double vaccination had been completed before hostilities commenced, there were only a few cases of cholera reported, and only among soldiers who had been sent from Athens and had not been vaccinated, whilst the other divisions which coöperated with them were attacked by the epidemic

It was noticed, also, that in the towns and villages a double vaccination of the inhabitants was followed by a sudden decrease and prompt disappearance of the epidemic, and it is to these vaccinations that Professor Savas ascribes the control and suppression of the disease, both in the army and among the civil population of the infected towns, and the protection of Greece from the ravages of cholera when the population was under conditions where other sanitary precautions were difficult or impossible to adopt

The success attending these inoculations is similar to that which I have had in regard to plague In 1913 the whole population of Mombassa, resident and floating, was inoculated during an epidemic of plague, with the result that the disease was effectually stamped out I had a similar experience in 1908 in West Africa In both localities pneumonic, as well as bubonic, plague prevailed The inoculations were, of course, combined with all other known methods of combating the disease

Professor Savas attributes to the inoculations the saving of Greece from a serious epidemic, concludes that 99 per cent of persons inoculated twice remained refractory to the epidemic, and classes anti cholera inoculations among the most efficacious preventatives against cholera

While recognising the extraordinary good effect which the inoculations had in checking and suppressing cholera in this particular campaign, there is one important point which has to be remembered in order to gauge the power of the inoculations at their true value, and that is that the type of cholera was not of a virulent character except in the 96 fulminating cases among the non inoculated The vaccines were capable of dealing with the epidemic, but it was a comparatively mild epidemic that was dealt with

There is much variancy in the virulence of epidemics of cholera I have seen an epidemic in which the mortality was as high as between 80 and 90 per cent, and I have seen others which have had a mortality of less than 20 per cent It is important in preparing vaccines against an epidemic to obtain for the inoculations a natural strain of cholera bacillus from as virulent a type of cholera as possible, in order that the immunising effect shall be well above the type of the epidemic, and in order that it can be maintained with ease at a high and fixed state of virulence in the laboratory Whether the present Russian strain will be the most effective to combat any natural exaltation of epidemics due to recrudescences or importation under the conditions mentioned, may well be a matter of doubt, seeing that since 1911 its virulence and capacity to spread have been diminishing

I think Castellani's method of mixing the vaccine is well worth consideration as being practical and convenient It is not doing anything different from inoculating on one arm with typhoid vaccine and vaccinating on the other at the same time against small pox

SOME CASES OF BLOOD INFECTION BY AN ANAEROBIC ORGANISM SECONDARY TO WOUNDS

By ADRIAN STOKES, M D Dub, F R C S Irel,

LIEUTENANT, R.A.M C (TEMP)

During the months of October, November, December, and January, while doing bacteriological work in connexion with the clearing hospitals, a series of cases in wounded men occurred giving the same clinical and bacteriological picture The clinical picture was characterised by four separate features (1) the colour of the patient, which was a dirty yellow, something like the colour of a dirty deal table, (2) the soft, running pulse, which was always very rapid, often uncountable, and in the later stages irregular, (3) uncontrollable vomiting, and (4) the rapid onset of the condition after the injury The presence of obvious gangrene at the site of the wound was inconstant, in three heart beat was followed by an extrasystole with a compensatory pause The *a c* interval was just one fifth of a second During the extrasystole there was only one wave in the jugular tracing which was synchronous with the wave in the carotid tracing This wave was larger than the *c* waves of the normal cardiac cycles and suggested that the auricles and ventricles were in simultaneous contraction The patient was put on ʒi of tincture of digitalis daily, and this was continued for eight days After ʒii of the digitalis the pulse rate fell to 75 per minute, and apart from an occasional extrasystole the pulse became regular for considerable periods Chart 1 is an example of this rhythm Except for an extrasystole occurring at the second cycle the heart's action is perfectly regular The jugular pulse shows well marked *a* and *c* waves corresponding to each cardiac cycle The *a c* interval is prolonged The apex beat tracing shows an unusually well marked *a* wave preceding the ventricular rise Chart 2 shows the same rhythm with the occurrence of an extrasystole at the fourth cycle The *a c* interval is definitely prolonged The extrasystole is fully compensatory and the jugular tracing shows only a single wave *c* synchronous with the ventricular rise in the apex beat tracing This *c* wave, however, appears at exactly the moment when a normal auricular contraction is due, and from a polygraphic tracing alone it is impossible to say whether the simultaneous contraction of auricles and ventricles is due to a ventricular or an auriculo ventricular extrasystole Occasionally two such extrasystoles followed one another, as seen in Chart 3

In addition to these extrasystoles the heart's action showed the frequent occurrence of the irregularity seen in Chart 4, A and B In this tracing the first five cycles show, both in the jugular and apex beat tracings, auricular and ventricular waves with a prolonged *a c* interval Following the fifth cycle is an extrasystole of the same type as in Charts 2 and 3 From here onwards we have a coupled rhythm with a gradual diminution in the *a c* interval of the first beat of the couple till in the fifth and sixth couples the *a c* interval has completely disappeared, and the auricles and ventricles are contracting simultaneously At the seventh couple the *a c* interval again appears This peculiar rhythm frequently appeared during the patient's stay in hospital, and always presented the same features

This gradual disappearance of the *a c* interval can only be attributed to a temporary change in the site of the pace maker of the heart from the sinus node to some part of the A V node or bundle, probably the result of an irritative lesion in that neighbourhood As corroborative evidence we have the presence of extrasystoles and a prolonged *a c* interval The fact that in the experimental production of an A V rhythm the *a c* interval shows a gradual shortening and not an abrupt disappearance has been demonstrated by Hering and others It has been suggested that this gradual change depends either on a gradual shifting or wandering downwards of the pace maker or to changes in conduction time

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Aberdeen

A CASE OF ACHOLURIC JAUNDICE

BY W HARMENS, M B , B C CANTAB

THE following case presents several points of interest both as regards diagnosis and treatment

The patient is a married woman, aged 27, who has two children, both girls, aged 5½ and 2¼ years respectively In neither is there any enlargement of the spleen Her maternal grandmother died in rather early life from a "floating tumour" in the abdomen Her mother died seven years ago from "hæmorrhage," having been in bed a month Splenic enlargement had been noticed 16 years before her death. During that time she had much ill health with repeated attacks of jaundice She was always more or less "yellow" When the patient was 16 years old a swelling was noticed in her left side Jaundice appeared for the first time 18 months ago, and she lost considerably in weight She complained of inability to do her work properly, loss of appetite, and feeling generally ill A considerable amount of pain was present in the left side of a dragging nature, but it was never acute She was sent to St Thomas's Hospital about 18 months ago with the diagnosis "splenic enlargement" There she gradually improved under treatment The spleen extended to a point at the level of the umbilicus The liver was also slightly enlarged A moderate degree of anæmia was present Her blood count at that time was red cells, 3,000,000, white cells 9200 An X ray examination was made but was negative

In the beginning of May, 1914, the same symptoms reappeared A slight degree of jaundice developed, which gradually became deeper but was never intense The pain in the left side was nearly always present and often severe, and prevented her carrying on her household duties She looked pale and anæmic, and said she had lost flesh There was marked enlargement of the spleen, which extended to a point half an inch below a horizontal line drawn through the umbilicus No tenderness was present The liver was slightly enlarged, and extended from the sixth rib above to a point three-quarters of an inch below the costal margin Hæmic murmurs were present over the heart The urine was very dark in colour acid in reaction, of specific gravity 1024, and contained no albumin or sugar Bile pigment was not present. There were no signs of disease elsewhere In view of her symptoms I sent her to St Thomas's Hospital where she was admitted under Dr H G Turney On July 9th a differential blood count was made by Dr L S Dudgeon as follows Erythrocytes, 4 000,000, slight poikilocytosis present, rouleaux formation fair, fibrin formation fair Hæmoglobin, 90 per cent Colour index, 1 1 Leucocytes, 10 240, polynuclear neutrophiles, 64 25 per cent, polynuclear eosinophiles 2 25 per cent, small lymphocytes, 25 75 per cent, large lymphocytes, 3 50 per cent, large hyaline, 3 25 per cent, coarsely granular basophiles, 1 00 per cent No nucleated red cells were seen The coagulation time was normal. The fragility of the red cells, tested by sodium chloride in distilled water, was very markedly increased as in congenital cholæmia

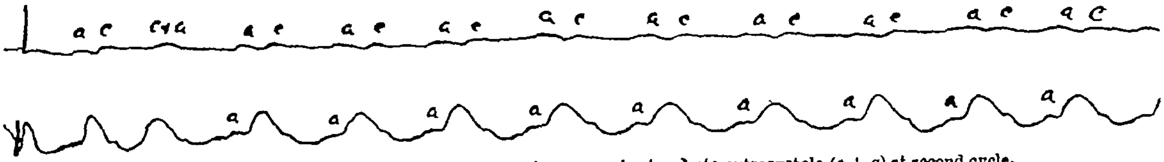
NaCl	Normal	Case under discussion
0 1%	Complete hæmolysis	Complete hæmolysis
0 2%	"	"
0 3%	"	"
0 4%	Tinge	"
0 5%	No hæmolysis	"
0 6%	"	Faint tinge
0 7%	"	Trace
0 75%	"	No hæmolysis.
0 8%	"	"

A Wassermann reaction was done but was negative While in hospital the temperature was slightly raised 100 2° F being the highest recorded The mean was about 99 4°

For reasons which will presently be discussed it was decided to remove the spleen The operation was performed on July 27th by Mr H Betham Robinson The anæsthetic used was chloroform and ether The peritoneum was found to be adherent in many places The patient stood the operation well, and had the stitches removed on the seventh auricles and ventricles into more or less simultaneous contraction I shall refer to this rhythm as the auriculo ventricular rhythm

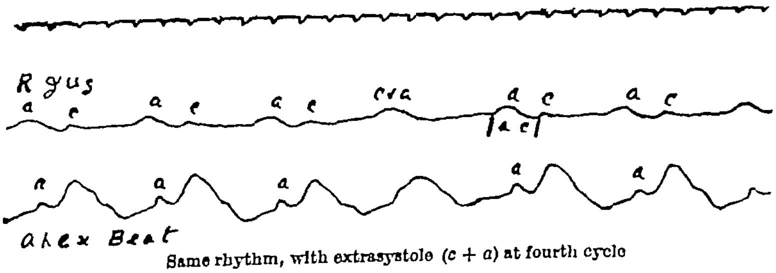
The following case was admitted into the Aberdeen Royal Infirmary on April 7th, 1914, under Professor A W Mackintosh, to whom I am indebted for permission to publish it

CHART 1



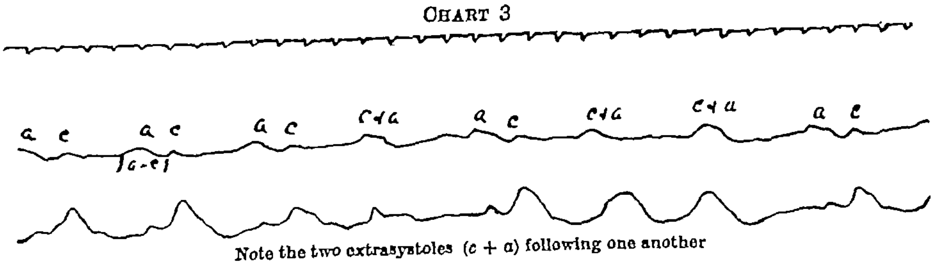
Upper tracing: jugular pulse Lower tracing: apex beat. Note extrasystole (c + a) at second cycle.

CHART 2



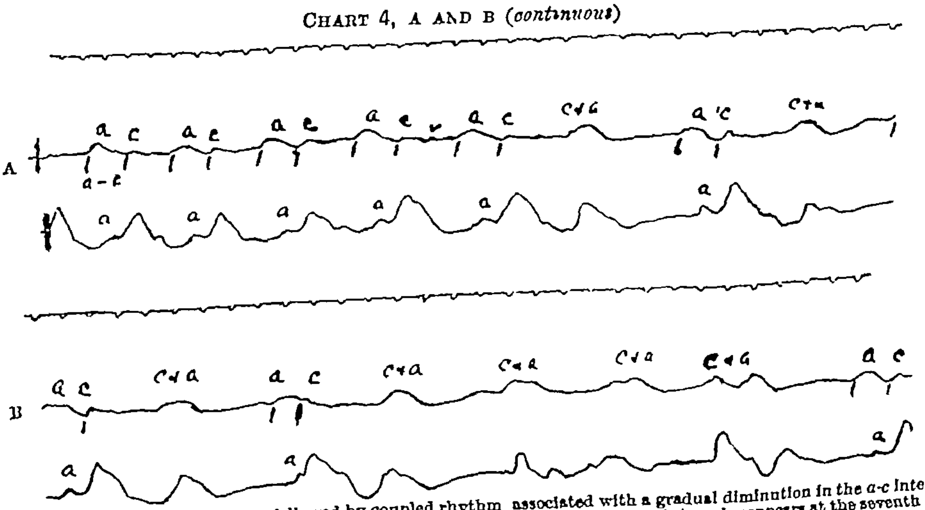
Same rhythm, with extrasystole (c + a) at fourth cycle

CHART 3



Note the two extrasystoles (c + a) following one another

CHART 4, A AND B (*continuous*)



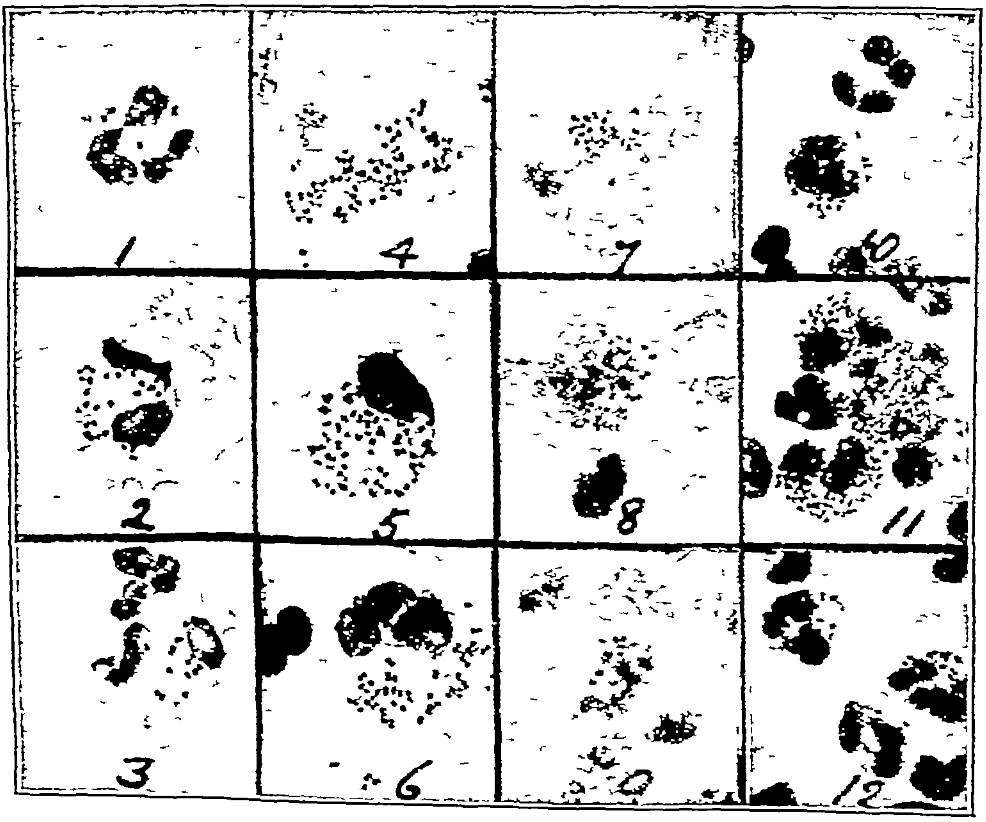
Extrasystole (c + a) follows the fifth cycle followed by coupled rhythm associated with a gradual diminution in the *a-c* interval until in the fifth and sixth couples the auricles and ventricles contract simultaneously the *a-c* interval reappears at the seventh couple.

The patient was a male, aged 33, a labourer He stated that he had never had rheumatism, but had suffered from some form of venereal disease in 1905 Up to three weeks before admission to hospital he had felt quite well and able to do his work without any discomfort He then began to suffer from pain over the epigastrium This pain was brought on by exertion and diminished by rest About the same time he also began to be troubled with severe breathlessness on exertion, and a fortnight before admission to hospital he had to give up work on account of severe dyspnœa, which was brought on by the slightest exertion

On admission to hospital the patient was able to lie quite comfortably in bed There was no œdema and the urine was free from albumin The liver was not demonstrably enlarged. The Wassermann reaction was strongly positive in the blood. The apex beat of the heart was in the fifth intercostal space, one inch outside the nipple line There was a mitral systolic murmur and the sounds over the aortic and pulmonary areas were almost inaudible

The heart's action presented several interesting irregularities On the day after admission the heart rate was 150 per minute and a polygraphic tracing showed a coupled rhythm Each normal procured about 20 c c of spinal fluid which had been drawn off on the previous day The latter had a very slight deposit, which appeared to the naked eye to be almost entirely blood On micro scopic examination it was found to consist of red corpuscles with a few white cells, but no meningo cocci could be detected.

The blood films made from the blood of the ear were stained by Giemsa's method, and showed a moderate leucocytosis of about 12,000 to 13,000 A differential count showed the following percentage of leucocytes Polymorphs, 80, large mononuclears, 19, lymphocytes, 1, eosinophiles, 0, in other words, the leucocytes were almost entirely polymorpho nuclear, transitional, or large mononuclear types, many of which were vacuolated.



Microphotographs of Meningococci and Gonococci. × 1000 diameters.
FIG. 1 to 6 —Meningococci from peripheral blood showing variations in the number of organisms in the leucocyte. FIG. 7, 8, 9 —Meningococci from cerebro-spinal fluid of another case of cerebro-spinal meningitis FIG 7 free meningococci
FIG. 10 11 12—Gonococci from urethral pus showing the close resemblance of these organisms to meningococci.

Whilst counting 2000 leucocytes, 10 were found to contain typical meningococci. Under a low power (8 mm objective and compensating ocular 6) these appeared very much like deeply stained blue granules lying in the protoplasm of the cell, and when examined under the immersion lens they were found to be typical bean shaped diplococci indistinguishable from gonococci (I have carefully compared the meningococcus or, to give it its full name, diplococcus intracellularis meningitidis (Weichselbaum), as found in the peripheral blood or in the cerebro spinal fluid, with the gonococcus in urethral pus under a magnification of 3000 diameters, and I must confess that I can find no morphological difference Both show considerable variations in size but possibly the latter organism more frequently appears to lie in a capsule or vacuole) The number of organisms lying in the protoplasm varied, in some cases there were only one or two pairs, in other cases the protoplasm was filled, but on an average there were about six in an infected leucocyte (See microphotographs)

With Giemsa's stain the meningococci stain a deep blue colour, but when there are many organisms lying in the protoplasm it is interesting to note that whilst the majority take the basic stain and appear blue, a certain number of them are faintly stained with the eosine and appear as very indistinct pale pink bodies, but they still retain their typical bean shaped character Free diplococci were seen but they were infrequent, though occasionally a group consisting of several organisms was found.

The discovery of a comparatively large number of meningococci in films made from the peripheral blood suggests, to my mind, the following questions —

1 As the cultivation of the meningococcus is a difficult and not very successful means of recog nising the disease (Eisler has only obtained positive cultures from the blood in 10 out of 41 cases), are the organisms to be commonly found in films made from the peripheral blood in cases of cerebro spinal fever, and is this a practical method of diagnosis, or are the meningococci only to be found in the septicæmic type of the disease?

2 As the meningococcus may occur in large numbers in the peripheral circulation, and as it is a very delicate short lived organism very susceptible to drying, may not the disease be

day On August 5th another examination of the blood was made as follows —Erythrocytes, 3 612,500 , rouleaux formation good, fibrin formation good. Hæmoglobin, 75 per cent Colour index, 1 Leucocytes, 7800 , polynuclear neutrophiles, 42 75 per cent , polynuclear eosinophiles, 2 75 per cent , small lymphocytes, 32 00 per cent. , large lymphocytes, 9 00 per cent , large hyaline 12 00 per cent , and coarsely granular basophiles, 1 5 per cent On August 12th, the day of her discharge from hospital, the fragility of the red cells was much less than at the previous examination

NaCl in distilled water	
0 1 per cent	Complete hæmolysis
0 2 ,,	,,
0 3 ,,	,,
0 35 ,,	,,
0 52 ,,	Faint trace
0 55 ,,	No hæmolysis
0 6 ,,	,,

The patient's weight on admission was 7 st 6 lb and on her discharge 7 st 12¼ lb Her colour had greatly improved, and her appetite was good On Oct 1st the fragility of the red cells was again tested and was found to be practically normal

NaCl in distilled water	
0 38 per cent	Complete hæmolysis
0 52 ,,	Trace
0 6 ,,	No hæmolysis

For a time after the operation the patient had a slight limp and a dragging pain in the left side These symptoms have completely disappeared, and she says she feels perfectly well She is able to carry out her household duties and look after her husband and children She is delighted with the change in herself since the operation

Two clinical groups of acholuric jaundice may be recognised in the one the condition is congenital and hereditary or familial, in the other acquired and lacking the hereditary tendency In other respects the course and symptoms of the two groups are identical The case just described seems to be a compromise between the two types On the one hand the hereditary tendency is very marked, while on the other there was no appearance of symptoms till about the time of puberty Of course it is possible, as there was never anything like persistent jaundice, that the case was really congenital but latent

With regard to the indication for operation, it must be granted that the mere diagnosis of acholuric jaundice is not in itself sufficient The condition, whether congenital or acquired, is compatible with many years of healthy life In this patient the impairment of general health was very considerable Abdominal pains were more or less persistent They were due probably to the dragging of the splenic tumour so far as the more chronic ones were concerned, but in addition to these there were others of a different type and of a different distribution which occurred synchronously with the attacks of jaundice, and were dependent to all seeming upon changes in the gall bladder and ducts These symptoms in themselves afforded sufficient justification for the removal of the spleen, especially as the organ was of moderate size and its extirpation promised to be attended with the minimum of risk But in addition to these actual inconveniences from which the patient might be promised relief there were others looming in the future which could not be ignored. The mother died from hæmatemesis 16 years after the enlargement of the spleen was diagnosed, and there is no ground for suspecting in her case either alcoholic excess or the presence of a gastric ulcer It is quite certain that the exaggerated hæmolysis which is the underlying condition of acholuric jaundice must throw an enormous increase of work upon the liver, and there is clinical evidence of this in the enlargement of that organ Eppinger has shown that even during apparently quiescent periods of acholuric jaundice the excretion of urobilinogen may be increased ten or even twenty fold, and increase of function to this extent must surely entail some danger of structural change in the long run in the organs concerned The history of the mother's illness is, to say the least, suggestive of the same sequence of pathological events that we find in Banti's disease, and in both mother and daughter we find the same history of repeated attacks of jaundice with enlargement of spleen. So far as I am aware, the only change hitherto described as occurring in the liver in these cases is the accumulation of pigment-bearing cells without cirrhosis, but pathological evidence of any sort is far too scanty for a final verdict

I wish to acknowledge the great kindness of Dr Turney in the help he has given me, and to thank both him and Dr Dudgeon for the use of the notes on the case

Addlestone, Surrey

CEREBRO SPINAL MENINGITIS MENINGOCOCCI FOUND IN PERIPHERAL BLOOD FILMS

By ALFRED C COLES, M D , D Sc , F R S Edin , M R C P Lond ,
PHYSICIAN TO THE ROYAL NATIONAL SANATORIUM, BOURNEMOUTH.

Dr A D Edwards, medical officer of health of Bournemouth, has given me the following notes of this septicæmic type of case of cerebro spinal meningitis

The patient, a male aged 33, a carpenter, was at work on the morning of March 15th, when he complained of pains in the lower part of the back, felt shivery, and soon afterwards vomited After this sudden onset the patient became rapidly worse, and by the evening he complained of "aching all over " A purpuric rash appeared on the following morning on the brow and face Retraction of the head was not present at this or any other stage of the illness Dr Edwards saw the patient for the first time on the afternoon of March 16th when his temperature was normal, but the pulse could not be felt There was a well marked purpuric rash on the face consisting mainly of more or less circular spots dark purple in colour There was also extravasation of blood on the trunk, especially on the buttocks The patient was conscious and complained of "pains all over," so that he could not rest easily in bed. Pains in the knees and elbows were marked, especially on movement , for this reason Kernig's sign was not available On lumbar puncture 25 c.c of cerebro spinal fluid were removed, and antimeningococcic serum was injected to the same quantity The fluid came out slowly , it was mixed with blood, but otherwise was not very turbid No growth occurred on blood serum or on agar although there was blood in the inoculating fluid. The patient's temperature rose on the night of March 16th to 102° F , but fell on the morning of the 17th There was diarrhœa on the night of March 16th, and the vomiting which had been occasional became frequent on the morning of the 17th During that morning the patient became comatose and died on the afternoon of the 17th, 50 hours after the onset of the first symptom

Clinically the case appeared to be a picture of profound septicæmia , there were no signs or symptoms to indicate the presence of meningitis This latter condition was suspected mainly by the process of exclusion and because the epidemic disease was known to be prevalent in certain military centres at the present time

On March 17th, at 11.30 A.M , I made films from the blood obtained by puncturing the ear and very promising for an ultimate recovery as though an active immunity was being established

Pair 2, Guinea-pig 7 (700 grammes—control) —Inoculated Result Tetanic symptoms first observed after 36 hours Death following tetanic convulsions after 50 hours

Guinea pig 8 (840 grammes) —Inoculated and given oxygen injection. Result Tetanic symptoms first observed after 51 hours Death following tetanic convulsions after 72 hours

With this pair of guinea pigs, as with the second pair in Series I, we noticed that while tetanus with fatal termination developed in both cases the time of onset of the disease and of death was much delayed by the oxygen injection

We take it for granted that the reader is acquainted with the modern treatment of tetanus —e g, use of antitetanic serum, hypodermic injections of dilute carbolic acid solution, anæsthesia for spasms, the darkened room, chloretone, &c — but draw attention to the fact that the only treatment used in these experimental cases was the direct deep injection of oxygen into the wounds, and we assume that if the beneficial effects in these cited cases were due to the injection of the oxygen other anaerobic infections might be at least equally well benefited

We do not say that these limited experiments prove conclusively that subcutaneously injected oxygen is a sure cure for tetanus, but we think the results obtained warrant their publication, and we feel justified, in view of the fatalities that are occurring in the war zone from tetanus, to call the attention of the medical men in attendance, and others, to the beneficial effects obtained from this treatment as in the above cases, with the hope that it may in some measure aid in the prevention of, or recovery from, the disease with the wounded

A fuller account of the experiments will be published later, and further experiments are planned which it is intended shall be carried out in the immediate future

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

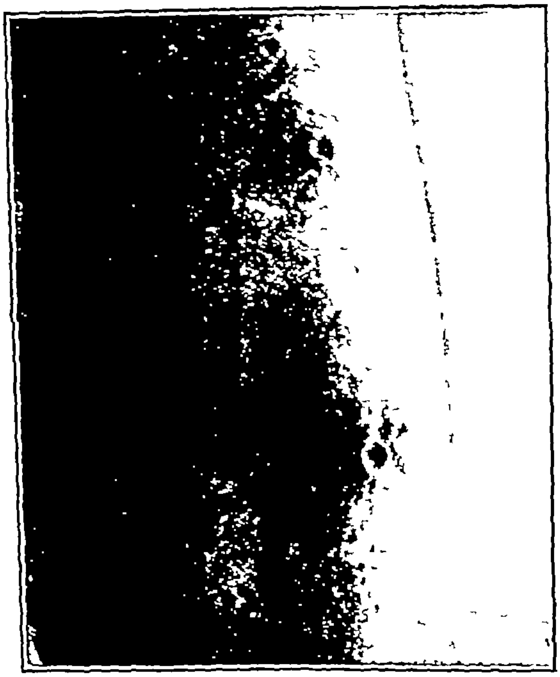
A CASE OF ANTHRAX.

BY J A BENNETT, M.B, B S DURH,
CAPTAIN ROYAL ARMY MEDICAL CORPS

ON account of anthrax being comparatively uncommon the following notes may be of interest to readers of THE LANCET

History —A driver in the R F A., age 30 was admitted to Connaught Hospital Aldershot with three pustules on his forearm For about six months the patient had been working amongst horses and in stables but had no recollection of having had any abrasions or the like On March 3rd he noticed three spots on his forearm two close together 2 inches below the end of the elbow and the other 2 inches nearer the wrist He felt ' out of sorts ' ascribing his condition to a cold, and it was on account of the latter that he reported himself sick on the 4th The pustules had then the following appearance small ulcers ¼ inch in diameter (those shown in the illustration are slightly smaller than natural size) with elevated edges the latter being due to small vesicles having coalesced and formed a complete ring surrounding a dry, depressed centre of a blackish purple colour Immediately outside this ring was an angry red area of about a quarter of an inch, on which were minute discrete vesicles irregularly concentrically placed The whole skin of the forearm was indurated and inflamed There was no febrile or constitutional disturbance of note

Treatment —After examination of many cover glass preparations stained with watery methylene blue made from the pustules no B anthracis were found, but as the appearance of the pustules was so suggestive of anthrax the patient was given an anæsthetic and the pustules were excised including the vesiculated area The raw surface left was cauterised with pure carbolic Readily assimilated nutritious fluid nourishment and stimulants were given



Pustules on the forearm in a case of anthrax.

Bacteriological examination —Agar tubes and plates were inoculated with serous fluid aspirated from the pustules after excision, 24 hours incubation showing a rich growth of staphylococcus albus, which obscured any other growths which may have been present, incubation was continued for three days A flask of normal saline inoculated with some of the dense growth by means of a glass rod, and the saline emulsion was then heated at 85° C for 30 minutes and stroke cultures made on agar plates from the latter 24 hours' incubation of the agar plates showed numerous colonies of B anthracis To the naked eye and low power examination the colonies were quite characteristic Examination under 1/12th inch oil immersion revealed the characteristic B anthracis

Convalescence has been progressive and the man has been discharged from hospital feeling very fit

I am indebted to Temporary Lieutenant R Francis Jones for carrying out the bacteriological work, and to Temporary Lieutenant D J Legge for the surgical work

South Farnborough

VESICAL CALCULI IN VERY YOUNG BOYS

BY W E NICKOLLS DUNN, M B LOND,
SUPERINTENDENT MEDICAL OFFICER, LUXOR HOSPITAL FOR NATIVES UPPER EGYPT

THE following brief details of two cases of vesical calculi in boys may be worth placing under the notice of readers of THE LANCET

In the first case the patient, a plump little Arab boy aged 2½ years, was brought to hospital in November, 1911, because he was passing blood from the penis and his urine was constantly dribbling away The sound entered the bladder with difficulty and there was no click heard. As the father of the boy was much upset at the child's screams the sound was at conveyed by some blood sucking insect? Dr Edwards tells me that one of his very rapidly fatal cases complained of having been bitten on the back of the neck by a body louse a short time before his illness, *post* or *propter hoc*

I would like to acknowledge my indebtedness to Dr Edwards for permission to examine this case, for the clinical notes he has kindly supplied, and for his interest in my results

Bournemouth

INJECTION OF OXYGEN AS A TREATMENT FOR TETANUS

BY H O HOWITT, M D, L R C P LOND, M R C S ENG,
AND
D H JONES,
PROFESSOR OF BACTERIOLOGY ONTARIO AGRICULTURAL COLLEGE, GUELPH CANADA.

As B *tetani is an obligate anaerobe* and will not develop in the presence of the smallest amount of oxygen, it was thought that the injection of oxygen into a tetanus wound, and into the tissue immediately surrounding the wound, would be more or less efficacious as a treatment, or auxiliary treatment, in delaying the onset of the disease or rendering it less acute, if not in preventing the development of the disease altogether

In the *Canadian Medical Association Journal* for November, 1914, one of us (H O H) reported beneficial results from the subcutaneous injection of oxygen in cases of dyspnœa of tuberculosis, gas poisoning, pneumonia, œdema of lungs, bronchial asthma, and operative cases, and the success with this treatment led to the surmise that it might be valuable in cases of tetanus and other anaerobic infections, such as malignant œdema, symptomatic anthrax, &c The prevalence of tetanus infections, causing extreme mortality in the European war zone, made it appear probable that a few animal inoculation experiments with tetanus and the subcutaneous injection of oxygen might be of use in ascertaining whether the treatment was of any value in this connexion. Accordingly, Dr G C Creelman, president of the Ontario Agricultural College, was asked if it would be possible to carry on the experiments with tetanus in the bacteriological laboratory of the College Dr Creelman readily gave his consent and referred the matter to one of us (D H. J) in charge of the laboratory As a result, the following experiments were planned, in which we were respectively responsible for the oxygen injections and the cultures, inoculations, and subsequent observations

Cultures used—A fresh culture of B tetani was obtained from the Parke Davis Co, and subcultures were made from this in dextrose beef extract bouillon and dextrose beef extract agar, incubated under anaerobic conditions at 37° C for three days, and kept later at room temperature

Virulence tests—To test the virulence of the cultures a guinea pig, weighing 790 grammes, was inoculated subcutaneously on the inner side of the right thigh with two drops of a three day old bouillon culture After 24 hours tetanic symptoms were shown by the extension backwards and outwards in a rigid condition of the inoculated leg Five hours later respiration was laboured, and the hinder half of the body was partially paralysed, being dragged around the cage with difficulty, 12 hours later—a total of 41 hours from the time of inoculation—the animal was found dead

Oxygen injection experiments—The oxygen injected was obtained from some oxone cartridges as prepared by the Roessler and Hasslacher Chem. Co, New York, from which oxygen was generated in the portable oxygen generator made by the Hartz Company, of Toronto, Cleveland, and Detroit The oxygen escapes by means of a long rubber tube, at the distal end of which is an aspirating needle which is inserted into the subcutaneous tissue The tube is then oiled, and by a pumping action of the hand the oxygen is forced through the needle

Series I

In this series four guinea pigs were used They were divided into two pairs All four were inoculated with B tetani, and one member of each pair was given an injection of oxygen near the point of inoculation, while the remaining member of each pair was kept as a control Sufficient oxygen was given to raise an emphysema from 3 to 5 centimetres in diameter in the immediate region of the point of inoculation (*Note*—In all the cases where tetanus developed the symptoms were similar to those described above in the virulence test, the only difference being the varying time of onset and termination of the disease)

Pair 1, Guinea-pig 1 (760 grammes—control)—Inoculated subcutaneously with half a drop of an eight-day bouillon culture on inner side of right thigh Result Tetanic symptoms first observed after 36 hours Convulsions and death after 72 hours

Guinea-pig 2 (760 grammes)—Inoculated same as No 1 but oxygen injected immediately after Result After 18 days no tetanic symptoms had developed, guinea pig well, having shown but little inconvenience at any time

Guinea-pig 3 (840 grammes—control)—Inoculated with one drop of eight-day bouillon culture Result Tetanic symptoms first observed after 30 hours Convulsions and death after 46 hours

Guinea-pig 4 (720 grammes)—Inoculated as above and given injection of oxygen immediately Result Tetanic symptoms first observed after 44 hours Convulsions and death after 84 hours

We see from the above that with the first pair of guinea pigs where half a drop of culture was used for inoculation tetanus developed and terminated fatally in the case of the control, but had not developed where oxygen was injected 18 days later With the second pair, where the amount of inoculum was double that used with the first pair, tetanus developed with fatal termination in both cases, but the appearance of tetanic symptoms and subsequent death were considerably deferred by the one injection of oxygen

Series II

For this series the agar plate cultures were used To inoculate, a puncture was made through the skin with a sterile sharp instrument, then a platinum needle was drawn through the surface growth of the culture and inserted into the wound As with Series I, four guinea pigs were used They were divided into pairs, and one of each pair was inoculated and immediately given a subcutaneous injection of oxygen, and the other member of each pair was inoculated and not given oxygen

Pair 1, Guinea-pig 5 (630 grammes—control)—Result Tetanic symptoms first observed after 38 hours Death followed tetanic convulsions after 66 hours

Guinea-pig 6 (700 grammes)—Oxygen injected after inoculation (*Note*—Some of the oxygen injected bubbled outward through a drop of blood at the point of inoculation, indicating that the wound was being well bathed with the oxygen, which would thus be brought into direct contact with the bacteria and prevent their development) Result Tetanus symptoms first observed after 90 hours Eight days after inoculation the pig was alive and active on three legs and able to eat hay The inoculated leg had been more or less extended and rigid for the last three days It looked contractures of the fingers and toes, and less marked contractures of both wrists, left elbow, and both knees Contraction of the skin round the nose and mouth was also noticed. A Wassermann reaction proved negative On Feb 9th, 1915, the mother noticed that the skin on the outer sides of both thighs was very hard This condition appeared suddenly and painlessly There were large, symmetrical areas of thickened skin on the outer aspect of each thigh. The skin was not changed in colour, did not pit on pressure, and was not tender The surface was nodular The skin over the abdomen was affected similarly, but to a much less degree Since it was first noticed there had been no change.

Dr **REGINALD MILLER** showed a case of Inherited Syphilis with Wassermann Reactions in a boy, aged 2, well nourished First child, no miscarriages, full term, breast fed. Father Infected December, 1911 Treated at Lock Hospital with mercury until April, 1912, then two doses of salvarsan Wassermann reaction not tested, as he failed to report Reported in August, 1912 no fresh symptoms, a weak positive reaction Received eight doses of mercury intramuscularly In April 1914, reaction negative Mother No symptoms throughout Conception about June 24th, 1912 Child Born March 22nd 1913 At 5 weeks, epiphysitis of left elbow Was treated with grey powder for seven weeks, combined with inunction (two weeks) Treatment then stopped for two months owing to doubt in *diagnosis* At 5 months he developed scaly rash on buttocks Was given antisyphilitic treatment, including inunction, from fifth to fifteenth months, none since *Wassermann reactions of* child and mother (full test) At 5 weeks, child and mother negative, at 5 months, child and mother positive, at 9 months child and mother positive, at 11 months child negative, mother (after salvarsan and mercury) negative, at 15 months, child and mother negative, at 23 months child and mother negative.

Dr **E G FEARNSIDES** showed a case of Chronic Poly articular Arthritis commencing in a child at the age of 2 years 4 months Until April, 1914 the patient was a healthy child He was breast fed for 12 months, walked at 11 months, and began to talk at 13 months In April 1914, he became ill in himself and subject to attacks of sweating, shortly after this the small joints of his fingers swelled his knees enlarged and he became unable to walk. The child first came under Dr Fearnsides's observation on August 28th 1914 He was pale flabby, wasted unable to use his hands or to walk There were considerable muscular wasting of the extremities, and great peri articular swelling of the joints of the fingers, wrists knees, and ankles and apparently some enlargement of the bones Lymphatic glands not enlarged, spleen could not be felt He sweated freely Tonsils were not enlarged No abnormal signs could be discovered in the heart lungs or abdomen. Neither albumin nor pus in the urine Under massage and grey powder by the mouth he had continuously improved By November, 1914 he was again able to walk The anæmia and the peri articular swelling of the knees, ankles, wrists, and fingers gradually diminished. The Wassermann reaction in the serum was negative At the present time a blood examination showed red blood cells 5 450 000 per cubic millimetre white blood cells 11,500 per cubic millimetre hæmoglobin 64 per cent colour index 0 8 with the differential count—polymorphonuclear cells 48 6 per cent small lymphocytes 38 4 per cent large mononuclear cells 10 4 per cent transitional cells 1 2 per cent eosinophiles 1 2 per cent, and mast cells 0 2 per cent Dr Fearnsides also showed a case of Pseudo-hypertrophic Muscular Dystrophy associated with Amentia in a boy aged 8 years As far as could be ascertained there was no family history of myopathy His father and mother were normal The patient was the youngest of four children and the other three were healthy In walking and mentally he had always been backward

Dr **ERIC PRITCHARD** showed a case of Pneumothorax A girl aged 12 years was brought to hospital on March 4th 1915 for sudden breathlessness with some cyanosis and pain in the left side of chest She had complained of the pain off and on for three weeks but had been going to school until the day she came to hospital No cough and no previous illness On examination nothing abnormal was found in the chest the heart was slightly dilated but otherwise in the normal position Patient refused admission and was taken home She continued to complain of the pain and was faint at times Two days later she was admitted temperature 100 F, pulse 104 respiration 28 Physical examination as before She continued to complain at times of pain in the lower and posterior part of the left axilla, but was otherwise comfortable On the fourth day the pain became severe, dyspnœa marked colour pallid, temperature 103°, respirations 64, and pulse 136 The heart's apex beat was in the fourth right space about 1 in internal to the nipple line. The left side of the chest was immobile and distinctly full under the clavicle The note was hyper resonant, breath soumds scarcely audible, vocal resonance and vocal fremitus absent, coin sound obtained In four days' time the respirations had come down to 28 and the pulse to 96 while the temperature varied from 100° to 101°, the patient was quite comfortable. The note at the left base behind became dull, otherwise there was very little change in the physical signs

Mr **PHILIP TURNER** showed a case of Hydrocephalus and Spina Bifida with Deformity of the Legs in a boy aged 2½ years, with talipes equinovarus of right foot and bowing inwards of the right tibia. Knee-joint in normal position, patella could be felt There was talipes equinovarus of left foot also but left thigh was externally rotated, so that the popliteal space was directed forwards The tibia was still further externally rotated, so that the foot, though actually in a position of marked equinovarus, was rotated outwards and the sole directed forwards Flexion of the knee was impossible but hyperextension could be produced to an angle of 90° The legs were not completely paralysed, though they could be moved but little The child seemed intelligent, and the vision was normal There was incontinence of urine and fæces The X rays showed that bones were all present except left patella The long bones were narrow, unduly slender, with enlarged and indefinite epiphyses There was some evidence of periostitis of the left femur

Dr **J PORTER PARKINSON** read a short paper on Suppurative Parotitis following Pneumonia in a boy, aged 3 years, in whom examination of the pus showed pneumococci and a few staphylococci. Recovery was uneventful

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BRADFORD MEDICO-CHIRURGICAL SOCIETY—A meeting of this society was held on March 16th, Dr A. Manknell being in the chair—Dr F W Eurich gave a microscopical demonstration.—Dr W Mitchell read notes of a case of Urinary Incontinence in a female cured by a para urethral injection of paraffin. The patient had sustained a rupture of the urethra during a very prolonged and difficult labour Though the urethra had been sutured and the canal remained perfectly intact afterwards, the incontinence continued and made her life miserable. Dr Mitchell then tried injecting paraffin with remarkable results, the patient being able to retain the urine from that moment and no recurrence had taken place—The case was commented on by Dr T J Wood Dr A. Bronner, and Dr Manknell and Dr Mitchell replied—Dr W Wrangham read notes on two cases of Vertigo induced by intestinal parasites Both patients were women and the symptoms were of short duration In neither case could any cause be at first assigned for the symptoms In one case a tapeworm was after a time discovered and in the other several round worms The symptoms of vertigo completely and abruptly disappeared in both cases after the worms had been evacuated Dr Wrangham thought that this was conclusive evidence that the vertigo was due in some way to the worms—Dr H J Campbell drew attention to the numerous drugs now on the market that are being used indiscriminately as purgatives by the public who seem to think that any drug credited with an action on the bowels is suitable for any and every case He reviewed shortly the action of the different purgatives and explained the principles guiding selection of a certain drug for a particular case Broadly speaking he said purgatives could be divided into vegetable and mineral the former being more generally useful in early life and the latter after middle age The vegetable drugs acted on a normal bowel and all along the bowel There was no absorption their action being entirely on the epithelial cell The mineral drugs, on the other hand acted on a bowel more or less overloaded with food and exerted their influence on the vessels, the action being that of bleeding the patient into his own bowel Great care and discrimination were required in the use of purgatives and much harm was being done by the increasing abuse of them which is growing to such an alarming extent amongst the public.—Dr Wood and Dr Wrangham discussed the paper and Dr Campbell replied.

once withdrawn, and it was decided to take the patient in and examine him under chloroform On the following day the child was duly anæsthetised When the abdominal muscles were relaxed under the chloroform it was found that the fundus of the bladder lay just above the level of the umbilicus The sounding of the bladder again failed to elicit any click, but the sound seemed to scrape against something as it entered the bladder On passing a catheter only a few drops of urine escaped An attempt was then made to distend the bladder with fluid, but without avail The bladder was at once opened by the suprapubic route No urine escaped, and it was found that the whole of the interior of the viscus was occupied by a smooth stone My colleague, Dr G V Worthington, grasped the bladder between his two hands and an assistant supported the stone with his finger in the rectum while it was being fractured with a mallet and chisel Fortunately the stone was not a very hard one, but the pieces thus fractured were far too large to be withdrawn through the small wound in the bladder wall A small lithotrite was then carefully passed around the side of the stone, between it and the bladder wall, and the female blade was slowly withdrawn until a portion of the fractured stone was grasped An assistant then hammered the top of the supported lithotrite until the blades could be locked and screwed home This manœuvre was continually repeated, and alternately the nozzle of an irrigator was introduced and the débris flushed out Eventually the lower part of the bladder was by these means completely emptied It was then thought that the rest of the stone could be pulled or pushed down from the upper portion of the bladder and more speedily dealt with However, the stone fitted so tightly into the bladder that it was impossible to move it *en masse*, and it had to be carefully nipped off bit by bit by various kinds of forceps right up to the fundus It took altogether two hours and a half to break up and evacuate the stone, the child being on the operating table two hours and three quarters For 48 hours after the operation the little patient was feverish and restless, but his subsequent recovery was uneventful The surface of this stone was smooth and its colour brown

The second case was that of a boy three years old who was admitted to hospital with a large stone on the same morning as the previous patient The stone was a mulberry calculus, extremely hard and very irregular externally The contrast between the two cases was remarkable The boy in this case was in agony, owing to the roughness of the calculus, he neither ate nor slept, and was in consequence a living skeleton The boy in the other case (whose bladder resembled a hard boiled egg, the contents of the egg being the stone and the shell the bladder wall) experienced discomfort only and was quite robust in appearance As in the former, so in this case the stone was crushed by hammering on the lithotrite, as it was too large to engage without this manœuvre, and subsequent flushing out of the debris through the suprapubic wound The boy rapidly put on flesh and convalesced uneventfully

In each case the wound in the bladder was left open and the edges were stitched to the abdominal wall No tube was used and the bladder was irrigated twice daily with warm boric lotion Urine was passed by the urethra in both cases on about the tenth day.

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION FOR THE STUDY OF DISEASE IN CHILDREN

Exhibition of Cases —Suppurative Parotitis after Pneumonia

A MEETING of this section was held on March 26th, Mr T H KELLOCK, the President, being in the chair

Dr F E BATTEN and Dr W H VON WYSS showed a case of the Atonic Form of Cerebral Diplegia (*Foerster*) The child, aged 3 years, was the first of two children, born as a breech presentation after version He had been weak from birth, and never able to stand or walk. He could sit up and hold his head straight There was some kyphosis in the sitting position He had difficulty in getting up because he could not balance properly Instead of lying down he dropped down powerless according to gravity He could move his arms and legs freely, but all his movements showed a great deal of incoördination. There was marked hypotonia of the feet, which could be bent on to the tibiæ There were hyperextension of the knee joints and a certain amount of hyperflexion of the hip-joints, also some flexor and adductor spasm. When suspended by the axillæ his legs were extended and rigid There was hypotonia of the different joints of the arms When placed on his feet he could not stand unsupported and when he attempted to walk his legs performed incoördinate movements The tendon reflexes were active. The abdominal reflexes showed a marked overflow, so that the thigh muscles contracted. The plantar reflexes gave a flexor response The muscles responded normally to galvanism and faradism The cranial nerves showed nothing abnormal The intelligence was not bad, but he could not talk properly, though he understood everything said to him The Wassermann reaction both in blood and cerebro spinal fluid was negative, and the cerebro spinal fluid showed no chemical or cytological abnormalities

Dr E G L GOFFE showed four cases of *Ichthyosis in a family of six children*. The dry, scaly condition of the skin began to show itself about two months after birth in each of the children affected Dr Goffe also showed two cases of ichthyosis in a family of five children

Dr J L BUNCH showed a case of Ichthyosis associated with Long standing Superficial Ulceration of the Tongue The patient, a boy aged 12, had had generalised ichthyosis since infancy Chronic glossitis with superficial ulceration had been present since birth, but varied in severity at different times His mental capacity was somewhat deficient

Dr EDMUND CAUTLEY showed a case of Pulmonary Regurgitation in a girl aged 15 years History of scarlet fever at nine years, and heart affection then recognised. Last August, and again in December, some pain and swelling in the hands and ankles On Dec 29th she took to bed on account of shortness of breath, for which she was admitted to the Metropolitan Hospital on Jan 8th, the pain having subsided a week previously During her stay in hospital there was no evidence of rheumatic fever, no fever, and no change in the cardiac signs She was rather high coloured, big, strong, and well developed. Her periods occurred every two weeks Enlargement of the right ventricle was shown by percussion, cardiogram, and skiagram. Over the pulmonary area a long loud diastolic murmur, most marked over the third and fourth left interspaces near the sternum, and 2 in to the left thereof, then rapidly lost in all directions, sometimes heard faintly along the right edge of the sternum There was no thrill The pulse was rather small and had no 'aortic" character, and varied from 68 to 100 per minute A blood count on Feb 12th yielded 5,270 000 red and 8600 white cells All the facts appeared to support the diagnosis of simple pulmonary regurgitation, except that the skiagram indicated displacement of the apex a little downwards and to the left, as in aortic regurgitation, but there was no evidence of the hypertrophy usually associated with aortic regurgitation and such a loud murmur Dr Cautley also showed a case of Ectromelus with Absence of Pectoral Muscles on the Right Side and one of Deformity and Wasting of the Hands with Deformity of the Feet

Dr E A COCKAYNE showed a case of Sclerodermia with Congenital Contractures and other Defects in a male infant aged 1 year Premature first child of healthy parents First seen five months ago, and found to have congenital hydrocephalus deformity of both ears, marked congenital closes with a description of most of the instruments employed in surgery It contains therefore, much that should be very useful to the student, the house surgeon, and especially to the practitioner who wishes to keep abreast of the ever advancing tide of knowledge The author, while describing the most recent methods has not omitted some of the more classical ones, which are indeed still practised by some surgeons

The book is very practical in its teaching, and evidently records the experience of a surgeon who is particularly attentive to details in his work—a matter of the greatest importance in surgery With nearly all that he says we cordially agree, but we cannot quite concur in the statement that instruments which take to pieces should be avoided. The author tells us that such instruments are liable often to fall apart when least desired This is to a certain extent true, but the tendency to fall apart at inopportune moments will rarely be exhibited if the locks are well made Instruments fixed by a screw can be as efficiently sterilised by boiling as the others, but it is very difficult to remove blood or other material which makes its way into the joint

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Clinical Diagnosis A Manual of Laboratory Methods

By JAMES CAMPBELL TODD, Ph.B M.D Professor of Pathology University of Colorado Third edition revised and enlarged. Illustrated. London and Philadelphia W B Saunders Company 1914 Pp 585 Price 12s net.

IN the review of the second edition[1] this book was welcomed as one likely to be useful to the clinical pathologist, that this has proved to be the case would seem to be indicated by its rapid appearance in a third edition. The book has been enlarged by some hundred pages and a considerable amount of new material has been added, while the original material has been carefully revised.

The practical character of the work is insisted upon by the author, and it is based on experience gained in teaching This experience leads the writer to the conclusion that the majority of the errors of students arise from an inability to use their apparatus properly or from failure to recognise artefacts, rather than from ignorance of typical structures when properly displayed. In this most teachers would agree The chapter on the use of the microscope has therefore been enlarged and a set of practical exercises has been added to assist the student to meet these difficulties As a further help to the learner use has been made of variations in size and character of type not only for the headings of sections, but also in the text to attract attention to important points in the subjects treated. The section on the urine always an important one and one containing methods not usual in English laboratories, has been completed by the addition of a simplified Volhard test for chlorides the urease method for detecting urea in urine, blood and cerebro spinal fluid, the Rimini Burnam test for formaldehyde, and the phenol sulphone phthalein test for estimating the functional activity of the kidney The section on the cerebro spinal fluid which in the second edition was rather scanty has now been rewritten and is considerably enlarged and improved. Sero diagnostic tests were not entirely neglected in previous editions but these tests and the methods employed in carrying them out now form a new and important chapter which has been contributed by Dr Ross C Whitman. The complement-fixation tests for gonorrhœa, tubercle, cancer, and syphilis are given, and the cobra venom test for syphilis and Abderhalden s protective ferment test are included With regard to the value of Abderhalden's test criticism is not only deprecated, but somewhat fiercely resented, but we may at least express doubts as to the wisdom of including such a test in its present stage of development and with its acknowledged difficulties in a text-book avowedly intended for the practitioner and student, rather than for trained laboratory workers

Further tests have been added in the section on the gastric contents, and several new staining methods are given. The illustrations, which are chiefly reproductions of microphotographs, have been increased in number and in some cases replaced by better plates, while the original frontispiece has been changed for a plate showing varieties of blood cells The printing, paper, and general appearance of the book are good, and the edition is a decided improvement on the previous one

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The Alimentary Tract A Radiographic Study

By ALFRED E BARCLAY, M.A. M.D, B C Cantab, M.R C S Eng L R.C P Lond. Medical Officer to the X Ray and Electrical Departments, Manchester Royal Infirmary &c. With 77 illustrations London Sherratt and Hughes 1915 Pp 195 Price 12s 6d net

THE work of Dr Barclay with the X rays in the investigation of disorders of the digestive system is so well and favourably known that it gives us no surprise to learn that the edition of his last work, "The Stomach and Œsophagus," was very quickly sold out In the volume now before us the above work forms the basis, though it has been enlarged and altered in keeping with subsequent experience. This has gradually taught the author that in dealing with disorders of the digestive system it is no longer possible to consider one part as distinct from the others, that the various parts from the cardiac orifice to the pelvic colon are so intimately associated with each other through their nervous mechanism as practically to constitute one organ, and that referred signs and symptoms are the rule rather than the exception. Merely to demonstrate the presence of a gastric or duodenal ulcer is now no longer sufficient, and in Dr Barclay s opinion these are most often secondary manifestations of disease elsewhere Thus it has become necessary to extend this volume so as to take in the whole of the alimentary tract The subject is as yet far from being worked out to finality, if, indeed, it can be said that we are not near the beginning, and this study of radiography will be no more than one of the milestones on the way, though a very important one

All through this book we are impressed by the judgment with which observations are recorded and by the care taken in the conclusions to be drawn therefrom, the author being his own most severe critic while a generous one to the opinions of others In dealing with the subject of the ileo pyloric reflex he confesses himself unable to recognise Lane s kink radiographically, or to regard it as a cause of either ileal stasis or of this ileo pyloric reflex—an interesting remark considering how much has been said on this matter by some radiologists

It would serve no purpose to pick out any part of the book for special remark, it is one that must be studied as a whole, and if it shows

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[1] THE LANCET 1912, vol. ii, p 15.

Reviews and Notices of Books.

A Surgeon in Belgium

By H S SOUTTAR, F R C S Eng London Edward Arnold 1915 Pp 217 Price 8s 6d net

Mr Souttar was until recently surgeon in chief to the British Field Hospital for Belgium This hospital started work in Antwerp, and when driven out by the fall of that city moved to Furnes, a little town about 15 miles east of Dunkirk From there, owing to the German advance, it moved to Poperinghe, about 15 miles south of Furnes in the direction of Ypres, and finally it was moved back to Furnes, where it still was in January of the current year Anyone who wishes to read a tale of simple, unaffected heroism on the part of patients, doctors, nurses, bearers, and non medical helpers, priests, nuns, and the incomparable lady whom Mr Souttar calls "Madame," had better read this book at once It is written in simple easy English, it is vivid and informing, and its pictures of the absolutely wanton, and purposeless devastation wrought at Louvain, Termonde, Ypres, and other places should bring home to everyone for what a righteous cause we and our Allies are fighting and what a practically unpayable debt we owe to Belgium

As to the purely professional work of the hospital it was very successful, and one great element of success was, as Mr Souttar says in his chapter "Some Conclusions," that the hospital being "always close to the front, we received our cases at the earliest possible moment, and could deal with them practically first hand" Naturally nearly every wound was infected and generally soiled by "earth, manure, fragments of cloth covered with mud" In Mr Souttar's experience, however, infection with tetanus and other virulent organisms was rare Many of the wounds were excessively foul and these were treated by solutions of oxygen, and when protected with a thin piece of gauze, by being exposed to the open air, "the results were almost magical, for in two or three days the wounds lost their odour and began to look clean, while the patients lost all signs of the poisoning which had been so marked before It may be partly to this that we owe the fact that we never had a case of tetanus"

An interesting phase of modern war surgery is the manner in which severe compound fractures were treated Many of these were fractures of the femur, with a large infected wound, and several inches of the bone blown clean away At first these cases were regarded with horror, splints proved unmanageable, the wounds had to be dressed, and any movement meant agony for the patient So Mr Souttar and his colleagues took to applying steel plates, and this somewhat bold stroke met with deserved reward, for, in Mr Souttar's words, "Not only could the limb be handled now as if there were no fracture at all, to the infinite comfort of the patient, but the wounds themselves cleared up with great rapidity" So well did they do, that on the night of the bombardment of Antwerp one patient who had been operated upon for this condition only ten days previously walked down stairs with the aid of a dresser's arm

The case narrated on p 16 is a wonderful example of what good prompt surgery will do for a man with pluck and a sound constitution. The war has given rise to many instances of heroism and self sacrifice, but perhaps to none finer than this of the Belgian officer who, with a hideous shell wound of the abdomen, dragged himself and a wounded companion for nearly a mile, crawling on his hands and knees When too exhausted to drag his friend any more he left him under a hedge and managed to crawl for another half a mile, when he obtained help At death's door he was brought to the hospital and treated, part of the operation consisting in making a short circuit Three weeks later he was left in Ghent "to all intents perfectly well"

As journalists, too, our hearts go out to our colleague, "the editor of a well known sporting journal in England" He was serving as a machine gunner on an armoured car and got shot through both tibiæ when standing at the back of the car The driver not realising this started the car, whereupon the editor just had time to catch hold of one of the rear springs, and in this position, with two broken legs, he was dragged along the road for half a mile When found he was unconscious and bruised all over He was brought into hospital and did well

Not only can Mr Souttar write well on professional matters, but he has the power of making the devastation of war seem very real For instance, of Termonde, the town which the Germans deliberately burned, he says "No words can ever convey any idea of the utter destruction of the whole town or of the awful loneliness by which one was surrounded One felt that one was in the presence of wickedness such as the world has rarely seen, that the powers of darkness were very near, and that behind those blackened walls there lurked evil forms One could almost hear the Devil laughing at the handiwork of his children"

We will end our notice of a first rate book by giving an anecdote told by Mr Souttar as a counterpoise to the heavy weight of wickedness accumulated by the Germans in their treatment of Belgium The story is told at p 197 and is shortly this About half a mile out of Pervyse was a farm held by a Belgian outpost, and half a mile beyond this were two other farms held by Germans One morning news was brought to Pervyse that some of the men at the outpost had been injured Nothing could be done till nightfall as the road (the only one across the flooded land) was swept by German guns Then two priests went out to the farm where they found the wounded beyond their powers of carriage They went on to the farms in the enemy's occupation and asked for help We give the rest of the story in Mr Souttar's own words "A few minutes later the astounded Belgians saw a little procession coming up the road In front walked the two priests, and behind them came four wounded Belgians, lying on stretchers carried by German soldiers They came right into the lines and they had a royal welcome They all shook hands, and the little party of Germans walked back down the road amid the cheers of their opponents" Such deeds as this throw a light amid the dark places of war

Surgical Materials and their Uses

By ALEXANDER MACLENNAN, M B, C M Glasg, Visiting Surgeon Royal Hospital for Sick Children, Glasgow, &c With 277 diagrams and illustrations London Edward Arnold 1915 Pp 252 Price 4s 6d net

THIS little book is based on lectures given to students of the Western Infirmary, Glasgow It includes an account of the various bandages, splints, dressings, sutures, and ligatures, also the methods of antisepsis and asepsis are described, and it

THE LANCET.

LONDON SATURDAY, APRIL 10, 1915

The Medical Needs of the Army

THE appeal of Sir ALFRED KEOGH, Director General of the Army Medical Service, for medical men to meet the needs of the army[1] has not, we fear, been met with quite the alacrity which it deserved, though we have his acknowledgment that a very satisfactory number of applications have been received. That more men have not as yet applied has been due, perhaps, to the fact that the forms which are supplied from the War Office to qualified medical men wishing to obtain a medical commission in the Royal Army Medical Corps are not as informing as they might be, and certainly to the other fact that no special mention was made of the possibility of the employment of part-time service. Sir ALFRED KEOGH's description of what he looked for was perfectly clear and simple, as far as it went. "We want," he said, "every qualified man who is physically fit and willing to serve." He mentioned the special need for general practitioners, though immediate employment could, he added, be given to all suitable men, "expert surgeons, ophthalmologists, radiographers, &c." The Director General stated plainly that the emergency was a national one, and that while there was no desire to denude the country of civil practitioners, he hoped that every man who could arrange to have his work done at home would come forward at once to keep up an adequate supply of medical service in the field.

We have had many communications arising directly out of Sir ALFRED KEOGH's appeal, while we know that not only our contemporary, the *British Medical Journal*, but also many lay papers have similarly received letters from medical men desirous of helping but uncertain how they could do so exactly. Those who were prepared to accept whole time service were confused by the different conditions for commissions in the Royal Army Medical Corps and for Territorial commissions, and letters which have found their way into the press have not cleared up the difficulties. The three varieties of commissions available—viz., the two indicated and the R.A.M.C. Special Reserve—present differences in pay and employment which are not so easy for the layman to deal with as the military mind might conceive, but at the same time we are bound to say that we think many of the medical men who are anxious to serve would find these difficulties could be got over if they were willing not to hedge their offers round with too close reservations. We know that many such medical men, however, must be prepared to make large sacrifices. What we would urge them to believe is that the War Office is only too anxious to obtain their assistance, and fully recognises that, in many cases, their aid must be forthcoming at both certain loss and possible risk to themselves. There has, moreover, been a widespread feeling, and one which has been openly alluded to in our columns, that in certain localities our forces were not only well supplied but over supplied with medical officers, so that what was required was perhaps rather a re-sorting of material than the recruiting of new men. In Scotland, largely through the energy and initiative of Dr. NORMAN WALKER, the convener of the Scottish Medical Service Emergency Committee,[2] there has been a brave attempt at organising the medical profession in such a way that those who joined the army should have their interests cared for by their brethren remaining behind, a certain proportion of the pecuniary risk run by those who were with the colours thus being obviated, but hitherto in England no attempt of the kind has been made. These are the things which have possibly kept many very suitable medical men from responding immediately to Sir ALFRED KEOGH's appeal, while the inability, apparently, to make use of the part-time services of the general practitioner has also helped to leave the army short handed. The following is an extract of a letter which we received this week, and which we reproduce because it exactly expresses the feelings of many general practitioners:—

> "I am wondering," writes a valued correspondent, "what is likely to be in process of arrangement *apropos* of the dearth of doctors and the possibilities of having to make use of part-time service men. I cannot leave my practice, but I should be glad to be useful if possible by giving certain hours on certain days or indeed every day. In order to meet the emergencies of general practice I could arrange with a neighbouring doctor, a friend, that one of us would be always available at arranged times within some reasonable distance of the road in which we live to carry out medical duties under orders. I have no doubt there are many situated as I am with no experience of the military side of the R.A.M.C., who are only awaiting the chance of making themselves useful in this emergency."

There were, as our correspondent guesses, many practitioners whose thoughts were running in exactly his own grooves. Doubt as to the conditions of military service, doubt as to the real need for their help, and doubt as to the possibility of giving to the army a part of their professional time—these things accounted for many abstentions.

Such was the position when just before Easter it was decided by the British Medical Association to invite Sir ALFRED KEOGH to a conference with a special committee of the Association. The Director General accepted the invitation and, accompanied by Colonel A. P. BLENKINSOP, the Assistant Director General in charge of questions of personnel, met the committee of the British Medical some lack of system in its arrangement, this is easily accounted for by the transitional stage through which our knowledge is passing We advise those interested in disorders of the digestive system—and that must surely include all medical practitioners—to study this book carefully

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[1] THE LANCET, March 13, 1915, p. 572.

[2] THE LANCET, [illegible] p. 552.

JOURNALS

Quarterly Journal of Experimental Physiology Editors, E A. SCHÄFER W D HALLIBURTON, C S SHERRINGTON, E H STARLING, and A D WALLER Vol VIII, No 4 London Charles Griffin and Co, Limited 1915 Pp 303–397 Price 7s 6d.—Researches on the Perfused Heart Some Effects of Sodium Chloride, by W Burridge This is a very elaborate, well illustrated, and illuminating contribution It is well known that the perfusion of isotonic sodium chloride through the frog's heart leads to its arrest in diastole and loss of electrical excitability, and that isotonic sodium chloride is not an indifferent substance for muscle The author, whose experiments were made on the frog's heart, shows that sodium chloride has an action in determining the sensitiveness of the reactions of the heart to a given concentration of calcium salts An active displacement of calcium salts by sodium is a factor in the production of the diastolic failure which follows perfusion of isotonic sodium chloride through the frog's heart The salts of sodium and calcium are antagonistic in regard to their mutual adsorption on the surface of certain of the heart colloids (surface effects), they are antagonistic in regard to the changes in the state of aggregation each induces in those same colloids (deep effects) The state induced by calcium is one unfavourable to its own activity in its function of tonus production, the state of aggregation induced by sodium favours these latter functions of calcium The favouring action of sodium on these calcium functions outweighs its antagonism Hence, if the amount of sodium chloride in a perfusing solution be increased, the effective action, in certain directions, of the calcium salts already present in that solution will also be increased, but at a distinctly later period, and *vice versâ*.—On the Relation between Calcium Salts and Alkalies of the Perfused Heart, by W Burridge That traces of alkali in the perfusing fluid cause arrest of the frog's heart in the systolic phase is well known The author finds that 1. The increased tonus which follows the addition of traces of alkali to a solution perfusing the heart is dependent on the calcium salts in the perfusing solution 2 It is suggested that this action of the alkali is mediated by a change in the state of aggregation of some of the heart colloids 3 It is shown that the action of the alkali in inducing changes whereby the effective action of a given concentration of calcium in producing tonus is increased is antagonised by calcium salts 4 It is suggested that calcium salts induce a state of aggregation in certain heart colloids which is unfavourable to their own activity in producing tonus 5 It is shown that alkalies first prolong and then shorten the refractory period of the heart, and that a marked summation of contractions is made possible.—Experiments on the Effect of Low Temperatures on the Frog, by A T Cameron.—On the Movements of the Isolated Small Intestine and the Action of Various Drugs and Extracts upon Them by Alexander Waugh Young The gut of the cat was found most suitable Pieces of a certain length were placed in a modified Ringer's fluid and the movements recorded The method employed for these isolated pieces of intestine was a modification of that of Magnus A large number of substances were studied We only refer now to a few of them Carbon dioxide has an inhibitory action on both the tone and movements of the intestine If the action of CO_2 is prolonged the intestine is permanently injured and eventually killed Hyoscyamine has a stimulating action, it can initiate the movements when they are absent The pendulum movements are increased in size and made more regular the tonus oscillations being partially or completely abolished Stimulation is seen with 0 001 per cent of concentration Hyoscine has an action similar to that of hyoscyamine, but it is weaker, 0 02 per cent being the weakest concentration having a distinct action. Both drugs inhibit the stimulation produced by pilocarpine Cocaine has a stimulating action in strength rom 0 001 per cent to 0 01 per cent, with higher concen ion no stimulation is seen, but a marked regularising effect then appears, with 0 2 per cent a paralysing of the intestine comes on Inhibition of the action of pilocarpine does not occur Choline produces a marked rise of tone in the isolated intestine, this occurs with a concentration of 1 in 50 000, with high concentration the pendulum movements are obliterated Atropine inhibits the action There is also mutual antagonism between the actions of choline and adrenalin Neurine in its action resembles choline, but is more powerful, 1 in 100,000 produces an effect Watery extract of the posterior lobe of the pituitary body has the effect of raising the tone and causing the development of large tonus oscillations The action occurs only with high concentrations, thus two glands per 100 c c of Ringer's solution is the weakest extract to give definite results Alcoholic extract has no action Hemisine causes inhibition of the movements and lowering of the tone of the intestine, 1 in 10,000 000 produces a small but distinct effect Extracts of spleen, thyroid and thymus, pancreas, liver, kidney, and brain give no definite results Stomach contents inhibit the movements by their acidity alone The contents of the small intestine have often a marked stimulating effect apart from, but to a considerable degree influenced by, their reaction Extract of digesting gastric mucous membrane and of mucous membrane of small intestine, and also secretin, have, when neutralised, no definite action. Pancreatic secretion increases the tone Indol inhibits the movements and lowers the tone Bile has a similar action.—The Mode of Action of Pituitary Extract on the Mammary Gland, by Sutherland Simpson and Reuben L Hill The galactagogue action of the posterior lobe of the pituitary body (pituitrin) in lactating animals is now well recognised If the action, which occurs 20 to 30 seconds after injection, is on the smooth muscle the result would be due to expulsion of the secretion already in the gland rather than to increased secretion Two lactating bitches were used The authors conclude that the flow of milk which follows the injection of pituitary extract is due to the action of the extract on the secretory mechanism of the gland and not on its muscular tissue, since barium chloride, which is a specific stimulant for muscle, produces no increase in milk flow It is conceivable that the barium salt may inhibit the secretion of milk, although no such action is claimed for it, but this supposition is ruled out by the fact that the gland responds actively to pituitrin within three minutes after the injection of barium. E A. Schäfer adds a note on the paper of Simpson and Hill. He favours the view that the complete emptying of a gland which obtains after an adequate injection can best be explained by supposing the existence of contractile tissue in the walls of the alveoli.—The Pyramidal Tract in the Striped Gopher (Spermophilus Tridecemlineatus—Mitchell) by Sutherland Simpson We must refer the reader to the original paper, and the same must apply to two short papers on the Lipoid Content of Vascular Epithelium and of Peritoneal Epithelium by John Tait and William Campbell

British Dental Journal.—In the March 15th issue of this journal there is an interesting paper by Mr C E Wallis on Ancient and Modern Dentistry He tells us that "extraction" was first recommended about the year 1300 B C, while he refers also to the skill displayed by the Etruscans in the manufacture of gold dental bridges and similar appliances to replace lost teeth He points out the influence of Fauchard Heister, and Moaton on modern dentistry and deals with the introduction of nitrous oxide In a paper on Toxæmia of Oral Origin, Sir Rickman Godlee utters a word of warning against the reckless removal of all the teeth in cases of general disease suspected to be due to mouth infection There is a paper by Mr C Every Brown on the Treatment of Sensitive Cavities

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DONATIONS AND BEQUESTS.—The late Mr William Richmond has left his residence and grounds at Lancaster to the Royal Lancaster Infirmary and, subject to certain devises of real estate and legacies to relatives and friends the net residue of his estate will be paid over to the trustees of the infirmary for founding endowing, and maintaining a convalescent home to be called the Richmond Convalescent Home.—The late Mrs Elizabeth Ellen Hopkinson, of Chesterfield Derbyshire has left by will £1000 to the Chesterfield and North Derbyshire Hospital and Infirmary.—The late Mrs Elizabeth Winstanley of Southport has bequeathed £1000 to the Chorley Dispensary and Rawcliffe Hospital, Gillibrand street freely admitted that the life of routine in a suitable convalescent home offers the best prospects The home would require to be under military discipline, since the cheeriness of the convalescent soldier might be misunderstood and even be troublesome in a home where civilians were received With judicious management and understanding the convalescent soldier is a most delightful being, but he requires just a little control occasionally, and to be effective this control must be exerted by someone whose authority he respects The difficulty of arranging for continuous supervision is perhaps the reason why so many of the offers of convalescent treatment have not been accepted by the authorities at the War Office It might perhaps be possible to arrange for a non commissioned officer to be responsible for due observance of regulations in small convalescent homes, but it is probable that more satisfactory results would be attained by the formation of larger homes, which should be under the management of permanent officials with military rank On leaving such homes the men should be physically fit for service and should only be entitled to such further furlough as is necessitated by their work in the front While under convalescent treatment in a home, or while on furlough subsequently, there can be no doubt of the importance of a sufficiently liberal diet or of strict limitation of alcohol

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Compulsory Notification of Measles, Rubella, and Whooping-cough

A CIRCULAR which has been issued by the Local Government Board to local authorities states that the central department is willing, on the application of any sanitary authority, to make compulsorily notifiable the first case of measles, German measles, or whooping cough which occurs in a household in the district concerned It becomes important, therefore, to consider the advantages which the adoption of local notification of these diseases is likely to secure

It is not at all probable that notification can lead to much diminution in their prevalence or in their regular recurrence at epidemic periods All three diseases are highly infectious during the days before the characteristic symptoms lead to medical aid being called, and the ability to infect will in most cases have been freely exercised before any intimation can have reached the local authority The notification of measles has, in fact, been tried in a large number of areas in the past, and in many cases has been abandoned on the ground that no appreciable impression was made on the figures of measles prevalence, and that no obvious benefit resulted from the considerable sum spent on notification fees Judged by the standard of prevalence notification of whooping cough and of rubella would probably be equally disappointing There is, however, another side to the case Taking the 1912 return of the Registrar General for England and Wales as an example, measles caused 12,756 deaths in the year and whooping-cough 8407 deaths, and these figures were not exceptionally large Local health authorities and the public generally have become alive to the seriousness of the measles and whooping cough factors in the death rate, and besides this are realising the large amount of invalidity, particularly that due to ear mischief, which results from the complications of measles and secondary septic infections The frequency with which tuberculosis supervenes on attacks of both diseases is also well known In respect of fatality and of complications there is a very striking contrast between children of more well to do parents—who can be isolated in airy rooms, receive adequate medical and nursing aid, and be well looked after and fed during convalescence—and the children of working class households who are usually under much less favourable conditions Public health authorities can set themselves to reduce the handicap of the latter class Owing to the numbers concerned routine treatment of measles in isolation hospitals is hardly practicable, though these hospitals should be available for special cases But much can be done by systematic and frequent domiciliary visits of trained nurses, and by health visitors under medical supervision, to see that in working class homes the best available conditions are secured during illness and convalescence, and that medical advice and other practical assistance are obtained where needed Authorities prepared to make arrangements on these lines will find the adoption of compulsory notification of great assistance to the work.

The system in the case of measles, rubella and whooping cough is, however, exceptional in that no approach to completeness can be expected unless parents themselves accept the obligation to notify As a strict matter of law, parents are already liable under the Notification Acts, in addition to the medical practitioner, for notification of the diseases to which these Acts apply, but in practice this obligation has seldom been enforced or recognised to be binding It will be important to ascertain by experience how far notification by parents can be successfully pressed in regard to the diseases here in question, as it may well be the case that the children needing the greatest amount of attention will be found in households where notification requirements have been neglected

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BY the will of the late Mr George Stowell, of Great Torrington the testator left subject to the life interest of his wife £1000 to the trustees of Epsom College upon trust to pay the income for one year to a boy who shall have been educated at the school for five years, to enable him to further his training

Association on Thursday, April 1st, when he made a statement which should, in our opinion, go far to clear up the existing difficulties Dealing in the first place with the widespread conviction that there was an abundant surplus of medical officers in some places at home, he pointed out that such surplus was only apparent, and that there was a place for every one of the men now holding commissions to serve with units which would be sent abroad probably in a very short time He assured the meeting that when everything that distribution could effect had been done, there would remain a serious shortage of whole time medical officers to serve with the troops wherever they might be sent He then made the statement, which appears on p 775 of this issue of THE LANCET, wherein, while warmly acknowledging the assistance already received from the civil medical practitioners of the country, he accepted the fact that the help now required must be given upon the part time principle Mr T JENNER VERRALL, the Chairman of Representative Meetings of the British Medical Association, promised that the Association would do all in its power to arrange some scheme of mutual aid, while medical men have before them the excellent example of the Scottish Medical Service Emergency Committee as a guide We feel certain that medical men who respond to Sir ALFRED KEOGH'S repeated invitation to apply to the War Office, if they desire to help the country at this juncture, will find that any doubts they may have as to the conditions of service will be removed The conditions may call upon their patriotism, but they need not also be a puzzle to their intelligence

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Convalescence and Sick Leave in the Army

EARLY in the war a wave of pity led many to prepare to do their best for wounded soldiers Throughout the kingdom in private dwellings preparations were made for the reception of small numbers of men, in pathetic ignorance of the difficulties that might be encountered if they ever arrived Our benevolent citizens could scarcely be expected to realise that the cordiality of their move might be embarrassing or even unwelcome to the authorities The offer of kindly treatment, of good food and surroundings, and of personal devotion seemed to mean so much when freely tendered that officialdom was blamed unjustly when the days passed without any tangible recognition Numbers of wounded arrived in this country, were treated in hospital, and then, so far as the members of the public were aware, they were sent out on sick furlough and returned to their homes, where the conditions must frequently be far from the ideal of convalescence In the near future the pressure on the accommodation available at the hospitals will induce a natural tendency to discharge the wounded or sick soldier on sick leave at the earliest moment possible, but it will be mainly to convalescent institutions that he will go Private hospitality is too devoid of regulation to be useful, while the unsatisfactory nature of the food in the homes of the soldiers on sick furlough makes reception by their families inadvisable

There is perhaps no subject upon which medical advice is more frequently sought than the question of the best method of bridging over the interval which must occur between the bed of sickness and the activity of daily life For ordinary patients this interval is half way between the control of the physician and the resumption of whatever free will is permitted by the ordinary occupation During the interval the control of authority is relaxed to some extent, while by degrees the convalescent man feels that, with returning strength, he is fit to run alone Though the control is relaxed advice is desired The medical man is asked where the time of convalescence should be spent, how the days should be occupied, what treatment, if any, should be continued, what rules of life should be followed. The answers to all these questions are dependent on the nature of the previous illness, and to a great extent they must vary with the circumstances of the patient In general terms it may be thought to be sufficient to advise a convalescent home for those who have been inmates of hospitals Further inquiry, however, soon shows the limits of this panacea. Many convalescent homes rigidly restrict the class of patients to be admitted, apart from questions of surgical dressings or continued surgical treatment, it is often found that the patients in convalescent homes are required to be able to perform various personal services For those more happily circumstanced, medical men are asked to consider whether the time of convalescence is to be spent at some specially selected place, or whether it may not be more conducive to quick recovery for the patient to go to friends living in the country Undoubtedly sympathy and kindly intercourse are factors which must often be reckoned with They are of inestimable service when they tend to distract from the memories of the period of danger, they may be positively harmful if, through lack of tact, they encourage gloomy reminiscences

The soldier on sick furlough occupies a position which is scarcely comparable to that of a civilian It may be assumed that his wounds or illnesses have not been sufficiently disabling to remove all hope of future service, and it therefore is desirable, in the interest of the nation, that he should be restored to efficiency at the earliest date On the other hand, if he is one who has returned from foreign service he has earned a furlough which he might legitimately desire to spend with his wife and family Provided that this can be accomplished without impairing his efficiency, the dictates of humanity would offer no obstacle Speedy restoration must, however, be the first consideration, and for this it must, we think, be lights on vehicles, can be said to have had any marked effect in augmenting the danger to pedestrians and to others inseparable from motor driven and other vehicles Horse drawn vehicles in any case grow fewer and so do the accidents which they cause The deaths officially ascribed to them in England and Wales during 1914 numbered 520, as against 554 in 1913, in Scotland 64, as against 86, and in Ireland 49, as against 84 Probably the demand for horses for war purposes, as well as the increase of motor traffic, must be taken into account in connexion with this diminution, but we must also remember, when considering the number of accidents in which motor vehicles have played a part, that in the last months of 1914 an enormous number of our private and other vehicles were already at work on the continent In England and Wales the number of accidents due to motor vehicles and reported to the police were, in 1914 fatal 1334, non fatal 29,891, in 1913 fatal 1189, non fatal 26,135 The corresponding figures for Scotland are 1914 fatal 142, non fatal 2308, 1913 fatal 133, non fatal 2064, and for Ireland 1914 fatal 53, non fatal 873, 1913 fatal 53 non fatal 728 The total increase of accidents due to vehicles of all kinds amounts to 63 so far as fatal accidents are concerned, and to 3994 with regard to non fatal accidents It may be suggested that of these the numbers which relate to deaths are likely to be more uniformly accurate than those tabulated with regard to non fatal accident Even a severe accident not causing death may never come within the cognisance of the police, and the proportion of accidents thus escaping record must vary according to local circumstances Be this as it may, the latest police statistics of accidents show an increase which may or may not continue in future years, and, as has been suggested, the war has afforded at least one cause for an upward movement, while another would be an increase, also due to war, in the number of inexperienced drivers Both these circumstances will have existed in even greater degree during the past three months than during the closing quarter of 1914, but, on the other hand, we must not forget the fact, referred to above, that a very large number of vehicles which otherwise would be circulating upon the highways of the United Kingdom are now abroad Upon the whole, therefore, it may be wiser to wait until peace has restored normal conditions and not to draw inferences rashly from the figures above quoted, but merely to note that there is an increase in the number of accidents This must be to some extent due to the popularity and usefulness of the motor propelled vehicle having increased the number of vehicles on our roads, and has not been necessarily caused by any general negligence on the part of drivers or by any dangerous qualities inherent in this form of locomotion

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"Ne quid nimis."

THE ALCOHOL QUESTION IN RELATION TO THE ALCOHOLIC STRENGTH OF BEVERAGES.

THERE appears to be a considerable amount of misapprehension in the public mind as to the alcohol value respectively of spirits, wines, and other beverages. Strictly speaking, a total prohibition order would exclude all fermented beverages, including ginger beer (made with yeast, sugar, and ginger), which may reach an absolute alcohol strength of 2 or 3 per cent. by volume. No beverage, of course, which has been fermented can be free from alcohol. On the other hand, there are a number of effervescing beverages—e.g., ginger ale, lemonade, "tonic" water—which are not fermented at all; they are simply solutions or infusions of the various ingredients aerated with carbonic acid gas under a small pressure. Broadly speaking, alcoholic beverages can be divided into the following groups in the order of their alcoholic strength: Spirits—whisky, gin, brandy, and rum containing about 50 per cent. of alcohol by volume; fortified wines—port, sherry, and madeira containing about 23 per cent. of alcohol by volume; unfortified or the so-called natural wines—some pale sherry, claret, moselle, hock, burgundy, and sauterne containing approximately 12 to 13 per cent. of alcohol by volume. In this group may be included champagne and saumur and sparkling hock, although these may be slightly liqueured. We find, however, that they seldom contain more than 14 per cent. of alcohol by volume. The last group comprises cider, perry, and beer. The alcoholic strength of cider is about that of light beers—viz., approximately 6 per cent. by volume of alcohol. There are, however, two classes of beer, the heavy or high gravity beers and the low gravity or light beers, the former containing about 2 per cent. by volume more of alcohol. The foregoing figures have been obtained in our own laboratory and have been often tested. It is important to remember that beers are sharply distinguished from all other alcoholic liquors inasmuch as they contain a decided amount of nourishing material in the shape of carbohydrates and proteins derived from the malt. The absorption of alcohol is retarded in the presence of food substances and also by free dilution with water. Recent events appear to show that owing to the extra taxation of beer there has been a decided decrease in its consumption and a corresponding increase in the consumption of spirits and especially of whisky. There are reasons for believing that the very cheapest and immature whiskies have thus replaced the much more wholesome malt liquor. If that is the case the extra taxation of beer with the object of gaining increased revenue was unfortunate. The brewing industry, especially if it be confined to brewing light beers, is much less likely to do harm than the distilling industry, which is bound by statute to keep up its product to a very high alcoholic strength. Of wines, a pure natural claret is undoubtedly the most wholesome, and the best non-alcoholic beverage is "dry" ginger ale.

ANGELO CELLI.

THE Roman Società per gli Studi della Malaria (writes an Italian correspondent) has undertaken to erect a monument to the memory of the late professor of State hygiene, Dr. Angelo Celli, to attest its appreciation of his work as the inspiring and guiding spirit of the society in question. The site of the memorial will be a commanding spot in the Agro Romano, to the rehabilitation of which, in a sanitary as well as an agricultural sense, Dr. Celli contributed so assiduously and so well.

GENITAL INFECTION IN LEPROSY.

THERE is a widespread belief among some native races, the Chinese and Japanese, for instance, that impure sexual contact plays a part in the spread of leprosy. Our contemporary, the *American Journal of Tropical Diseases and Preventive Medicine*, has, in an editorial article in a recent number, called attention to this subject. At the present time our knowledge of the ways by which the disease is propagated is defective, and as a consequence it is possible that our efforts to prevent it may not be altogether carried out in the proper directions. The presence in lepers of nasal discharges containing the bacillus lepræ has been regarded as probably concerned in the diffusion of the malady. A few writers on leprosy have at times expressed the opinion that unclean sexual intercourse may be responsible in some cases for the development of the infection, but it cannot be said that hitherto any very convincing facts have been reported to support this view. The article to which we have referred above brings forward some evidence bearing upon the point, and quotes the statements of Dr. E. Jeanselme in the *Bulletin de la Société de Médecine Exotique*. Sometimes, it is alleged, lepromata form in or near the genital organs, and in certain instances pus containing "myriads" of B. lepræ can be squeezed from the urinary meatus. Dr. Jeanselme describes the case of a South American leper living in France upon whose glans penis lepromata were present encroaching upon the meatus, and who had suffered for some time from difficulty in passing his urine. From the urethral discharge of this patient Hansen's bacilli were obtained. In this instance the bacilliferous urethritis was of the gravest importance, since the man was still at the height of his sexual activity. It is suggested that leprous urethritis is not so rare as is commonly supposed, and careful examination would probably often reveal its existence in unsuspected cases. In the later stages of leprosy the sexual powers decline, but they are active in the earlier period of the disease. Systematic examination is proposed in all cases, and where urethral discharge is present it is recommended that the patient should be strictly isolated to prevent any further mischief to others.

STREET ACCIDENTS CAUSED BY VEHICLES.

A RECENT return showing the number of accidents resulting in death or personal injury known by the police to have been caused by vehicles in streets, roads, or public places during 1914 comprises a period during which in London and in many sea-coast towns street lighting at night has been diminished or forbidden. To some extent this incident of war may account for a rather marked increase in the number of accidents which took place during last year as compared with 1913, and it will be of some interest to observe, when the statistics of 1915 are published, whether an increase in the number of darkened areas, and in the strictness of the regulations as to this measure of precaution, as well as with regard to manufacturers are misleading, since the statement "physiologically standardised" means practically nothing The tests employed were those known as the isolated uterus method, and by these tests it was found that of two preparations claiming to be of the same strength one was 7 5 times stronger than the other Altogether 11 different samples were collected, representing the product from six different manufacturers They were all bought in the open market in sealed packages, and were kept in their original package in a cool dark place until used The examination of these samples by the blood pressure method and the intact-uterus and isolated uterus methods showed them to possess a wide range of physiological activity, the ratio of variability between the strongest and weakest by the blood pressure method being 15 to 1, by the intact uterus method about 10 to 1, and by the isolated uterus method about 7 to 1 The article concludes that the need for uniformity in the strength of commercial pituitary preparations has been made apparent Incidentally it may be remarked that these experiments have also demonstrated the unreliability of some of the commercial claims connected with "physiological standardisation" and the urgent need of some central bureau of control before any reliance can be placed on the label

AUTOPLASTIC OVARIAN TRANSPLANTATION

THE number of cases of ovarian transplantation recorded is so limited that every case is of value In the *Medical Journal of Australia* Dr J H. Nattras has reported the following case A married woman, aged 17 years, was admitted for her confinement to the Women's Hospital, Melbourne, on March 5th, 1911 She had suffered from hip and spinal disease for ten years and had not walked, except with crutches, since the age of 7 years Menstruation occurred regularly until May 15th, 1910, and then ceased The right lower extremity was 12 inches shorter than the left and much atrophied The hip joint was ankylosed with the thigh flexed and fixed in a position over the middle line There was a tuberculous sinus over the right trochanter, and scars from healed sinuses were present over the lower lumbar vertebræ and right buttock The appearance of the abdomen was consistent with pregnancy at term The fœtus was alive and apparently below the average size, but there was not the slightest engagement of the head in the pelvic brim Examination per vaginam showed a generally contracted pelvis, especially in the true conjugate diameter, which was 3 inches, and the transverse diameter of the outlet, which barely admitted three fingers As natural delivery was impossible it was decided to perform Cæsarean section and in consequence of the tuberculous condition of the patient and her deformities, to sterilise her by transplanting the ovaries As 294 days had passed since the commencement of the last menstruation the operation was performed without delay On March 7th, 1911, a full time female child, weighing 6 lb, was removed The ovaries were excised and immediately placed in normal saline solution at 98 4 F Each ovary was incompletely divided longitudinally through its hilum As much ovarian stroma was cut away as possible with curved scissors, because a transplanted ovary degenerates to an extent directly proportionate to its thickness and density By sacrificing the fibrous stroma the ovum bearing part is more easily nourished Each ovary being thus prepared under saline solution, the sheath was separated from the anterior surface of the left rectus muscle until the outer border of the muscle was free With catgut sutures the surface of the incompletely divided left ovary was fixed on the muscle border so as to form a sandwich with it The cut surface of the right ovary was fixed with catgut to the right external oblique muscle about 2 inches from the middle line Recovery was uninterrupted The patient suckled the baby for nearly five months, until the first week of August On Sept 24th menstruation recommenced and was fairly regular Sometimes the patient knew she was about to menstruate by tenderness in one of the grafted ovaries, usually in the subcutaneous one She thought that the ovaries swelled on these occasions Three and a half years after the operation the subcutaneous graft could be easily felt, and a sickening sensation was produced by palpation The left ovary, which was placed more deeply, could not be palpated definitely, but a spot could be found pressure on which caused a sickening sensation This sensation and occasional pain on menstruation seemed to indicate the development of nerves in the graft similar to the development of blood vessels, which is known to occur The patient looked well, the uterus was of normal size, and there were no symptoms of the menopause As an example of successful ovarian transplantation the case is of great interest, but it may be suggested, as is done by Mr A N McArthur in a subsequent issue of the same journal, that sterilisation could have been effected by the much simpler operation of resecting the tubes

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Dr Henry Lewis Jones, consulting medical officer to the electrical department at St Bartholomew's Hospital, died at his residence, 143, Harley street, W, on Easter Day Dr Lewis Jones was the best known authority in this country on the electrical treatment of disease, he was a pioneer, and remained in the van He had been in ill health for some considerable time, and the recent death of his only son while on active service no doubt hastened his death at the age of 58 years

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THE King has given to Dr David James Galloway His Majesty s Royal licence and authority to wear the Insignia of the First Class of the Order of the Crown of Johore, conferred upon him by His Highness the Sultan of Johore in recognition of valuable services rendered as physician extraordinary to His Highness

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METROPOLITAN ASYLUMS BOARD —A three months course of lectures and demonstrations in hospital administration for the Diploma in Public Health will be given as follows (1) At the North Western Hospital Lawn road, Hampstead, N W by Dr J MacCombie medical superintendent on Mondays and Thursdays, at 5 P M, beginning Monday April 12th, and (2) at the Grove Hospital Tooting grove Tooting Graveney, S W, by Dr J E. Beggs D P H medical superintendent on Mondays and Thursdays at 5 P M beginning Monday, April 12th. The fee for the course is £3 3s Cheques should be made payable to the Metropolitan Asylums Board' Medical men desiring to attend a course of instruction are required before attending at the hospital to pay the above mentioned fee to Mr T Duncombe Mann, clerk to the Metropolitan Asylums Board Embankment, E C, giving their full name and address rather than an infection, if one can judge from the rapid disappearance of symptoms when the tick is entirely removed, whereas if only the head of the parasite is left in the skin the paralysis may persist and even progress If the possibility of the presence of a tick be not borne in mind the condition might be mistaken for simple convulsions or for infantile paralysis

THE EFFECTIVENESS OF TOOTH-WASHES

There are few persons now who have not the conviction that the scientific cleansing of the teeth and gums is very valuable, and the business in antiseptic dentifrices is obviously increasing, judging from the numerous public advertisements which appear in the daily press setting forth the merits of a great number of these preparations Generally speaking, they are so composed as to render them well adapted for the purpose, and we have submitted a number of them to analytical examination The choice of antiseptic is commonly confined to carbolic acid, thymol, peppermint, boric acid, benzoic acid, eucalyptus and other essential oils, distributed in vehicles containing as an agent of attrition non gritty chalk and as an alkaline medium soap Experiments are usually quoted as to the actual germicidal value of these preparations *in vitro*, but of course it would be more satisfactory to have evidence of their real effect in the mouth where very different conditions must as a matter of fact exist The use of a tooth wash does not approach the conditions of a laboratory test, though there can be little doubt that a good deal of germicidal work in the mouth is done by the vigorous application of the toothbrush, and it may be pointed out that the tongue may well be included in the process To be effective, however, the action of all antiseptics takes time, according to the vitality of the organisms they encounter, and usually the tooth brushing process does not occupy many seconds This question of time exposure is important, but it is very generally overlooked, and consequently the antiseptic treatment of the teeth falls short of that effectiveness which is shown to be the case in laboratory experiments The tooth washing process should be more prolonged and the antiseptic wash allowed to remain in contact with the teeth and gums for some minutes instead of seconds before finally washing the mouth clear of antiseptic with plain water

CONGENITAL DIAPHRAGM OF THE LARYNX

According to Sir StClair Thomson there are but 20 cases of congenital diaphragm of the larynx on record In the *Saint Paul Medical Journal* for February Dr G B New has reported the following case from the Mayo Clinic, Rochester, Minn A well developed and healthy man, aged 27 years, had been hoarse since birth with no apparent change of voice On exertion, such as running up stairs, he had slight difficulty in breathing Laryngeal examination showed a thin membrane extending between the margins of the true vocal cords for two thirds of their extent anteriorly with a concave margin towards the lumen of the glottis The membrane was pale grey, gradually fading into the margins of the cords, which were rounded and slightly reddened It appeared thinnest in the median line and at its free margin, and did not show any scarring The larynx was otherwise normal. During phonation the membrane almost disappeared, but enough remained to prevent approximation of the cords The Wassermann reaction was negative Congenital diaphragm of the larynx was diagnosed because of the history of hoarseness since birth, the absence of any illness which would account for such a condition, the appearance of the diaphragm, and the otherwise normal larynx. With a laryngeal knife the membrane was split down the centre from the free margin to the anterior commissure As the knife approached the anterior commissure there was increased resistance on account of the greater thickness of the membrane Although measures were taken to prevent it, adhesion of the cords at their anterior part occurred After the reaction from the operation the voice was slightly improved and breathing easier As to the origin of such membranes, Ganghofner has shown that the larynx is developed from two symmetrically placed ridges which bound a small fissure At a certain stage of development these ridges lie close to each other and are attached by epithelial adhesions The membrane is due to the persistence of these adhesions Heredity seems to play a part, though in the present case there was no family history of such a condition A case has been recorded in which the father and sister of a patient had similar formations, and a case in which the mother of a patient had congenital adhesions of the cords at the anterior commissure Other congenital deformities—shortening of the frænum linguæ and coloboma of the upper lid—have been found associated with congenital laryngeal diaphragm Microscopic sections have shown the presence of mucous glands and muscle fibres in the diaphragm. Flat epithelial cells were present on the upper surface and cylindrical epithelial cells on the under surface similar to those of the cords A congenital diaphragm of the larynx is usually in the anterior part, but two cases have been reported in which it was in the posterior part The diaphragm varies in size from a simple rounding of the angle of the anterior commissure to that present in the case described above Rounding of the anterior commissure is not an infrequent finding in the examination of the larynx. Treatment, as a rule, has been unsatisfactory, because the raw surfaces of the anterior commissure unite again Improvement of the voice usually is not marked, although the breathing is easier

PITUITARY STANDARDISATION

Physiological standardisation has for many years been a subject of controversy, and many efforts were made to induce the General Medical Council to adopt this method in the current British Pharmacopœia It has been urged that this test affords the only certain method of obtaining uniformity of strength for various galenical preparations Since the General Medical Council has not thought fit to introduce this innovation, it is not necessary to recount the various arguments adduced in its favour It must be admitted that the latest contribution[1] is certainly not encouraging It recounts experiments conducted with a view of comparing the physiological activity of some commercial pituitary preparations, and after a careful description of a large series of experiments the writer (George B Roth) concludes that in a general way it may be said that the claims of the

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[1] Hygienic Laboratory Bulletin No 100 November 1914 Washington

In the opinion of the Medical Research Committee, the experimental work which has been done under their direction has already shown that the problem of the successful manufacture of the Salvarsan compounds in England and France has been solved. By the communication from time to time to the manufacturers of certain findings of the scientific workers, entrusted with the problem by the Committee, assistance has been given wherever possible towards the establishment of fully satisfactory technical manufacturing methods, and the Committee are confident that, so far as the strictest laboratory controls can ensure it, the profession and the public are now receiving from English and French sources compounds fully up to the standard of the best German samples previously sold. It is to be hoped that very soon the quantity of the products so supplied will be as sufficient as their quality.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The War.

THE interest in the European War is still the prominent feature of all public discussion and activity. The Federal Government proposes to place no actual limit on the number of men sent abroad, and recruiting is proceeding daily at all important centres. No difficulty has been found in providing medical officers, and volunteers are still in considerable excess of the demand. The physique of the men selected is still kept to a high standard. Much public interest has been shown in the provision of motor ambulances for the front. The Australian Women's National League in Victoria has supplied four from a purely women's subscription. The medical profession throughout Australia have equipped two from a general subscription and the Victorian Bar has offered one to the Defence Department. Similar movements are on foot throughout all the States, and the various Red Cross and relief funds are being added to daily.

Soldiers and Alcohol.

Public attention has been attracted to the indulgence in alcohol by soldiers, and various suggestions are being made. In Victoria deputations of temperance and religious organisations waited on the Premier and asked for earlier closing of hotels. Sir A. Peacock deprecated the idea that as a body the men were over indulgent. It might be true that some individuals drank too much, but this was not characteristic of the Australian troops. He promised to look into the Licensing Act and do what was reasonable to mitigate drinking to excess by the men and at the same time expressed the view that the abolition of wet canteens by the defence authorities did not make for sobriety among the troops.

Personal War Items.

Surgeon General W. D. C. Williams, the Director General of Medical Service to the Commonwealth military forces, has been appointed honorary Surgeon General of the British Army.—Mr. F. D. Bird, lecturer in surgery in Melbourne University, who went as a volunteer with the Expeditionary Force, has been appointed consulting surgeon to the Australian forces in Egypt.—Mr. R. Hamilton Russell, who was attached for some time to the Australian Voluntary Hospital at Wimereux, has returned to Melbourne and resumed practice.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

An Easy Mode of Sterilising Material for Dressings.

Professor Weil, of Lyons, has recommended an excellent method of sterilising linen by ironing. From his experiments on baby-linen Professor Weil finds that the temperature at which laundresses used the heated iron is about 150° C. It will cause hydroquinone to melt. But linen is not sterilised every time it is ironed unless it has been previously dampened throughout. The laundress sprinkles the linen before ironing, thus unconsciously fulfilling the conditions desirable for a satisfactory sterilisation. "A fire, a flat iron, some linen, these are all that is necessary to provide a supply of sterilised dressings, and they can be obtained almost anywhere; even in the country one can find plenty of used linen which, in consequence of its greater suppleness than when new, is admirably adapted to make dressings. It is cut into pieces of the required size and folded into compresses of suitable shape. Every house has a flat iron and a fire can always be got. Some flat surface is necessary to serve as an ironing board, and it is covered with some thickness of stuff in cushion fashion so as to make the ironing easier. This is covered with linen, which is carefully ironed first, and is left in place forming a sterile surface upon which the dressings can be ironed. It is necessary before sterilising each object to pass the hot iron afresh over the linen covering of the ironing board. The iron may be considered as sufficiently hot when, on bringing it within a few centimetres of the cheek, a heat too powerful to be borne is felt. In ironing it is necessary to touch the linen, wherefore aseptic hands are required, and in addition it is a good plan to paint the tips of the fingers with tincture of iodine. The blue mark caused on the linen thereby is of no consequence in this case. The *sine quâ non* is that the linen should be carefully moistened before ironing—indeed, the principle of moist sterilisation, as in the autoclave, is thus realised. Finally the linen is ironed surface by surface and fold by fold. It is important never to touch the linen save at the corners and always to run the iron over the place that has been touched. If the material is not to be used immediately it should be covered as soon as possible away from the dust in the air. A soldier's mess tin makes a very good dressing receptable; it is easily sterilised by boiling or heating.

A Mechanotherapy Apparatus.

M. Privat recently showed at the Academy of Medicine a very simple method of constructing a mechanotherapy apparatus. Every medical man knows how to construct a continuous traction apparatus with a weight, a piece of cord, and a pulley. If the point of attachment of this pulley is made mobile by suspending it by a cord from the ceiling, the weight in balancing produces rhythmic tractions passing alternately from maximum to minimum. This apparatus can further be graduated according to the degree of sensibility of the joint. With two pulleys of different diameters it is possible to make five different dispositions, each giving (for the same weight) a different result, which allows diminution or augmentation of the interval between maximal and minimal tractions.

THE MANUFACTURE OF SALVARSAN PRODUCTS IN ENGLAND AND FRANCE

WE have received the following communication from the Secretary of the National Medical Research Committee (National Health Insurance Act):—

In consequence of the outbreak of war the Board of Trade suspended the Patent and Trade Mark of the drugs Salvarsan and Neo Salvarsan, and, as the medical profession will be generally aware, granted a licence to Messrs. Burroughs, Wellcome, and Company for the manufacture in this country of these preparations, which they sell under the names of Kharsivan and Neo Kharsivan, and to the Société Anonyme des Etablissements Poulenc Frères, of Paris, for the sale in Great Britain (through the agency of Messrs. May and Baker, Limited) of the same products under the names of Arsenobenzol Billon and Nov Arsenobenzol Billon.

It must be understood that, although the manufacturers have in both instances adopted distinguishing trade names for their preparations, the latter are not merely similar substitutes for, but are chemically identical with Salvarsan and Neo Salvarsan, differing in no known respect from Ehrlich's original products, either in their final constitution or in the details of their preparation. The proof of such absolute identity is, however, in the case of these substances a matter not only of great importance but of unusual difficulty. Salvarsan is a highly reduced substance. If the reduction, which constitutes one stage of its manufacture, is carried out with insufficient vigour, or if the product is later exposed to the danger of oxidation by contact with air, it is readily contaminated with a much more toxic oxidation product. The water soluble derivative "Neo Salvarsan" is even more liable to this defect. As a matter of fact it is impossible, by the most careful procedure, altogether to exclude the presence of the more toxic oxide, and the best specimens, from any source, contain it in the proportion of about 0·5 per cent. The extent of this known contamination can be chemically determined with some degree of accuracy, and it is an obligation resting upon the manufacturer to see that no batch of his product contains it in an unsafe proportion. According to Ehrlich the proportion varies from 0·5 to 0·8 per cent. in good specimens.

If the presence of an excess of this easily recognisable and determinable oxide were the only source of difficulty or danger, a chemical standard of purity, on similar lines to many in the Pharmacopœia, could easily have been defined and enforced for these preparations. Unfortunately there are indications that other toxic products, of unknown constitution, may arise through uncontrollable accidents of preparation. The presence of these is only indicated by the fact that the toxicity of the Salvarsan products cannot be accounted for by the percentage of the known toxic oxide which they contain. While, therefore, the determination of the latter is a necessary safeguard, it can be regarded as a preliminary precaution only, and the final appeal, in the present state of knowledge, must be to animal experiment, the result of which gives evidence of the total toxicity from whatever source it comes.

The Board of Trade licence in both the above cases was therefore granted subject to the condition that all samples of these drugs sold in this country should be submitted to biological tests by an authority approved by the Board of Trade.

In the special emergency created by the war the Medical Research Committee, at the request of the Board of Trade, accepted for the time being the responsibility of directing the biological tests of the Salvarsan and Neo Salvarsan produced by these English and French firms.

Examples of these products, therefore, cannot be properly sold in this country by Messrs. Burroughs, Wellcome, and Company or by Messrs. May and Baker unless and until samples of the batch of product from which they are taken have been tested under the direction of the Committee and a certificate has been issued by the Secretary of the Committee approving that particular batch for sale.

In view of the public interest which must attend the establishment of so intricate a manufacturing process in England at short notice, and in view also of the great importance to the medical profession and the public of the degree to which success has been attained in the manufacture, it is thought desirable that a general statement should be made of the policy which the Medical Research Committee have pursued in their performance of the public duty which has fallen to them.

When the work of biologically testing samples of these arsenical compounds from other than German sources was undertaken, there was no time for any elaborate preliminary investigation of new methods of biological assay. The public need for an immediate and abundant supply was urgent, and the existing stocks of German production were found to be too low to allow delay.

The Committee entrusted the details of the work to most competent pharmacological workers, who took as a basis for the biological control, supplementing the chemical tests of the manufacturer, the methods and standards which had previously been found adequate in Ehrlich's Institute. It was decided, accordingly, that specimens should be passed as satisfactory, under the official certificate of the Committee, which were not more toxic to mice than the average sample of German manufacture. This decision has already involved the rejection of some samples which exhibited no greater toxicity than some of those previously issued in this country, with Ehrlich's authority, and used therapeutically without adverse result.

In addition, however, to this application in all cases of the official German test, every sample has been further tested by the intravenous injection into a rabbit of a large dose only slightly less than that which may be expected, according to Ehrlich's publications, to be lethal for the animal. The object of this test was to guard against the presence of any immediate toxic constituent which might escape detection when doses were given hypodermically to mice. If, in the performance of this test, any difference had been found to exist as between the English or French products on the one hand, and the original German products on the other, the sample in question would not have been passed for certification and for sale to the public.

It should also be added that in addition to these biological tests which have been imposed as an invariable routine, the Committee have caused experimental assurance to be obtained that both the French and English preparations are equivalent to the German in therapeutic effect. This has been done by a comparison of their relative potencies in curing experimental trypanosomiasis in mice and experimental spirochæte infections in rabbits.

Tuberculosis amongst School Children

In the routine work of medical inspection special attention is given to the detection of early tuberculosis amongst school children the object being to place them promptly under the treatment of the School Care Committee. In the schools examined during the year 0 41 per cent of the children examined were found to be the subjects of pulmonary tuberculosis, and 0 32 per cent. of other tuberculous affections On the whole it appears that the incidence of tuberculosis in school children varies inversely with the average standard of comfort in the home The close interrelation of mal nutrition with tuberculosis is generally recognised and has been confirmed by recent investigations

Open-air Schools

The two open air schools maintained by the Council have been in operation throughout the winter with uniformly good results to the children s health. Medical inspection of the ordinary elementary schools has abundantly proved the need for additional schools on the open air principle, but for these it has hitherto been found impossible to obtain suitable sites either north or south of the Thames Particulars are given of the schools at Birley House and Shooter's Hill and of the defects noted among the children there resident as well as of the considerable numbers of children returned to ordinary elementary schools because of improvement in their physical condition. Last year s experience of the former school confirms that of the previous six years as to the existence of a large class of delicate children who are capable of mental and physical improvement in such schools At the Shooter's Hill school, where the average attendance is about 100, so great was the improvement effected by the treatment there received that nearly one-third of the pupils were discharged in 1913 as fit to return to the ordinary elementary schools Figures are given showing measurements of the height weight, and chest capacity of the boys and girls respectively These figures show general amendment which is also borne out by the increased smartness and intelligence observed in the children It is frequently stated that after a sojourn at Shooter s Hill school children previously regarded as almost defective mentally had returned completely changed—bright, energetic and good workers in strong contrast with their condition prior to entering that institution

Personal Hygiene and Cleanliness

In the report for last year the development of the "cleansing scheme' was traced from the purely voluntary work effected in 1902 to the County Council s arrangements of 1912, whereby cleansing centres were established and a large staff of specially trained nurses were appointed. In the year under review nearly 859 000 children were examined, more than 29 000 of whom were found to be verminous The fact that an increasing proportion of these children are now voluntarily cleansed at home shows that parents are at length beginning to realise the importance of cleanliness to the well being of their offspring The scheme for dealing with unclean heads and verminous bodies has been modified so as to accelerate the process of cleansing and to secure closer coöperation with the local authorities in dealing with clothing, &c., in the homes of the children

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

In the 96 English and Welsh towns with populations exceeding 50 000 persons at the last census 8917 births and 6879 deaths were registered during the week ended Saturday, March 27th The annual rate of mortality in these towns, which had declined from 20·7 to 19 3 per 1000 in the five preceding weeks rose in the week under notice to 19 8 per 1000 of their aggregate population estimated at 18 134 239 persons at the middle of 1914 During the first 12 weeks of the quarter just ended the mean annual death rate in these towns averaged 19 5 against a corresponding rate of 20·5 per 1000 in London The annual death rate during the week ranged from 6 1 in Lincoln 9 7 in Leyton 9·9 in Grimsby 10 5 in Stockton-on-Tees and 10·6 in Barnsley to 25 4 in Salford 27 5 in West Hartlepool 28 1 in Northampton 30·0 in Wolverhampton and 34 2 in Aberdare

The 6879 deaths from all causes were 165 in excess of the number in the previous week, and included 695 which were referred to the principal epidemic diseases against numbers increasing from 511 to 739 in the six preceding weeks Of these 695 deaths, 397 resulted from measles, 127 from whooping-cough 70 from infantile diarrhœal diseases, 58 from diphtheria, 31 from scarlet fever, and 12 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 2·0, or 0 1 per 1000 less than in the previous week. The deaths attributed to measles, which had increased from 207 to 421 in the six preceding weeks, fell to 397, and caused the highest annual death rates of 3·4 in Croydon, 3 7 in Merthyr Tydfil, 4 1 in Smethwick 4 4 in Darlington 5 3 in West Bromwich, 6·0 in Wolverhampton, 7 4 in Northampton, and 9 7 in West Hartlepool The deaths referred to whooping-cough, which had been 110 120 and 151 in the three preceding weeks, fell to 127, and included 31 in London, 10 in Liverpool, 6 in Bristol 5 each in Brighton and Birmingham, and 4 each in Leeds, Merthyr Tydfil and Aberdare The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 71, 67, and 63 in the three preceding weeks, rose to 70, of which 24 were registered in London, 6 in Birmingham, and 5 in Liverpool The deaths attributed to diphtheria, which had been 64, 51 and 61 in the three preceding weeks, fell to 58 and included 16 in London, 8 in Birmingham, and 3 in Liverpool The deaths referred to scarlet fever, which had been 32, 21, and 29 in the three preceding weeks, rose to 31 of which 13 occurred in London, and 2 each in Ipswich and Wigan The fatal cases of enteric fever which had been 10, 15, and 14 in the three preceding weeks, fell to 12, and included 5 in London and 3 in Manchester

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily declined from 5036 to 2730 in the 17 preceding weeks had further fallen to 2672 on Saturday, March 27th, 301 new cases were admitted during the week, against 293, 275 and 289 in the three preceding weeks These hospitals also contained 1445 cases of diphtheria, 342 of measles, 57 of enteric fever 16 of whooping-cough, and 3 of smallpox. The 1935 deaths from all causes in London were 112 in excess of the number in the previous week, and corresponded to an annual death rate of 22 3 per 1000 The deaths referred to diseases of the respiratory system, which had been 468, 442 and 478 in the three preceding weeks further rose to 481 in the week under notice, and were 190 above the number recorded in the corresponding week of last year The deaths from influenza numbered 65, against 48 54, and 67 in the three preceding weeks

Of the 6879 deaths from all causes in the 96 towns 224 resulted from different forms of violence and 495 were the subject of coroners' inquests while 1930 occurred in public institutions The causes of 51, or 0·7 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester Sheffield Leeds, Bristol, West Ham, Bradford, Hull, and in 63 other smaller towns Of the 51 uncertified causes, 10 were registered in Birmingham, 4 each in Liverpool and Preston, 3 in Southend-on Sea and 2 each in London, Reading, Stoke-on Trent, Southport, Darlington, Sunderland, South Shields, and Gateshead

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2 345,500 persons at the middle of this year, 1290 births and 948 deaths were registered during the week ended Saturday March 27th The annual rate of mortality in these towns which had been 23 2, 20·9 and 20·8 per 1000 in the three preceding weeks, rose to 21 1 per 1000 in the week under notice During the first twelve weeks of the quarter just ended the mean annual death rate in these towns averaged 22 4 against 19 5 per 1000 in the large English towns. Among the several towns the death rate during the week ranged from 13·0 in Coatbridge 13 7 in Falkirk, and 14·0 in Ayr to 23 1 in Aberdeen 25·4 in Kilmarnock, and 29·1 in Dundee

The 948 deaths from all causes were 12 in excess of the number in the previous week, and included 132 which were referred to the principal epidemic diseases against 131 and 139 in the two preceding weeks Of these 132 deaths, 81 resulted from whooping-cough, 21 from measles, 12 from scarlet fever 10 from infantile diarrhœal diseases 7 from diphtheria and 1 from enteric fever but not one from small pox. The mean annual death rate from these diseases was equal to 2·9 against 2·0 per 1000 in the large English towns The deaths attributed to whooping-cough, which had been 91 87 and 85 in the three preceding weeks fell to 81 and included 45 in Glasgow, 13 in Dundee, 11 in Edinburgh and 4 in Kilmarnock. The deaths referred to measles, which had been 21 15 and 26 in the three preceding weeks, fell to 21 and comprised 14 in Glasgow and 7 in Dundee The fatal cases of scarlet fever which had been 9, 13 and 11 in the three preceding weeks were 12 in the

Public Health.

REPORT FOR 1913 OF THE MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER OF THE ADMINISTRATIVE COUNTY OF LONDON [1]

PART II —EDUCATION

IN an introductory note to this part of the present report Dr W H Hamer gives an account of the further development of school work in the direction foreshadowed in his previous report Among measures of special importance he refers to the reorganisation of the Council's arrangements for the medical inspection and treatment of school children, the promotion of efforts for the control of infection in schools, and the maintenance of schemes for encouraging personal hygiene and cleanliness

Medical Inspection and Treatment

In making provision for the efficient inspection and treatment of school children the numerical strength of the medical inspecting staff must obviously be adequate The question of the suitability of the candidate for appointment will also require careful consideration Respecting the latter point Dr Hamer insists that for the efficient discharge of his duty the school doctor should have received special training in public health It is imperative, for example, that he should be expert in the detection of conditions inimical to health and in the investigation of infectious outbreaks in the schools under his charge, inasmuch as prompt and decisive action is often required at the school itself in order, *inter alia*, to avoid unnecessary interference with educational work Moreover, this officer should be thoroughly conversant with the physical and mental development of normal and abnormal children so that he may be competent to advise in cases of backwardness or retarded development or of other conditions detrimental to educational progress When medical inspection was first undertaken in London the term of appointment of officers seldom exceeded three years Consequently the supervision and training of the newly appointed doctors entailed a severe burden on the supervising staff, and frequent changes proved so prejudicial that steps have recently been taken to secure greater permanency and continuity in the work The inspecting medical staff has therefore been reconstituted London has been divided into five districts instead of four as formerly, the staff of each district being controlled by a divisional medical officer with the aid of additional permanent and temporary medical assistants In order to comply with the suggestions of the Board of Education it has been arranged that the permanent medical assistants shall share in the general work of the department, including the inspection and "following up" of defective children, the visitation of treatment centres, and the regulation of open air schools General public health supervision is now added to the duties of these officers, including the investigation of infectious disease and the control of tuberculosis among school children

Centres for Medical Treatment

During the year under review there has been a large increase in the facilities afforded by the Council for institutional treatment At the end of the year 34 centres existed in which 84,350 children were treated, or more than 11 000 in excess of the number treated in the previous year The reorganisation of the medical staff already referred to has led to extension of the school doctors' work by reinspection in all cases where hospital or other medical treatment has been recommended. During the year the number of such reinspections is estimated at 150,000 Dr Hamer testifies to the satisfactory character of the work now in progress, a result that could not have been achieved by a staff previously unskilled in the details of school inspection

Government Grants

In the course of 1913 new regulations were issued by the Board of Education providing for the first time for the payment of grants in respect of medical inspection in addition to those formerly payable in respect of medical treatment The grant for the year under notice was equal to 46 per cent of the County Council's total expenditure under this head In announcing a grant of more than £31,000 the Board expressed their appreciation of the improvements effected in the work of the authority's school medical service and, in particular, their recognition of the extension of facilities for treatment. Moreover, in Sir George Newman's recent report to the Education Department,[2] referring to the medical treatment of London school children under the County Council's scheme, the following sentence occurs "In any case, the figures clearly indicate the vast amount of benefit that is accruing to the defective school children of London as the result of the Council's organised scheme of medical inspection and treatment"

Public Health Laboratory

A well equipped laboratory has recently been established by the County Council which, as part of the public health organisation, has already been found valuable by the medical department Amongst other uses it frequently affords a trustworthy means of diagnosis in cases of sore throat associated with infectious disease, as well as in doubtful cases of ringworm, favus, and other microbic affections It has consequently been of great assistance in the detection of possible foci of infection in the Council's schools, in addition to which, specimens are frequently received for bacteriological examination from the places of detention and the industrial schools belonging to the County Council The number of cultures examined in this laboratory in the course of 1913 has exceeded 2000

Infectious Diseases amongst School Children

Scarlet fever —Compared with the average for the three previous years, scarlet fever showed a considerable increase in London schools

Measles —The incidence of measles amongst school children was lower in 1913 than in any of the preceding seven years Among measures for limiting measles prevalence compulsory notification has been fairly tried, but seldom with success For protective purposes exclusion from school is now generally confined to children in the infant departments, more than 90 per cent of the children attacked being below 5 years of age The severity of attack largely depends on the age of the patient The younger children usually suffer excessively and are more liable than their elders to complications which may be fatal or may predispose to tuberculosis, ear discharge, or injury to eyesight Accordingly, if children cannot be prevented from eventually contracting measles, efforts should at any rate be made to protect them from attack in early infancy

Diphtheria —Diphtheria prevalence was more marked in London than in the provinces Of the London attacks notified at all ages more than one third occurred among school children Many schools which showed a tendency to spread the infection by contact were kept under constant observation by school doctors and 2220 cultures were forwarded for examination in the laboratory True diphtheria germs were identified in 112 cases, whilst a further 212 cultures contained germs not definitely distinguishable from the Klebs Löffler bacillus Still unsolved is the difficulty of dealing effectually with bacteriological cases of diphtheria in which the usual clinical symptoms of the disease are not apparent Further research in this direction is therefore desirable

Ringworm and favus —The differential diagnosis between these diseases is by no means easy to make and the importance of laboratory aids to diagnosis is apparent in the discovery of these otherwise unrecognised cases Of the 76 cases of favus reported during the past two years no fewer than 63 have been discovered by microscopical examination in the Public Health Department During 1913 large numbers of specimens of hair have been sent to the laboratory by school doctors for microscopic examination Out of 3464 specimens submitted ringworm was found in 1979 cases and favus in 57 cases, in 1415 cases no fungus was found Ringworm involves so much interference with school attendance and with the educational progress of children that it would be a misfortune if treatment by X rays the speediest known method of cure were discontinued Much improvement has recently been effected in the method of applying the X rays Most of the cases where unsatisfactory results have been recorded date from the early days of that treatment

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[1] Published by P S King Limited London price 2s 6d Part I Public Health) was reviewed in THE LANCET of April 3rd p 720

[2] THE LANCET, Jan. 9th, 1915 p 84

South Midland Casualty Clearing Station William Albert Higgins to be Lieutenant

1st London (City of London) Sanitary Company Henry Holroyd to be Lieutenant

West Riding Divisional Sanitary Section Surgeon Captain Harold F Horne, from the 5th Battalion, The York and Lancaster Regiment, to be Captain

Attached to Units other than Medical Units—Captain John Hobbs is seconded To be Captains John Alban Davies (late Captain 7th (Merioneth and Montgomery) Battalion, The Royal Welsh Fusiliers) and Lieutenant Oskar Teichmann. To be Lieutenants Lieutenant Alfred H Bell, from 5th London Field Ambulance, Gerald Wetherell Capron Hollist (late Surgeon Royal Navy) Reginald Devereux Moore Charles Nyhan (late Lieutenant, 3rd Battalion, The Monmouthshire Regiment), and Berkeley Noel Ash

THE NATIONAL INSURANCE ACT

Exempt Persons

DRAFT regulations, dated March 16th 1915 have been issued to deal with the limited benefits to be enjoyed under the Insurance Acts by "exempt persons —i.e by those who on account of their having means of livelihood independently of their wages from their employers are allowed exemption from contributing to the National Insurance Funds Employers it will be remembered, pay the same contributions for exempt persons as for others Under the new regulations, and subject to the restrictions and conditions prescribed by them exempt persons will enjoy medical benefit and sanatorium benefit, described in the regulations as ' the benefits," an exempt person in respect of whom not less than 20 weekly contributions have been paid being entitled to apply to the Commissioners and to enjoy the benefits subject to the regulations being otherwise satisfied six weeks later An exempt person who does not so apply, but for whom 20 contributions have been paid, becomes entitled at the commencement of the next benefit period after that in which the twentieth payment on his behalf was made, and provision has necessarily had to be made for those cases in which broken periods of contribution and other circumstances have to be taken into consideration Contributions out of the Exempt Persons Fund, which is instituted as a separate fund are to be made to the General Medical Benefit Fund the General Medical Benefit Administration Fund and the General Sanatorium Benefit Fund

Complaints against Medical Practitioners in London

The reports of subcommittees laid before the London Insurance Committee at its recent meeting contain a good deal of information as to the practical working of the Insurance Acts in the abnormal circumstances created by the war The report of the Medical Service Subcommittee upon complaints against medical practitioners upon the panel for the County of London commences with a question arising out of an incident which took place at the end of November and discloses nothing of a serious nature with regard to the supply of medical treatment in the metropolis Among ten cases investigated three complaints referred to the same practitioner and of the remaining complaints only two are found to be wholly or partly justified One of these related to the conduct of a practitioner who declined to visit a patient when sent for, on the ground that he could not quit his surgery at the time The patient was thus left without medical attention for nearly two days while suffering from a broken leg The practitioner pleaded that he was ill and had been unable to obtain a locum tenent He had also apparently been under the impression that he was not required to provide treatment in cases of accident and had so informed the patient's messenger and he had given the messenger a bottle of liniment with directions without having seen the leg which he had been told was broken and which in fact was broken. The subcommittee found the complaint of neglect to be substantiated and recommended severe censure for the practitioner He was required to make provision for a deputy to act on his behalf when unable to attend his patients personally and his conduct in prescribing without having seen his patient was made the subject of a separate resolution

Excessive Prescribing and London Practitioners

The Panel Committee (London) reporting upon cases submitted to them for investigation by the Pharmaceutical Committee, and relating to drugs prescribed in May, 1914, stated that in the case of four practitioners on the panel the cost of drugs and appliances was in excess of what was reasonably necessary for the adequate treatment of their patients, that in the case of three practitioners there was no such excess, that in the case of four others they were unable to come to a decision upon the materials before them The consideration of these last was therefore postponed. In the case of seven others circumstances prevented the committee from making an investigation

Obituary.

SIR JOHN LENTAIGNE, F.R C S IREL,

PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND

THE death of Sir John Lentaigne occurred suddenly at his residence in Dublin on March 30th in his sixtieth year He had been feeling unwell for a few days, but thought little of it, and was persuaded with difficulty to remain in bed on the morning of his death Early in the afternoon, while talking with two of his colleagues, he suddenly expired He had been sorely tried a few months ago by the loss of one of his sons at the battle of the Aisne The lad, a lieutenant in the Connaught Rangers, who had just entered the service, was first reported "missing,' and it was not until after some weeks that the fact of his death was ascertained. The anxiety and grief made an indelible mark on his father's health. Only a few weeks ago Sir John Lentaigne suffered a further loss in the death of his brother

Sir John Lentaigne was the grandson of a French *émigré* of good family who settled in Dublin at the time of the Revolution and became a prominent medical practitioner On account of his nationality he was chosen to attend Wolfe Tone in prison in his last illness Lentaigne's father was a Government official in Ireland, and was knighted for his public services John Lentaigne, born in Dublin in 1855, was educated first at Clongowes College and later at Vannes in France, and then entered Trinity College He received his medical education at the Catholic University School of Medicine He graduated B A of Trinity College in 1880, and received the licences of the Royal Colleges in the following year In 1886 he was admitted a Fellow of the Royal College of Surgeons in Ireland Having been for a short time assistant surgeon to the Richmond Hospital, he became one of the visiting surgeons to Jervis street Hospital in 1883, and four years later he left there for the Mater Misericordiæ Hospital, where he worked regularly up to the time of his death. He was for many years consulting surgeon to the Royal Hospital for Incurables, and also one of the Lord Chancellor's Visitors in Lunacy He was surgeon to the household of successive Viceroys for the past 18 years For 15 years he was a member of the Council of his College, and in 1903 he was elected President In 1910 he was knighted.

Sir John Lentaigne's reputation as a surgeon was high He made no claim to great originality, but his work bore the mark of thoroughness and sound experience He took infinite pains to do the best for his patients, and the most tedious case never exhausted his interest In his early days, when antisepsis was still little understood and week under notice, and included 6 in Glasgow and 2 each in Aberdeen and in Paisley The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 7, 5, and 6 in the three preceding weeks, rose to 10, of which 5 occurred in Glasgow and 2 in Aberdeen The deaths referred to diphtheria numbered 7, against 15, 10, and 7 in the three preceding weeks, and included 4 in Glasgow The fatal case of enteric fever was registered in Paisley In addition to the above deaths a fatal case of typhus fever was recorded in Dundee

The deaths referred to diseases of the respiratory system, which had been 264, 215, and 188 in the three preceding weeks, further fell to 186 in the week under notice, but were 75 above the number recorded in the corresponding week of last year The deaths attributed to violence numbered 34, against 23 and 36 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland with an aggregate population estimated at 1,212,380 persons at the middle of this year, 651 births and 555 deaths were registered during the week ended Saturday, March 27th The annual rate of mortality in these towns, which had declined from 27 6 to 24 0 per 1000 in the four preceding weeks, further fell to 23 9 per 1000 in the week under notice During the first 12 weeks of the quarter just ended the mean annual death rate in these towns averaged 25 6, against corresponding rates of 19 5 and 22·4 per 1000 in the English and Scotch towns respectively The annual death rate during the week under review was equal to 26 8 in Dublin (against 22 3 in London and 21 8 in Glasgow), 21 3 in Belfast, 26 5 in Cork, 34 2 in Londonderry, 20 3 in Limerick, and 11 4 in Waterford, while in the 21 smaller towns the mean rate was 22 4 per 1000

The 555 deaths from all causes were 3 fewer than the number in the previous week, and included 47 which were referred to the principal epidemic diseases, against 37 and 36 in the two preceding weeks Of these 47 deaths, 16 resulted from whooping-cough, 12 from measles, 11 from infantile diarrhœal diseases, 6 from scarlet fever, and 2 from diphtheria, but not one from enteric fever or from small pox. The mean annual death rate from these diseases was equal to 2·0, against corresponding rates of 2·0 and 2 9 per 1000 in the English and Scotch towns respectively The deaths attributed to whooping cough, which had been 10, 12, and 14 in the three preceding weeks, further rose to 16, of which 10 were recorded in Dublin and 3 in Belfast The deaths referred to measles, which had been 8 in each of the four preceding weeks, rose to 12, and included 4 each in Belfast and Coleraine and 2 in Portadown The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 11, 14, and 4 in the three preceding weeks, rose to 11, of which 6 were registered in Dublin and 3 in Belfast The 6 deaths attributed to scarlet fever were 2 in excess of the average in the earlier weeks of the quarter, and included 3 in Cork The fatal cases of diphtheria were recorded in Dublin and Belfast respectively

The deaths referred to diseases of the respiratory system, which had been 188, 167, and 155 in the three preceding weeks, further fell to 145 in the week under notice Of the 555 deaths from all causes, 157, or 28 per cent, occurred in public institutions, and 8 resulted from different forms of violence The causes of 17, or 3 1 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the English towns the proportion of uncertified causes did not exceed 0 7 per cent

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned have been granted temporary commissions as Surgeons in His Majesty's Fleet —George Murray Heiron Charles Edward Reckitt, William Whitfield, Marmaduke Fawkes, Hugh Bernard German, William Gifford Wyllie, Harry Aitken Hewat, and John Benjamin Crawford

The following appointments have been notified —Staff Surgeon G S Davidge to the *Sirius* Surgeon A V J Richardson to the *Brilliant*

ROYAL NAVAL VOLUNTEER RESERVE

Temporary commissions in the Royal Naval Volunteer Reserve have been issued as follows —Dental Surgeons Stanley Maddox Gardner, Clementson Glover, Alan Basil Hacking, Roy William List, Frederick William Paul, Edwin Joseph Handford, and Herbert John Corin

ROYAL ARMY MEDICAL CORPS

The undermentioned are granted temporary rank whilst serving with the Field Ambulances of the Welsh Division —As Lieutenant-Colonel John Edward Henry Davies dated Dec 2nd, 1914), Major Robert John Richard Cobden Simons, Territorial Force (dated Jan 9th), and Captain Thomas Price Thomas, Territorial Force (dated Jan 6th) As Major, William Bickerton Edwards (dated Dec 2nd, 1914) As Captain Andrew Woodroffe Anderson (dated Dec 2nd, 1914) and Edward Llewelyn Parry Edwards (dated Jan 30th) As Lieutenant Frederic Samuel Rowland (dated Dec 20th, 1914)

The undermentioned Lieutenants to be Captains —Dated March 30th Alexander G Biggam, Roy K Mallam, William McNaughtan, David T M Large, Walter W Pratt, William F Christie, Maurice Burnett, Alexander Hood, Edward A. Strachan, Cuthbert J Blaikie, James H. M Frobisher Walter B Stevenson, John L Ritchie, David T Richardson, Owen W J Wynne Christopher M Ingoldby, Sydney J Higgins, Gilbert A. Blake, Percy A. With, Cuthbert J H Little, Stephen J Barry, Robert W Vint, Henry R L'Estrange, Harold W L Allott Edward P A. Smith, Robert B Price, James B A. Wigmore, John Hare, Robert A. Flood, Eric C Lang, William V Corbett, Leopold T Poole, Thomas H Balfour, Frank C Cowtan, Charles C Jones, Edward V Whitby, Edmund U Russell, Robert G Shaw, Norman W Stevens, Richard B Phillipps, Alexander L Urquhart, Noel T Whitehead, James C Sproule, Avenell F C Martyn, George F Allison Robert C Carlyle, John E Hepper, Arthur A. M Davies Leslie Dunbar, Henry F Panton, Henry Beddingfield, D S O, Frederick C Davidson, Stanley D Large Cyril Helm, Humfrey N Sealy, Albert Jackson, Edward C Beddows, George E Dyas, Conyngham V Thornton, John Rowe, William P Croker, Arthur B H Bridges, Aubrey G Brown, Percival D Warburton, Robert Hemphill, Summer H Smith, Ernest W Wade, Bernard Woodhouse, William K. Morrison, Edgar Percival, Henry C D Rankin, Treffry O Thompson Stanley J Linzell, Lewis R Shore, Allan Watson, Norman V Lothian, John G Gill, Sidney M Hattersley, John W C Stubbs, Arthur J A. Menzies, John Fitz G Gwynne, Thomas F P Breen, David C G Ballingall, Herbert G Winter, James M Evatt, Francis G Thatcher, William P Mulligan, Gerard P Selby, John G Butt, Neil Cantlie, Edward A. P Brock, Percival T Priestley, Edward Phillips, Spence D Reid, Peter J Ryan, Barcroft J L Fayle, and Evelyn A. Sutton

Temporary Lieutenant Claude W S Saberton relinquishes his temporary commission on account of ill health (dated March 17th)

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

The undermentioned Lieutenants are confirmed in their rank —Eric S Mawe, Edward W Mann, and Sydney W Lund.

TERRITORIAL FORCE

Royal Army Medical Corps

1st Home Counties Field Ambulance Lieutenant Charles Killick to be Captain (temporary)

2nd Home Counties Field Ambulance Captain Antony A. Martin to be Major (temporary)

2nd East Anglian Field Ambulance Lieutenant James Arthur, from Attached to Units other than Medical Units, to be Lieutenant

1st West Lancashire Field Ambulance Surgeon Captain James Wood, from 5th Battalion, The Loyal North Lancashire Regiment, to be Captain

2nd London (City of London) Field Ambulance Lieutenant Horace G L Haynes to be Captain, and William Travers Homan to be Lieutenant

2nd Lowland Field Ambulance Major William Bryce, from 1st Lowland Field Ambulance, to be Major

3rd Lowland Field Ambulance Captain James W Keay to be Major (temporary)

1st East Anglian Field Ambulance Transport Officer and Honorary Lieutenant Frederick Harris resigns his commissions

3rd London (City of London) Field Ambulance Major George L L Lawson to be Lieutenant-Colonel (temporary)

6th London Field Ambulance William Henry Dickinson to be Lieutenant

2nd Northumbrian Field Ambulance Clifford Crawshaw Pickles (late Lieutenant, 5th Battalion, Alexandra Princess of Wales's Own (Yorkshire Regiment), to be Captain (temporary)

2nd Wessex Field Ambulance Lieutenant Henry W Spaight resigns his commission on account of ill health

3rd East Anglian Field Ambulance —The undermentioned to be Lieutenants Alexander Cuffe and Edward Knox Goodwin

1st East Lancashire Field Ambulance Lieutenant Henry E Fox, from Attached to Units other than Medical Units, to be Lieutenant

3rd South Midland Field Ambulance Captain Charles Corfield, from Attached to Units other than Medical Units, to be Captain

1st Southern General Hospital Eric Walter Assinder to be Captain (temporary) he is short by a year of completing his curriculum he is to be allowed to sit for his degree If he be fortunate enough to pass will his fellow graduates think the less of him? War excuses many things which are then a glory and not a disgrace

I am, Sir, yours faithfully,
WILLIAM BRUCE, M.D Aberd
Late Member of the General Medical Council.

Dingwall N.B March [illegible] 1915

THE "ELIZABETH ROSS" BED

To the Editor of THE LANCET

SIR,—To those who have read about the terrible struggle against disease and the efforts made to succour the wounded in Serbia at the present time, nothing can have appealed more strongly to public sympathy than the heroic action of the late Dr Elizabeth Ross, Tain, who added to the glorious record of the medical profession in this terrible war by giving her life to save that of others It has been felt that in this town, so closely associated with her and her family, some memorial of such self sacrifice should be set on foot, and that nothing could be more fitting than the establishment of a bed in the hospital at Kragujevatz, where she died It is hoped that this scheme will appeal not only to those who knew her personally, but to a much wider public, who will welcome an opportunity of showing their appreciation of her heroic action.

Many of us are debarred from active service either in battle field or field hospital, but we can all "do our bit" by giving to such schemes as this, and surely no more fitting memorial could be raised to this brave woman's memory than one calculated to benefit the country where she laid down her life and where the need at the present time is such a crying and terrible one Her brothers and sisters of the medical faculty will doubtless be glad to "place a stone on the cairn" of one who has added glory to the noble records of their profession and sacrificed her life in the execution of its duties

Anything collected over the sum required will be used either in the establishment of a second bed, or in some way to provide medical or surgical comforts to alleviate the terrible distress in Serbia, which Dr Ross gave her life to help

Messrs Wallace and Fraser, Tain, have kindly opened a list for local subscriptions, and donations, large or small will also be gratefully received and acknowledged by any of the undersigned

Yours faithfully,
E K. MACKENZIE, M.D Aberd.,
Shandwick House Tain
(Mrs) C IRWIN SMART,
Drynoch Lodge Tain.
SUTHERLAND M ROSS,
Woodbine Tain

Tain Ross-shire N.B., April [illegible] 1915

STOMACH v HEART IN RELATION TO PRÆCORDIAL PAIN AND SUDDEN DEATH

To the Editor of THE LANCET

SIR—Mr Walter Verdon's letter in THE LANCET of April 3rd bears out in many ways one's own personal observations in relation more especially to intercostal pain and heart disease His contention as I read it is that segmental neurosis of that area of the cord which more immediately subserves the regions in the neighbourhood of the heart itself predisposes to anginal attacks and similarly neurosis in other regions may favour spasmodic alimentary disorders Such a neurosis may be secondary, I take it, to cardiac trouble, but not necessarily so In a case I had recently under observation the relation of the pain or algesia to the frequent true anginal attacks from which she suffered could with difficulty be explained by any means other than some such segmental neurosis This patient, who had well-marked aortic incompetence, had from day to day definite areas of deep and superficial intercostal tenderness, varying in site, as Mr Verdon observes, from day to day, though at times certain intercostal areas, particularly the fourth, would show algesia at exactly the tender spots peculiar to such nerves—namely, near the vertebra, in the axillary line, and near the sternum respectively Very occasionally she would be free from such areas In one such phase this patient, in my presence, had a definite anginal attack relieved after a few minutes by amyl nitrite Afterwards there was not the slightest tenderness to be made out, contrary to what one ought to expect The suggestion in such a case was that there was a segmental neurosis or possibly a definite radiculitis (the Wassermann was positive), and that this in the main predisposed to her attacks, which were exceptionally numerous No stomach symptoms were ever present in this case She died suddenly a few weeks ago

The whole question of pain and cardiac disease requires more careful investigation than it has yet received

I am, Sir, yours faithfully,
C EDGAR LEA.

Manchester April [illegible] 1915

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN (UNIVERSITY OF LONDON).—Dr F Wood-Jones lecturer and head of the department of anatomy has been granted the title of professor of anatomy in the University of London. The title of reader in pharmacology in the University of London has also been conferred on Dr Fred Ransom lecturer and head of the department of pharmacology The Rose Neville scholarship of £150 a year for four five or six years, the Mabel Webb research scholarship of £30 for one two or three years the St Dunstan's exhibition of £60 a year for three or five years, the Mabel Sharman Crawford scholarship of £20 a year for four years, and the Isabel Thorne scholarship of £30 will be awarded during the summer term Full particulars can be obtained on application to the secretary Mr A. G R Foulerton has been appointed lecturer in public health in succession to Professor W J Simpson, resigned. The Duchess of Marlborough has accepted the office of honorary treasurer of the extension fund and Miss Edith Calkin B A. has been appointed organising secretary of the fund.

CHARGE OF DISPOSAL OF A BODY—At the recent Galway Assizes before Lord Justice Ronan the Rev Paul Barrus Superior of Moyne Park Hospice for Infirm Clergymen was found "Not guilty" of the charge "that he on Dec. 23rd 1914 having the custody of the dead body of the Rev John Keane who had died under circumstances which had rendered the holding of an inquest necessary did dispose of the body with intent to prevent the holding of an inquest" It appeared from the evidence that on the morning of Dec 23rd Father Keane was found in the yard of the hospice in a dying condition, and that he died a little later He had been of intemperate habits and rather infirm and had been locked into his room the previous night by Father Barrus There was reason to believe that he had fallen from his window No death certificate was given the medical officer to the institution being informed merely that Father Keane had died in bed suddenly Similar information was given to the police when an officer entered to make inquiries In defence it was urged that the accused did not act with the intention of preventing the holding of an inquest He was a foreigner who was probably imperfectly acquainted with English law and customs asepsis unknown, he attracted attention and even astonishment by his rigorous methods He did well in private practice His family position, his ability, and his charm of character combined to make his career successful No stress of work, however, was allowed to distract him from the due performance of his hospital duties Sir John Lentaigne's character and manner were singularly attractive Until within the last few months, when sorrow tried him, he seemed to be of those who never grow old He had the *joie de vivre* of a boy, and he had also the frankness and straightforward simplicity of a boy Success did not spoil him. To his brother practitioners he was always the honourable and kindly comrade, to whom professional jealousy was a thing unknown In private life he was the soul of geniality, but it was the geniality that rests on a strong foundation of character In Lentaigne's death not only the Dublin school of surgery but the medical profession have lost a man of outstanding character His friends miss one of the most lovable of their circle

BERNARD ROTH, F R C S Eng

Mr Bernard Roth, whose death at the age of 63 we briefly announced in our last issue, was the eldest son of the late Dr M Roth, of Wimpole street, W After obtaining his M R C S in 1874 he became house surgeon at University College Hospital, and also studied at Brussels, Paris, Vienna, and Berlin. In 1875 he took the L S A and the M D Brux, and joined his father in orthopædic practice, being particularly interested in the treatment of lateral curvature of the spine In 1878 he married Anna Elizabeth, third daughter of the late Right Hon John Bright, P C, M P, of One Ash, Rochdale, and in the same year obtained the F R C S Eng From then onwards he took a leading place among orthopædic surgeons, and devoted his energies to introducing to the medical world a more rational method of treating lateral curvature than was then in use He was particularly opposed to its treatment by mechanical supports, and through his writings and demonstrations did much to open the eyes of his professional brethren to the harmfulness of such methods

In 1888 he was elected a corresponding member of the American Orthopædic Association, and in the following year published "The Treatment of Lateral Curvature of the Spine," a second edition of which he brought out ten years later In the treatment of other orthopædic conditions he was much influenced by his friendship with the late H. O Thomas, of Liverpool, and frequently attended Thomas's Sunday morning clinics At these Thomas saw patients at his house free of charge, and his rooms were thronged with scores of patients waiting for his opinion and advice He was thus one of the first surgeons to become expert in the application of Thomas's splints, now so universally in use He carried on his practice daily in both London and Brighton for 27 years, travelling by the midday train between the two At Brighton he held the posts of orthopædic surgeon to the Royal Alexandra Hospital for Children and surgeon to the St John's Convalescent Home

In his later years he was much interested in numismatics, and besides other papers published in 1910 a monograph on the Hiberno Danish coins At the time of his death he was a Vice President of the British Numismatic Society and of the Royal Numismatic Society, and a Fellow of the Society of Antiquaries He also occupied himself with magisterial work, being a J P for Brighton (1892), a J.P for Middlesex (1905), and a Visiting Justice, H.M Prison, Pentonville

He leaves a wife and two children, a son and daughter, the former of whom, Paul Bernard Roth, follows his father's profession

JOHN VINRACE, M D St And, M R C S Eng, L S.A

Dr John Vinrace died at his residence, "Denehurst," Oxford road, Moseley, on March 12th, at the age of 81 The eldest son of the late Mr Luke Vinrace, of Ashby de la Zouch, he went to Birmingham in 1851, when he was apprenticed to a medical man and studied at the old Sydenham College, also acting as indoor surgical assistant at the General Hospital In 1855 he qualified as M R C S Eng and L S A, and two years later graduated as Doctor of Medicine at the University of St Andrews He first started practice in Moseley, but later he entered into partnership at Birmingham He returned to Moseley some 15 years ago, when he retired He was one of the oldest and most respected practitioners in Birmingham

Correspondence.

"Audi alteram partem."

THE DEARTH OF DOCTORS

To the Editor of The Lancet

Sir,—Day by day the seriousness of the situation created by the war is deepening, while with those best fitted to judge the demand for more and more doctors seems as steadily to be increasing Are we then to go on muddling over the question of how best to provide for the inevitable emergency, or shall we take decided steps to deal radically with the situation? Yeoman service has been done by Dr N Walker and the Scottish Committee in the interests of the profession as well as of the public at large But, all the same, it must be allowed that these public spirited gentlemen have been able to do but little to meet the undoubted dearth of doctors, the deficiency affecting not only the present but the future supply of medical practitioners

To deal adequately with the position there is only one way of going to work, and that is to revert to the old four years' curriculum There need be less reluctance against the apparent reduction of the standard of qualification, when it cannot be denied that the change made less than 30 years ago has failed to meet the paramount argument for extending the course of study—i.e., the provision for an extra year to be solely devoted to *practical* bedside work—a result which the change has notoriously not effected With a sufficiently strict final examination there need be no fear, any more than was the case 30 years ago, of the standard for admission to the Register being degraded to an injurious extent, while the expense of medical education would be lessened Above all, the change would result in an annual addition of 20 per cent to the roll of diplomates

I have just been told of the case of a candidate for the B D degree in one of our Scottish Universities who has joined Kitchener's army Although

	£	s	d
Mr H. O Gray	0	10	6
Mr A. E. Mills	0	10	6
Mr G T Kingston	0	10	6
Messrs. Pinch and Co	0	10	6
Mr R. H Moore	0	10	6
Messrs Hodders Ltd. Staff	0	12	6
Messrs. Cater Stoffell and Forth, Ltd.	0	10	6
Dr L. S Clark	1	1	0
Warrington Division B.M.A. (per Dr J A. Murray Hon. Sec.) Result of Lecture at Padgate organised by Dr J Bennett Chairman of Division Gas and Lantern provided by Mr Hill	10	7	6
Dr Arthur Whitfield (second donation total £7 7s)	5	5	0
Harrow Division, B.M.A. (per Dr C M Pennefather Hon. Sec.)—			
Dr B H Barton	0	10	6
Dr A. H Bindloss	1	1	0
Mrs Brady M.B	0	10	6
Dr Andrew Brown	0	10	6
Dr T Compton	1	1	0
Dr J D Cooke	1	1	0
Dr W S Darby	0	10	6
Dr J Davidson	0	10	6
Dr Godkin Downes	1	1	0
Lt.-Col. E. F Brockman Drake	0	10	6
Dr H E. Dyson	1	1	0
Dr Cavendish Fletcher	1	1	0
Dr C E A. Goddard	1	1	0
Dr H B Harley	1	1	0
Dr H J Hildige	0	10	6
Dr R. E Humphry	0	10	6
Dr M. O Hunter	0	10	6
Dr M. F Hutton	0	10	6
Dr H S W Jones	1	1	0
Dr T S Kerr	1	1	0
Dr S H. A. Lambert	1	1	0
Dr G A. B Levick	2	2	0
Dr B H. Martin	1	1	0
Dr F M Matheson	0	10	0
Dr H Crichton Miller	2	2	0
Dr T T O Callaghan.	1	1	0
Dr C M. Pennefather	1	1	0
Dr R. L. Romer	0	10	0
Dr R. J Stilwell	1	1	0
Professor G D Thane	3	3	0
Dr W D Traill Thompson	1	1	0
Dr F E Walker	0	10	6
Dr A H Williams	1	1	0
Dr F H Woodroffe	0	10	6
Dr A. K. Baxter	1	5	0
Dr Agatha Porter	0	10	6
Dr C Oldfield (per Dr Barrs)	5	5	0
Dr C R Benson	1	1	0
Mr H Secker Walker (per Dr Barrs)	3	3	0
Barnsley Division B. M. A. (per Dr R. F Castle) (second donation)	7	7	0
Dr John Fawcett	3	3	0
Canadian Committee (per Dr J Gibb Wishart Hon. Treas.) (fourth donation total £900 5s 3d.)	400	0	0
Rotherham Division B.M.A. (per Dr Knight, Hon. Sec.)—			
Dr Anderson	1	1	0
Dr Elliott	1	1	0
Dr Jago	1	1	0
Dr Knight	1	1	0
Dr Lodge	1	1	0
Dr Picken	1	1	0
Dr Reid	1	1	0
Dr Riddell	1	1	0
Dr Kenny	1	1	0
Dr Slack	1	1	0
Dr Williams	1	1	0
Dr Sedgwick	1	1	0
Dr Collinson	1	1	0
Brussels Medical Graduates Asso (per Dr Major Greenwood, Treas.) (seventh donation total £1251 1s 6d.)	2	2	0
Anonymous from Dunedin (per Bank of New Zealand) (third donation total £605)	200	0	0
Mr S T Briggs	0	5	0
Mr A. E. Grimwade	1	1	0
Miss A. McNicol	0	10	0
West Ham East Ham and Metropolitan Essex District Asso of Pharmacists Proceeds of Annual Dinner (per Mr W T Johnson)	7	7	0
Western Pharmacists Asso., collected by (per Mr W E D Shirtliff) (second donation total £125 14s)	5	[illegible]	0
Norwich Pharmacists' Asso., collected by (per Mr W J Lacey) (third donation)—			
Mr H E. Taylor	1	1	0
Mr J E. H. Watson	0	13	0
Birmingham Pharmaceutical Asso collected by (per Mr F Smith) (sixth donation, total £120 12s)—			
Mr H. O Lloyd	1	1	0
Manchester and District Subcommittee (per Dr E. M Brockbank, Hon Sec.)	5[illegible]	5	7
Dr G H. Pinder	2	2	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A. Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors' and Pharmacists Relief Fund, crossed Lloyds Bank, Ltd £9700 had passed into the treasurer s hands by Tuesday last the sum not including the Scottish and Irish Funds

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries begs to acknowledge the receipt of surgical instruments kindly contributed by Mr T F Blaker, of Brighton, and by Messrs Claudius Ash, Sons, and Co, Broad street W C

AT a meeting of the council of the Hampstead General and North West London Hospital held last Wednesday Mr Conrad W Thies who was present by invitation received formal thanks for his voluntary help during the absence of the late secretary Mr A. E Thomas who was killed in the war and pending the appointment of a successor The council passed a resolution acknowledging the gratitude of the charity to Mr Thies for his great assistance and at the same time begged his acceptance of a gold watch with suitable inscription as a slight token of their appreciation of his services during their time of difficulty

The War.

THE NEED FOR MEDICAL OFFICERS IN THE ARMY A STATEMENT BY SIR ALFRED KEOGH.

AT a meeting of the Special Committee of Chairmen of Standing Committees of the British Medical Association, held on Thursday, April 1st, Mr T Jenner Verrall, chairman of Representative Meetings, presiding, Sir Alfred Keogh, Director General of the Army Medical Service was present upon invitation and made an important statement upon the need by the army of more medical officers

The civil medical profession, he said, had given the army so much generous and self sacrificing assistance since the outbreak of the war that he regretted to be compelled to make further demands on it But it was necessary to look ahead and make adequate provision to safeguard the health of the home army when the Expeditionary Force was increased in strength to such an extent that every commissioned medical officer fit for active service would be required for service on the continent It was anticipated that this increase would take place in the course of the next three or four months, so that the call on medical resources was urgent Sir Alfred Keogh suggested the following means by which the civil practitioner could come to the aid of the army —

Whole time Service

1 I would urge all those who are under 40 years of age and who are fit for active service to apply for temporary commissions in the R.A.M.C if their civil obligations will allow them to do so Such men would have an opportunity of seeing active service on the continent or elsewhere where we have fighting armies We are especially in need of young general practitioners who are willing to go anywhere and do anything in the way of duty with troops or with medical units

There are also vacancies for men who have specialised in surgery, bacteriology, medicine, X ray work, and ophthalmic surgery They would probably eventually be appointed to the large hospitals of 1040 beds each which are being fitted out for service with the Expeditionary Force, but they would be required to do a certain amount of work in a military hospital in this country first, so as to familiarise them with the routine of a military hospital.

2 Men over 40 years of age are not being sent abroad at present, but their services would be of the greatest value to the military authorities in this country, and many of them would probably go overseas for hospital work later on

Part time Service

So much for men who can offer themselves for whole time and general service, and who are therefore eligible to receive temporary commissions We now come to men who, on account of age or health, or local obligations are unable to accept these larger responsibilities I will divide these into three classes —

1 Those who can give so many hours a day to military work and give a certain fixed time on each day These men would be a great help in doing work in military hospitals seeing men in combatant units reporting sick with minor ailments, and looking after the sanitation of camps, barracks, and billets.

2 Men who could not devote a specific time to military work, but who would be willing to attend

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

The Fund during the fortnight that has elapsed since we reported upon its progress has received notable accretions

The large local fund collected in Manchester has now been paid in to the treasurer, making an addition to our resources upon which an influential Manchester committee and Dr E M Brockbank, the energetic secretary, may well be congratulated. Handsome subscriptions have reached the treasurer from Canada and New Zealand, while the funds in the Birmingham and Newcastle districts continue to grow

The second subscription list of the Scottish Fund is published this week, and shows a total of over £1000

Manchester and District

A total of £588 17*s* 6*d* has been received, including £104 11*s* from the pharmacists The individual subscriptions have all been acknowledged in the press Any further contributions should be sent direct to London, as this local fund is now closed

	£	*s*	*d*
Dr George Taylor	2	2	0
Dr Arnold Gregory (second donation)	1	1	0
Dr C Carruthers	1	1	0
Dr T M Popple	1	1	0
Dr W Chapman	1	1	0
Dr J T McGlade	1	1	0
Dr W Bradley	1	1	0
Dr M J O'Doherty	1	1	0
Dr C H Thompson	1	1	0
Dr Colley Salter	0	10	6

The Scottish Fund

The second list of subscriptions to the Scottish Fund brings the total subscribed to £1015 16*s* The first list of subscriptions was published in our issue of March 13th

	£	*s*	*d*
Amount previously acknowledged	888	5	6
Dr R P McMorland	1	1	0
Dr John Dalgleish	5	0	0
Dr Robert Crawford	2	2	0
Dr John Alex Gray	0	10	6
Dr A. S Walker	2	2	0
Dr H L Calder	5	5	0
Dr Alex. Robb	1	1	0
Dr H E Langwill	3	3	0
Miss Fanny Marshall	0	12	6
Dr D Gilmour	0	10	6
Dr Alex M Malcolmson	2	2	0
Dr L W C Macpherson	1	1	0
Dr F I Mackintosh	1	1	0
Dr John Ritchie	1	1	0
Dr Robert Abernethy	2	2	0
Dr J J Graham Brown	5	0	0
Dr Frederick *Gourlay*	1	0	0
Dr G R E G Mackay	3	3	0
Mrs *Glen* Henderson	0	10	0
Dr George S Carmichael	2	2	0
Dr Ada Miller	1	0	0
Dr James A Adams	2	2	0
Dr John Lindsay	1	1	0
Dr W F Gibb	1	1	0
Dr Geo S Middleton	4	4	0
Dr E H L Oliphant	2	2	0
Dr W J Richard	1	1	0
Dr P S Buchanan	1	1	0
Dr R Barclay Ness	1	1	0
Anonymous	1	1	0
Dr Jane H Filshill	1	1	0
Dr Thos Barr per B.M A. (Central Div)	3	3	0
Dr John Wright	1	1	0
Prof *T K. Monro* (additional)	5	5	0
Partick and District Medical Society	5	0	0
Dr R Speirs Fullarton	1	1	0
Dr John Paterson	1	1	0
Dr Alex Munro	2	2	0
Dr J *Maxwell Ross* Dumfries	1	1	0
Dr Wm Craig *Cow*denbeath	3	3	0
Dr Geo. Hunter	3	3	0
Mr Chas W Cathcart	5	0	0
Dr W Bruce Dingwall	0	10	6
Messrs Boots Pure Drug Company Limited Nottingham	5	5	0
Mr A. Kennedy Edinburgh	3	3	0
Glasgow Chemists Association and Pharmacy *Athletic Club* per Mr Wm. Selvwright, Glasgow ..	2	0	0
Mr A P McCallum Edinburgh ..	2	0	0
West Fife Colliery Chemists Association per Mr C Hoy Kelty	1	7	0
Mr R. Cairnie Lochgelly	1	1	0
Mr M Carmichael Glasgow ..	1	1	0
Messrs John Currie Limited Glasgow ..	1	1	0
Mr James Finlay, Edinburgh	1	1	0
Mr J Fraser Dumfries	1	1	0
Mr Jas Grant Glasgow	1	1	0
Mr John Hodge Dundee	1	1	0
Messrs W O Kay and Son Cumnock	1	1	0
Mr T McKenzie Inverness	1	1	0
Mr J B McLaren Kirkcaldy	1	1	0
Mr J H Nicholson Maxwelltown	1	1	0
Mr A W Ritchie *Montrose*	1	1	0
Mr R Robertson Dunfermline	1	1	0
Mr J H Scroggie Lauder	1	1	0
Messrs Smith and Govan St. Andrews	1	1	0
Mr *George Somerville* Edinburgh	1	1	0
Mr D N Wylie, Edinburgh	1	1	0
Mr R A. Scott Motherwell ..	1	0	0
Mr Alexr Davidson Montrose ...	0	10	6
Mr D Dunnet Falkirk	0	10	6
Mr J S B Heddle Leith	0	10	6
*Mr W J Jack Loch*gilphead	0	10	6
Mr J G Sclater *Edin*burgh	0	10	6
Mr F W Soddy Glasgow	0	10	6
Mr C Stewart Kirkcaldy	0	10	6
Mr Robt Aitken Dunbar	0	10	0
Miss R R Bell Edinburgh	0	10	0
Mr D Black Glasgow	0	10	0
Mr A. J Clark, Edinburgh	0	10	0
Mr J Smith Aberlour	0	10	0
Mr D Walker Lockerbie	0	10	0
Miss M D Hutchison Edinburgh	0	9	0
Mr P S Beatton Port Glasgow	0	7	6
Mr W C D Robertson Cockenzie	0	6	0
Mr W Barrie, Cambuslang	0	5	0
Mr C P Bayne, Innerleithen	0	5	0
Mr W J Cameron Edinburgh ..	0	5	0
Mr S P Crowden, Edinburgh ...	0	5	0
Mr R Fraser, *Portobello*	0	5	0
Mr A. Gold Larkhall	0	5	0
Mr A. Inglis, Edinburgh	0	5	0
Mr A. MacDonald Dunfermline ..	0	5	0
Mr Peter Nisbet, Leith	0	5	0
Mr A. A. Porteous, *Lerwick* ..	0	5	0
Mr Findlay Stuart Broxburn ..	0	5	0
Mr J M Turner Falkirk	0	5	0
Mr Wm Walker Dundee	0	5	0
Miss E R Hodge Dumbarton ..	0	2	6

The Fortnight's Subscriptions

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, and not including money collected by the Scottish and Irish Funds, are as follows —

	£	*s*	*d*
Dr Carey Coombs ..	2	2	0
Lt. Col. G T Langridge, *R A.M.C*	1	1	0
Tower Hamlets Division B.M A. (per Dr W H F Oxley Hon Sec) (third donation)—			
Dr McCrae	1	1	0
Dr Rosewarne	2	2	0
Dr Arthur R Randle	1	1	0
Southern Branch B M A. (per Dr J Green, Hon. Sec)—			
Dr E L Camble	2	2	0
Dr J T Leon	2	0	0
Capt. W *Carling* R.A.M C ..	1	1	0
Mr Henry Rundle	1	1	0
Dr L K. H Hackman	1	1	0
Dr T A Mulcahy	1	1	0
Dr Thos Baker	1	1	0
Dr T S Pennington Sparrow	1	1	0
Dr A. E Peters	1	1	0
Dr C D A. Collings	1	1	0
Dr H. C Major	2	2	0
Dr Hutton Castle	0	10	6
Brigade-Surgeon J W Wilson ..	1	1	0
Dr J A Gibson	1	1	0
Col W E Webb	1	1	0
Dr Alfred Hill	1	1	0
Lt Col Le Mottée ..	1	1	0
Brig Surg W M Harman ..	3	3	0
Dr O V Payne	1	1	0
Dr J B Wood	0	10	6
Mr C Gordon Brodie	2	2	0
Lt Col Dimmock ..	2	2	0
Dr C H Fowler ..	1	1	0
Dr D A. Sheahan	3	3	0
Dr E. Lawrie Robinson	1	1	0
Dr H. J Gauvain	1	1	0
Fleet-Surg K. Hurlstone Jones R N	0	10	6
Dr Charles H. Bois	0	10	6
Capt. J A. Cruickshank, I M S	1	1	0
Major T Hunter I M S	3	0	0
Birmingham Local Committee (per Dr R Saundby) (thirteenth donation total £338 11*s* 3*d*)—			
Mrs Allison	10	10	0
North of England Branch (per Dr James Don and Mr A. S *Percival* Hon Secs) (6th donation total £323 14*s*)—			
Dr W Hay	1	1	0
Dr A. S Hedley	1	1	0
Dr H A Edwards	1	1	0
Dr Henry Smith ..	2	2	0
Dr G E Welford	1	1	0
Dr John Brown ..	1	1	0
Dr J W Blandford ..	2	2	0
Dr W Petter	1	1	0
Dr J R Baumgartner	2	2	0
Dr George Murray	1	1	0
Dr G R Philipson	1	1	0
Dr John Wishart	1	1	0
Dr Thos F Johnston	0	10	6
Dr T Buckham	2	2	0
Dr G H. Norris	5	5	0
Dr R. Parry ..	2	2	0
Dr Wm Allen	1	1	0
Dr C L Fraser ..	1	1	0
Dr G B Morgan	1	1	0
Dr H. de Legh	1	1	0
Dr T A. McCullagh.	1	1	0
Dr Wm. Scott	1	1	0
Dr A M G Walker	1	0	0
Dr Dora E L Bunting	1	0	0
Dr Martin	1	0	0
Prof Hutchens	2	2	0
Dr Hart Jackson ..	0	10	6
Sir G H Philipson	5	5	0
Dr R. Morris	1	1	0
Dr R McGregor	1	1	0
Dr S Basham	2	2	0
Dr Dewar ..	1	1	0
Dr A. Brown	1	1	0
Dr G Lloyd	1	1	0
Dr and Mrs A. Campbell ..	2	2	0
Drs H and S Russell	4	4	0
Dr A. Herbert Peters	2	0	0
Dr R B Reed ..	1	1	0
Dr A. Walker	1	1	0
Dr U B Walker ...	1	1	0
Dr C H Walker	1	1	0
Dr G M. Coull	1	1	0
Chichester and Worthing *Division* B M A. (per Dr A. Morton *Palmer* Hon Sec.) (3rd donation)—			
Dr R M Goring	1	1	0
Dr D Hethcote	1	1	0
Dr G F Briggs	2	2	0
Mr H *Crompton*	1	1	0
Mr F W Scanlon	0	10	6
Mr *Waldron Griffiths*	0	10	6
Buckrose *Pharmacists* Asso. (per Mr P Hawkins)	1	10	0
Mr A Chapman	0	8	9
Mr G Knowles	1	1	0
Mr J H Hart	1	1	0
Lanarkshire Pharmacists Asso (per Mr J *Loboar*)	1	1	0
Messrs Fairchild Bros & Foster	52	10	0
Bath Pharmaceutical Asso collected by Mr D A *Evans* (per Mr W J Hallett)—			
Messrs Steele & March and Staff	1	8	6
Messrs Hawes Whiston & Co	0	10	6
Mr Luther Wilson	0	10	6
Messrs A. *C Olds* and Co	0	10	6
Messrs Tylee and Cooper	0	10	6
Messrs Appleby and Co ..	0	10	6
Mr W J Hallett	0	10	6
Messrs Davies and John Ltd	0	10	6
Messrs Wilkinson and Dickinson	0	10	6
Mr H. C Broad	0	5	0
Mr H Norris	0	5	0
Mr J L. S Gordan	0	10	0
Mr A. B Hall ..	0	5	0
Mr E Loveless	0	10	6
Mr *H W Gedge*	0	10	6

an indraught of filtered air Closely fitting flanges to the windows keep out dust, and the tail board is arranged ingeniously so that the outer surface is always outside and dirt is not tipped into the theatre when it is closed up The back of the car during travelling is covered by American cloth

Washing, drying, and sterilising are provided for, and so long as supplies arrive regularly the theatre can be kept in constant use to serve casualty clearing stations and to deal with cases of grave abdominal injury, head cases, and large amputation or wound cases It is not suggested that it should be used for any case that can be removed without risk of further complications ensuing or of pain and shock

The cost of the theatre is £1100, the chassis costing £600, the body about £200, and the electrical fitting £70, leaving £230 for stores, fittings, and instruments, a sum which need not be spent or can be exceeded

Mentioned in Dispatches

The following names have been added to the list of officers recommended for gallant and distinguished service in the field in the dispatch published in the *London Gazette* on Feb 17th (see THE LANCET, Feb 20th, p 406) Major S L Cummins, M D, R A M C, Captain C G Browne, R A M C, and Lieutenant (temp) G W Milne, M D, R A M C

In the same list, as previously published, the following corrections are notified with reference to the officers of the Royal Army Medical Corps Lieutenant (temp) J B Mathews should read Lieutenant (temp) J B Matthews, Lieutenant R B Philippo should read Lieutenant R B Phillipps, and Lieutenant R E Pirrie, M B (killed in action), should read Lieutenant R E Porter, M B (killed in action)

The Casualty List

Since our last issue the casualties reported in our Expeditionary Force include the names of Lieutenant E Stratford, R A M C, and Lieutenant A N Smith R A M C both wounded

The Water supply of the Belgian Army

A representative of the Belgian Soldiers' Fund writes on the problem of the water supply of the Belgian army Owing to the floods the water, obliged to filter through land soaked in blood and strewn with dead, is in a dangerous condition In a few weeks the fierce sun will be pouring its rays on a devastated country A rapid advance of the allied troops is expected, when the forced marches may cause urgent thirst and the tired men, unable to resist the temptation, will drink at the roadside dyke The terrible conditions that exist in Serbia are due mainly to lack of sanitary organisation in the earlier months of the war Belgium has no lack of willing men but does lack funds to place the necessary arrangements at the service of the army and the Government to keep a permanent supply of pure water always at hand till danger is passed The Belgian Soldiers Fund has acquired 100 portable 50 gallon boilers complete with pony and harness which are being delivered now, but what is that among so many? As the boilers take a week or two to manufacture the order must be given at the earliest possible date The Belgian Soldiers Fund deals entirely with providing food comforts, clothing and pure water for the Belgian Army and for the widows orphans and families of their soldiers All consignments are made direct to M de Broqueville, Minister of War Cheques should be made out to the "Belgian Soldiers' Fund" crossed on Lloyd's Bank and addressed to the Secretary, 17–19, James street, Oxford street, London, W

The Medical Plight of Serbia

The urgent appeal of Serbia for medical officers to attend the Serbian wounded, preferred through Sir Lomer Gouin, Premier of the Province of Quebec, by the Serbian Royal Legation in London, has resulted in the following Canadians volunteering —

Dr Albert Paling, Winnipeg, Dr J M Casserly, St Thomas, Ont , Dr W J McAllister, Calgary, Alberta, Dr A. W M Leclair, Letellier, Man , Dr O S Waugh, Winnipeg, Dr D C Hart Kipling, Sask , Dr Arthur Macaan Birtle Man , Dr R L Hutton, Rosthern, Sask., Dr J Hetherington Carievale, Sask., Dr Thomas H Smith, North Sydney, N S , Dr James Peake, Winnipeg, Dr W A. Dymond, Winnipeg, Dr Alex Osmanley, Toronto, Dr W P Mackasee, Springhill N S , Dr O A. Cameron, Stratford, Ont , Dr A H Bowen, London, Ont , Dr D E Scott, London, Ont , Dr J V Brandon, Winnipeg, Dr L Zealand, Winnipeg, Dr J Baxter, Chatham, N B , Dr G Degrys Abenakis Springs, Que., Dr Alfred Whitmore, Cabri Sask , Dr V Bourgeault, Marcelin, Sask , Dr P E Lavoie, Marcelin, Sask. , Dr C M Keiller, London, Ont , Dr G E Duncan, Vernon B C , Dr M F Lucas, Dryden, Ont , Dr J Murray Winnipeg, Dr P A Guay, South Shipshaw Que , Dr E E Robrabough, Sanford, Man , Dr B A. Hopkins, Blaine Lake, Sask., and Dr J B McKay, Kitscoty, Alberta

Several nurses have also volunteered for the Serbian service

The third and fourth units of the Serbian Relief Funds Hospitals left London on April 1st The third unit, Mrs St Clair Stobart's Hospital, is staffed almost entirely by women There are 16 nurses, 15 women orderlies, 7 women members of the medical and surgical staff, besides 6 male orderlies and the treasurer Its destination is Salonica The fourth unit, the British Farmers' Hospital, under the administration of Mr L M Wynch, C I E, has a tent hospital to contain 300 beds, with baths, ice plant, and everything requisite for serum treatment It has four medical men, a secretary, a matron, 18 nursing sisters, 13 female and 4 male orderlies, and a dispenser, and its destination is Skoplje, where there are said to be some 3000 cases of typhus fever

The Princess Christian Hospital Train

The Princess Christian Hospital Train is due entirely to the initiative and energy of Her Royal Highness, by whom also the necessary funds have been raised It is the successor of the train which, under the same name, was sent to South Africa in 1899 Sir John Furley and Mr William J Fieldhouse, who designed the latter train, are responsible for the present one also The difficulties in the present case were increased by the necessity for consulting different bodies The War Office laid down that hospital trains should accommodate 400 patients, the French railway engineers required all questions relating to under carriages, couplings, brakes, lighting, and so forth, to be submitted for their approval. A joint railway committee was accordingly formed of managers of the leading English railway companies and French railway engineers, with the result that the train as it stands now satisfies the requirements of the different authorities

The arrangements of the train are as follows —The first coach contains an office with bed, fittings, desk, safe &c, for the quartermaster sergeant partitioned off from a ward containing 30 beds. Coaches 2 and 3 have each the wives and children of officers and soldiers as part of their general practice at good rates of pay.

3. Men who could arrange to help the neighbouring practitioners who have undertaken military duties, and who would do so without encroaching on their practices, and under terms which would have to be settled by mutual agreement.

It will be seen that every medical man in the country can "do his bit" to help the Government to bring this great war to a successful issue, and from our previous experience we can trust them to respond generously to the appeal we are now making to their patriotism.

A MOTOR OPERATION THEATRE

A highly convenient operating theatre contrived within a motor wagon has been designed by Captain G. H. Colt, R.A.M.C., assistant surgeon to the Royal Infirmary, Aberdeen.

The chief points in connexion with this motor operation theatre are that it can be easily taken wherever it is required, that its dimensions are reasonable, that it can carry all its personnel, and that its price is not high. The chassis is of the commercial vehicle type, 20–30 h.p., the wheel base being 11 ft. 6 in., the body is 9 ft. 6 in. long, 6 ft. 6 in. wide, the cab is 3 ft. 6 in. long, 6 ft. 6 in. wide, the height of both is 7 ft. over all, and the weight carried, including five persons, is about 2¼ tons, suitably arranged as regards steering facilities. A clear space of at least 2 ft. 9 in. and more if required is available as a stretcher way.

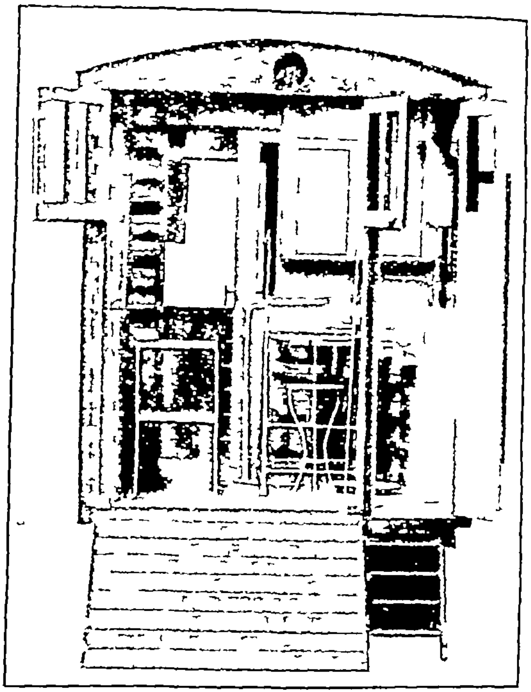

FIG. 1.—Motor operation theatre. Back view.

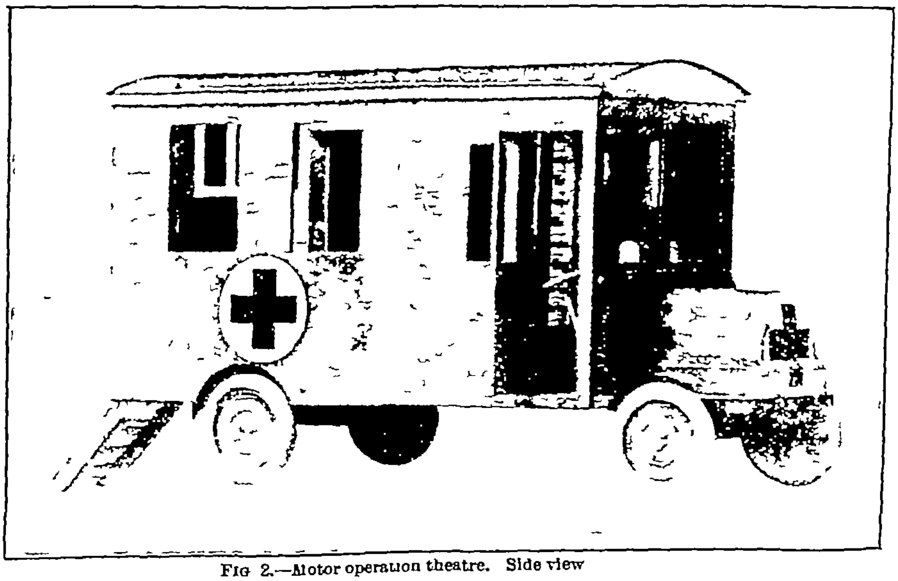

FIG. 2.—Motor operation theatre. Side view.

All boiling and sterilising and drying of washing is done in the cab (or partly outside the theatre) by paraffin burners. The cab is separated by a sliding door from the body of the theatre, thus eliminating phosgene gas, a most important point as regards the efficiency of the personnel. Cold sterile water is obtained in the body of the theatre either by tabloid hypochlorite in 15 minutes or by filling the four vessels from the boiler. The storage room is 34 cubic feet, providing for, say, 60 towels, 15 gowns, wool, gauze, bandages, and instruments. In addition a minimum of 16 full-sized drums, shelves, two drum stools containing plaster of Paris, and a trolley are provided. Seven cubic feet of space are available under the operation table if required. Two 20 gallon water tanks are carried.

Electric light can be run for six hours off accumulators. A minimum time of 15 minutes is available for recharging off the engine between operations if required. Ventilation is by windows and an electric fan, causing

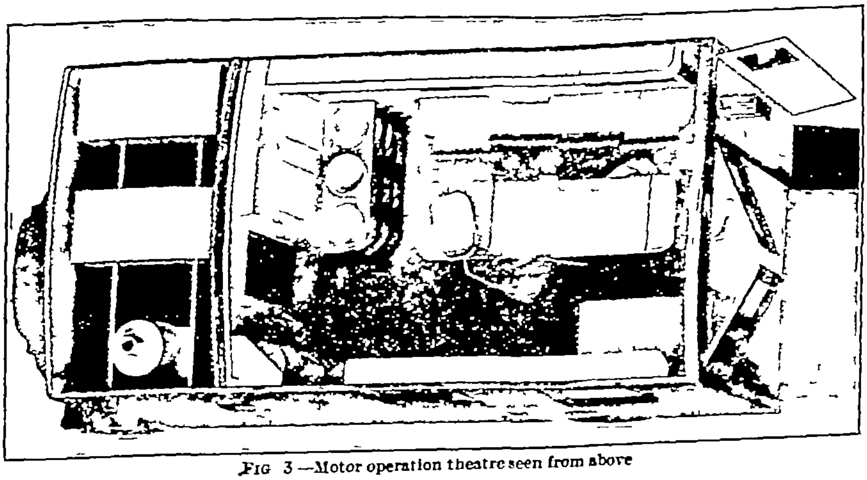

FIG. 3.—Motor operation theatre seen from above.

HELP FOR THE HOSPITALS —Lady Lawley, honorary secretary of the Queen Mary's Needlework Guild, has made a public announcement that with the approach of summer the necessity for woollen comforts no longer exists, nor for clothing for women and children, but owing to the duration of the war and the large number of casualties there is an increased demand for all necessaries and comforts for wounded and convalescent soldiers in the hospitals at home and abroad, for which several thousand more beds have to be equipped Ladies are therefore requested to devote their energies to making for hospital use shirts, pyjamas, slippers towels bandages, nightshirts, dressing gowns, sheets, feather pillows, lint, together with socks, which are always useful

CARDIFF MENTAL HOSPITAL —The committee have agreed to hand over this hospital, situated at Whitchurch, to the War Office for use as a military hospital The conditions, among other things, arrange that the Army Council is to make good expenditure or loss sustained The War Office is to become responsible for the care and treatment, the hospital being handed over with its entire staff as a going concern Any extra staff required will be appointed by the War Office The scales of board and living for the staff are to be not less favourable to the staff than those at present obtaining The medical superintendent will be the officer in charge under the direct control of the War Office. He will make contracts for supply and carry on the business side of the administration, opening a separate account and presenting his monthly accounts to the War Office through the Board of Control The taking over of the hospital is to entail no expense whatever to the Cardiff ratepayers, and this includes the removal of patients to other mental hospitals and the charges made for their maintenance

THE TRAINING OF WAR PROBATIONER NURSES —The army appeal for nurses is meeting with a wide response St Bartholomew's Hospital, which has arranged a three months course for war probationers, to fit them for service under fully qualified nurses in military hospitals in accordance with the expressed desire of the Director General of the Army Medical Service, as mentioned in our columns on April 3rd (p 728), has received over 400 applications, of which not more than 40 could be accommodated University College Hospital has also arranged for three and six months courses for the same purpose.

READING AS A HOSPITAL CENTRE —The War Office has taken over the Reading workhouse and several large elementary schools with the object of making Reading an important hospital centre The transport service is to be organised entirely by the Berkshire Automobile Club, which will provide a staff of drivers

DISINFECTANTS NEEDED FOR MONTENEGRO —The prevalence of epidemics of typhus and typhoid fever in Montenegro has caused Sir Edward Grey to issue an appeal through Sir J Roper Parkington for financial aid to supply the large quantities of disinfectants that will be required the transit of which it is believed will be expedited by the Italian Government Donations can be sent to the Duchess of Rutland, 16 Arlington street W, or to Lady Parkington, 53 Green street Park lane W

THE Cross of Chevalier of the Order of Leopold has been conferred by the Belgian Government on Miss Beatrice Dormer Maunder director of the Anglo-Belgian Hospital at Rouen in recognition of her services since the outbreak of the war first at Ostend and subsequently at Rouen

THE Indian Field Ambulance working at Neuve Chapelle received the special commendation of Lieutenant General Sir James Willcocks commanding the Indian Army Corps in France

BRISTOL ROYAL INFIRMARY —At the annual meeting of the supporters of the Bristol Royal Infirmary on March 22nd Sir George White the President congratulated the governors on their prescience five years ago in placing the Royal Infirmary at the disposal of the nation to constitute the 2nd Southern Base Hospital for the sick and wounded in case of war The report stated that at the end of 1914 no
fewer than 1637 military patients had been adm
very large number of military out-patients treate
mittee having agreed with the War Office to un
feeding, cooking provision of drugs and dre
laundry In addition accommodation had also
for many wives and families of soldiers comin
and the colonies Nevertheless, the treatm
patients had gone on as usual Practically the
honorary staff had been called up for military
of past and present sisters and nurses 103 we
military hospitals at home and abroad Lieut
J Paul Bush, C M G, R A M C (T), express
behalf of the War Office for the way
president and committee had responded
made upon them

Medical News.

EXAMINING BOARD IN ENGLAND BY
COLLEGES OF PHYSICIANS OF LONDON AN
ENGLAND —At the First Professional Exan
Conjoint Board, held on March 23rd, 24th,
the following candidates were approved
mentioned subjects —

Chemistry and Physics.—John Griffith Barrie
Lionel Moore Billingham Cardiff Kevin
St Bartholomew's Hospital Benjamin Young
Middlesex Hospital Cyril Bernard Dix Guy's
Henry Dobrashian University College John I
worth Guy's Hospital William Collins Faull
Edgar Francis Job Jones Cardiff Francis Will
Cross and King's College Elizabeth O Flynr
Medicine for Women Arthur Gordon Or
Mohammed Abbas Ragy King's College Jose
Guy's Hospital and Henry William Miles Wil
Chemistry —Frederick Thomas Allen St Thoma
Edward Barnes University College Alfred
mew's Hospital Wahba Girgis St Mary's I
Guilfoyle, St. Bartholomew's Hospital Tu
Cardiff Eva Morton London School of Medi
George Foster Smith Manchester University
Physics —Ina Valentine Vincent London Sc
Women and Polytechnic Institute.
Biology —Abraham Abelson D Sc. Lond.
College Frank Barker King's College W
University College; Willie Beaumont, Lon
Moore Billingham Cardiff Frederica Ma
Bridget Broman, London School of Medic
Francis Edward Burns Bristol Univers
Davies Cartledge St Bartholomew's Hosp
Chappel London School of Medicine
Robert Chapple, St. Bartholomew's Hosp
Harper Christmas Middlesex Ho pit
Collyns St Bartholomew's Hospital
and Ignatius Joseph Cruchley Lond
Henry Dobrashian, University College A
Edward Edwards Manchester Univer
Evans and William Collins Faull St M
Finkelstein Zürich and King's College
Portsmouth Technical College Sydney
University College Arthur Robert H
Thomas James St Bartholomew's Hosp
Jones Cardiff Francis William Kemp
College John Kendall and Gerald B
Hospital Paul Lindsey St Bartholome
Llewelyn Cardiff Eva Morton Londo
Women Arthur Richard Neckles and
Hospital Frederick Ferdinand Pete
Eleanor Margaret Reece London School
Charles Edward Roach-Smith and Geoff
Hospital Peter Erbin Williams B Sc.
Wolff Guy's Hospital

At the Second Professional Exami
Board, held on March 25th 26th
presented themselves of whom 29
were rejected The following are th
candidates —

Hector Demetrius Apergis and Ernest
pital Charles Herbert Carroll an
London Hospital Eric Croft New Z
Nangalana han Dominick Madras
El Gauly St Bartholomew's Hospit
Hospital Frank James Harringt
Hubbard Guy's Hospital John
versity College Cardiff Florence
University Richard Turner Mells
Harry Mandling King's College
burgh and London School of
Olivera L M S Bombay Bombay
King's College Aron Israel Paris
Powles Peirce Birmingham Univer
Powell London Hospital Royal
Hospital Florence Mildred Rhod
for Women Khurshedjee Jamset
versity George Ernest Spero and H

36 beds, with lavatory and lockers Coach 4 has beds for 12 orderlies with two lockers and lavatory, a kitchen fully equipped and a 60 gallon hot-water tank, also store-room for linen The first part of Coach 5 provides sleeping accommodation for the nurses, and nurses' and doctors' dining rooms, also office and sleeping accommodation for the P M O Then come the surgery and a sleeping room for doctors Coaches 6 and 7 are similar to 2 and 3, and Coach 8 contains beds for 12 orderlies, a kit store, and a second kitchen In accordance with the War Office desire, four other coaches, each for 60 sitting up patients, have been added to the original eight, thus making with the engine and brake-van a train of 14 vehicles with a total length of about 700 feet There is an ample supply of water throughout the train and gas and electric lighting, while in case of these failing Gimble candle lamps are placed in each carriage The equipment of this train is ample and excellent, so that the train can, if necessary, be used as a stationary hospital on wheels

THE FRENCH RED CROSS HOSPITAL AT ROYAUMONT —Our own correspondent sends the following description of the military hospital at Royaumont —"The Abbey of Royaumont dates from the thirteenth century, and has been occupied by religious communities from its foundation until some ten years ago It is beautifully situated in the picturesque valley of the Oise in extensively wooded grounds Its peacefulness renders it an ideal site for a military hospital The abbey is built round three sides of a central court with cloisters and two of these wings have been easily adapted to the needs of a modern hospital On the ground floor are three medium sized and two large wards, kitchen, lavatories, and bathroom All have high arched stone roofs, one, the ancient refectory, is oak panelled, with windows facing south and west New patients during their first days remark that on awaking from sleep they think they are in a church so peaceful and so dignified are the arched roofs, stone walls and pillars and the latticed glass of the tall windows Two great staircases of oak lead to the first floor, where the ancient library of the monks, another stately hall, has been converted into a ward Its windows look north and south, on one side the windows open on the terrace above the cloisters, where convalescents can lie in the sunshine On the same floor in adjacent rooms are the X ray department, the dispensary, and the operating and sterilising rooms On the same floor at a higher level are two long corridors with convenient bedrooms for the nurses and the medical and administrative staff, on the second floor are isolation chambers storerooms, and bedrooms, and rooms for mending and sorting of clothes and arms There is electric light throughout, hot water and anthracite stoves for heating have been inserted Three motor ambulances fetch the wounded daily from the evacuation station at Creil The first set of patients arrived about the middle of January, in March 161 entered, 106 were discharged. Shrapnel and bullet wounds form the majority of the cases which reach Royaumont, usually from 12 to 40 hours after being wounded All wounds arrive with a clean excellent first dressing, and the men have already received an injection of antitetanic serum As a consequence, no cases of tetanus have been seen at Royaumont The shrapnel wounds tend to become septic, and are treated at once with hydrogen peroxide and mercurial dressings When examination by X rays reveals the presence of a foreign body it is localised by Hampson s method, and extraction is facilitated by the use of the telephone probe Bullets embedded deeply in the muscles are rarely septic, and when left alone frequently give rise to so little trouble that their removal is unnecessary and inadvisable.

The military medical authorities have made a request to the chief surgeon at Royaumont that the number of beds be increased from the original 100 to 200—a request which is the more flattering seeing that in January when the hospital opened, it received no eager welcome and for some weeks had three fourths of its beds unoccupied. Miss Ivens M B, M S, is head surgeon, Miss Winifred Ross and Miss Ruth Nicholson act as assistant surgeons, Mrs Berry and Miss Deborah Hancock as physicians, and the X ray and electro therapeutic department is under the care of Dr Agnes Savill. The hospital, whose official title is Hôpital Auxiliaire No 301 of Royaumont Asnières sur Oise, is under that branch of the French Red Cross known as Secours aux Blessés Militaires"

CANADIAN BASE HOSPITALS —The following is the staff for the base hospital contributed by the University of Toronto, which has been accepted by the War Office. Administrative staff Lieutenant-Colonel James A. Roberts, F R C S, commandant, Major William B Hendry, second in command, and Captain M J L Yellowlees Surgical staff Professor A. Primrose, Dr F N G Starr, Dr Walter McKeown (of equal rank), Dr E S Ryerson, Dr Geo E Wilson, Dr W J O Malloch, Dr R Gaby, Dr F W Watts, Dr J G Gallie, Dr H Wookey, and in addition Dr F W Marlow and Professor B P Watson. Medical staff Dr Andrew R Gordon and Dr Graham Chambers (of equal rank), Dr D McGillivray, Dr Harold C Parsons, Dr D King Smith, Dr C F McVicar Dr Geo F Boyer, Dr F R D Hewitt, Dr R G Armour, and Dr J H. McPhedran. Nose and throat Dr Gilbert Royce Eye and ear Dr Wm H Lowrey Genito urinary Dr Robert Pearse Sanitation Professor John A Amyot Laboratory Dr Duncan Graham, Dr N C Sharpe, Dr A. A. Fletcher, and Dr C. J Imrie Dental staff Dr George Dow This staff has been selected from the various hospitals of Toronto, in addition some 80 nurses will also be selected.—The base hospital contributed by McGill University, which will be known as No 3 McGill Hospital, and which also has been accepted by the War Office, will be under the command of the Dean of the Medical Department, Lieutenant-Colonel H S Birkett, with Lieutenant-Colonel H B Yates as second in command The personnel was announced by our Canadian correspondent on March 20th.

THE FEEDING OF TROOPS IN THE FIELD —Our Paris correspondent writes *Dr Basset, inspector of provision factories in the 18th district, has pointed out that there is at present too exclusive an amount of flesh eating, for the French soldier refuses rice and makes but little use of bread To remedy this state of things he suggests the preparation of four new forms of preserved foods, forming nutritious, hygienic, and agreeable dishes, the preparation of which is simple and practical* These dishes are a beef hash with vegetables, a *ragoût* of beef with vegetables, a *cassoulet* (a Languedoc dish of *haricots blancs* with pieces of goose, duck, mutton, or pork), and a *mince of pork* cooked in fat

THE DEARTH OF MEDICAL OFFICERS —A correspondent writes to us in reference to Sir Alfred Keogh's appeal, which appeared in THE LANCET of March 13th, to say that there are several reasons why medical men do not come forward Among others he has heard the following 1 Many now serving as combatants to fill up a niche, which they prefer, are willing to serve professionally from a sense of duty, naturally they will not accept a rank lower than their present one, and for this reason they are refused. 2 Medical men of many years' standing and in a good professional position very naturally object to be placed under men half their age and with no professional experience to speak of 3 The offer of £8 8*s* a week without any allowances is hardly attractive to a man, however patriotic he may be, who has to pay at least that amount per week to carry on his practice, in addition to the fact that his practice only earns about a quarter of what it should earn, and that his household and most of his professional expenses remain as before—the loss of most of his practice is hardly compensated for by a *donation of £60* at the end of his service A man who gives professional service is worth more than one who gives amateur service The heads of the Royal Army Medical Corps do not know anything about private general practice and cannot be expected to think of these things, but until they do it will be difficult to get men to come forward

RE-EDUCATION OF CRIPPLED SOLDIERS —The Colony for Cripples at Chailey, Sussex, has instituted military wards for convalescent soldiers where the men are taught various crafts in conformity with the disabilities imposed on them by their injuries An appeal for special support was endorsed by the Bishop of London who paid a surprise visit to the camp before going to the front for Easter Things especially desired as gifts are a gramophone and records a piano bagatelle boards, a revolving shelter, books and magazines, and the loan of motor cars Communications may be addressed to Mrs C. W Kimmins, The Old Heritage, Chailey, Sussex

UNIVERSITY OF GLASGOW —The following candidates have passed the examination for the degrees of Bachelor of Medicine (M B) and Bachelor of Surgery (Ch.B) in the subjects indicated—B , botany, Z , zoology, P , physics, C , chemistry —

John Smith Aitken (Z) Robert Caldwell Allan (Z) Carl Otto Anderson M.A. (B P) John Lang Anderson M.A. (Z) James Baird (Z., C) Adam Barr (C) Alexander Kidd Begg (Z , C) Alexander Shanks Bisset (P) Alexander Ronald Black (Z C) John William Stewart Blacklock (Z C) Donald Cameron Bowie (C) Alexander Davie Boyd (Z) Alexander Lochlan Brough (Z C) Archibald Donald Brown (Z) Murdoch Brown (Z C) James Caddies (Z. C) Alister Campbell (Z C) Donald Stewart Campbell (B Z.) James Gibson Campbell (Z., C) Lovat Fraser Capell (Z C) John Parker Chisholm (P) Booth Frederick Clarke (B P) Horace Collingbourne (B) John Gilchrist Coltart (Z. C) Alexander Conner Connell (Z. C) George Michael Cooper (Z C) James Livingstone Cowan (Z C) Archibald Joseph Cronin (Z., C) Edward Mitchell Erskine Cumming (B., P) Douglas Roy Ferguson Davidson (Z) John Campbell Dow (P) John Grahame Drew (Z., C) Peter Alexander Falchney (Z C) Robert Fletcher M A. (Z. C) Colin Macphail Forbes (Z C) Robert Adam Forsyth (Z C) Allan Donald Fraser (C) William Armour Galbraith (Z. C) Matthew Forsyth Gibson (Z C) William Gibson (Z., C) Francis Denis Gillespie (Z. C) Joseph Drysdale Glaister (Z. C) Adam Smith Goodie M.A. (P) John Crawford Grant (Z C) John Forrest Hamilton (Z C) William Mason Hamilton (Z., C) William Harrison (Z C) John Hewitt (Z C) Robert Gold Howat (Z., C) David Imrie (Z C) John Edward Jeffrey (Z., C) Andrew Yuill Pollok Johnston (Z C) Ian Gordon Kennedy (Z C) Robert Kennedy (Z C) William Milroy Kennedy (Z C) John Kirk, M.A. B Sc (Z C) Alexander Adam Kirkland (Z) William Malcolm Knox (Z) James Burnett Lawson (Z) John Leishman M.A. (Z., C) Barnett Levine (Z C) Douglas Marshall Lindsay (Z) David Logan (Z.,C) George Alexander Lowe (Z C) Duncan MacColl (B., P) Robert M Courtney (Z.) Patrick Joseph M Cusker (Z., P) Andrew Buchanan Macdonald (C) John MacColl MacDougall (Z., C) Frederick M Elwee (Z. C) William Douglas Macfarlane (Z C) Robert M Intosh M Kean (B Z P) William M Kendrick (Z) Kenneth Mackenzie (Z C) Alexander Henderson M Lean (Z) Angus Maclean (P) Neil Alexander MacLean (Z C) William Henry M Leish (Z P) Joseph Patrick M Millan (Z. C) Peter MacMurray (Z C) Alexander M Callum Macqueen (Z C) Robert Mair (Z. C) James Matheson (B) John MacKean Maxton (Z C) Hugh Robertson Melville (B P) Modiri Silas Molema (Z C) James Bennie Morrison (C) George Nelson (Z) John Nicolson M A (C) John Stewart Nisbe (Z C) John Alexander Ramsay Oswald (Z C) Gilbert Paterson (Z C) James Paterson (Z) William John Payne (Z C) John Pollock (Z., C) Thomas Poole (C) Rahmat Ullah Qureshi (Z. P) Peter Crawford Rankin (Z C) David Reid (Z C) Andrew Morton Robertson (Z C) Henry Alexander Ross (Z C) Archibald Morton Sanders (Z C) John Kennedy Scotland (Z.) Thomas Sommerville (Z. C) Donald M Dougall Sproull (Z C) Horatio Walter James Steen (B., Z., C) John Stevenson (B., P) Robert Miller Stevenson (B Z) William Howie Stevenson (Z C) Andrew Sneddon Bennie Stewart (Z C) Noel Eustace Stone (Z. C) Alexander Strang (Z C) Hugh Sutherland (Z C) William Crookenden Taylor (B) William Robert Paton Templeton (Z) Ernest John Tytler Thompson (Z) John Todd (B Z C) John Leonard Turpie (Z C) John Walker Walker (Z C) William Burns Wallace (Z.) James Alexander Walls (B Z) Richard Jackson Watson (Z C) John Cunningham Watt (Z) Robert Kennedy Watt (Z C) John Whitelaw M A. (Z C) Andrew Wilson (Z C) Robert MacLaren Wilson (B P) and Stephen Young (B Z., P., C)

Women —Christine Calder Abernethy (Z C) Helen Frances Allison (B Z C) Ellen Davidson Anderson (Z C) Grace Hay Anderson (Z C) Elizabeth Pace Cameron (Z., C) Helen Clacher Cameron (Z. C) Edith Chalmers (Z) Mary Turner Liddell Clark (Z C) Emily Loudon Clow (Z., C) Veronica Catherine Jessie Davies (Z C) Charlotte Ann Douglas (Z) Helen Hogg (Z) Marion Pitcairn Hogg (Z., C) Elizabeth Smith Inglis (Z. C) Margaret Logan (Z C) Alice M Elwee (Z., C) Alice M Glashan (Z C) Evelyn Christina M Donald M Gregor (Z C) Ellen Thomson Mackenzie (Z. C) Annie Isabel Christian Maclardy (Z) Margaret Elizabeth M Laren (Z. C) Mabel Mary Maclean (Z C) Caroline Jane Maclennan (Z) Muriel Mary M Walter (Z) Agnes Hislop Macwhirter (Z) Florence Frances Mitchell Milne (P) Georgina Murdoch (Z C) Kathleen Nicol (B) Margaret Mitchell Paterson (Z.) Louisa Evelyn Pigeon (Z C) Margaret Innes Prangnell (P) Eliza Dorothea Sandison (Z C) Elaine Bessie Stuart Stenquist (Z C) Muriel Amy Stowe (Z) Jean Banks Thomson (Z) Marion Thomson (B Z P., C) Lilian Jane Taylor White (Z C) and Helen Barr Wilson (Z C)

The following have passed the examination for the degrees of Bachelor of Medicine (M B) and Bachelor of Surgery (Ch B) in the subjects indicated—A anatomy, P , physiology M materia medica and therapeutics —

John Alston (M) Alexander Bell Austin (P) Alexander George Brand (M) William Moore Cameron M A. (A P) John Williamson Dalglish (M) James Ferguson Duthie (M) Kenneth Henry Dyke (A. P) James Ewing (M) Thomas Fleming (A.) Thomas Kendall Fulton (M) Kenneth [illegible] Alexander Gillanders (A), John Gray Gilmour (A) William Ha[illegible] Gordon M A (M) [illegible] Guillermo Sanchez Hall (A. P) Frederick William [illegible] (A [illegible]) George Mundell Hetherington (M) Arthur [illegible] Hill (M) Tom John Honeyman (P M) James Neil Jamieson M.A (A [illegible]) Oswald Johnston (A. P) Peter Stewart [illegible] (M) William Fulton [illegible] M.A. (A.) Andrew [illegible] Lang M.A. (A P M) George Lean B Sc (A P) James [illegible] (A P) Frederick [illegible] (A P) William Wilson [illegible] (A., P) Arthur Daniel Clark M'Gowan (P M.) Alexander M Cheyne Macintosh (A., P) John Ebenezer MacIntyre (A. P) Donald William Morison MacKenzie (A. P), Neil Mackillop (M.) Robert Hugh M Killop (A.) Donald Macqueen (A. P) William M'William (A P) William Duff Miller (A. P) George Anderson Mitchell (A., P) James Moffat (P) William Harold Palmer (M) James Walker Patterson (A P) Samuel Murdoch Riddick (A. P) Ian Menteith Robertson (A. P) John Llewelyn Rowlands (P) Alexander Benham Stich B Sc. (A. P) Thomas Stewart Stirling (A., P) James Joseph Treanor (A. P) James Livingstone Walker (A.) Robert Nisbet Walker M.A. (M) John Allan White (A.) Kenneth John Talbot Wilson (M.) William Alexander Wilson (M) and Robert Young (M.)

Women —Janetta Margaret Alexander (M) Annetta Gillies Turnbull Anderson (A , P) Mabel Nellie Blake (A. P) Margaret O Rourke Gallagher (P) Mary Brown Gillespie (A. P) Margaret Hutchison Glen (M) May Constance Boughton Leigh (A.) Margaret Jane Thorburn Leitch (M) Elizabeth Clark M Haffie M.A. (A.) May Elizabeth MacIver (M) Alice Julia Marshall (M), Mercedes Margaret Morton (A.) May Isabella Turner Reid (M) and Marion Watson (M.)

The following have passed the examination for the degrees of Bachelor of Medicine (M B) and Bachelor of Surgery (Ch B) in the subjects indicated—P , pathology, M , medical jurisprudence and public health —

William Dick Allan (M.) John Alston (P) William Baird (M) James Beveridge (P M) James Prowse Broom (P) Duncan Cameron (M) Joseph Chalmers (M) Douglas Hamilton Coats (P) Alexander Findlay Cook (M) Archibald Shankland Cook (M) James Crerar (P) John Norman Cruickshank (M) John Freeland Cunningham M.A. (P) John Williamson Dalglish (P) Andrew Davidson (P M.) George del Pino (P) Michael Devers (P) Alexander Dick (P) John Dunbar (M) James Ferguson Duthie (P) James Ewing (P) James Brown Fisher (P M) Matthew Mair Frew (M.) Leonard Woodburn Gemmell (P M.) William Hamilton Gibson (P M) Norman William Gilchrist (P) Thomas Gray (P) David Heard (P) Arthur Robert Hill (P) Theodore Paton Hutchison (P) James Scott Kinross (M) George Kirkhope (M) Robert Lindsay M.A. (M.) Frederick Colquhoun Logan (P) Donald John MacDougall (P M) James Wallace Macfarlane (M) Gerald James M Gorty (P) Joseph Patrick M Grechin (P M) John MacInnes (M) Neil Mackillop (P) Keith Stuart Macky (M.) Duncan M Laren (P M) John Wilson Maclean (P) Frederick Robertson Martin (P), William Watson Morrison (P) Alexander Morton (M.) John Hughes Murray (P) William Harold Palmer (P) James Alexander Paterson (P) Thomas Smith Paterson (P) William James Poole (P) Thomas Joseph Desmond Quigley (P M) Alexander Wilkie Ritchie (M) David Bell Robertson (M.) Thomas Robertson Sinclair (M) William Mitchell Stewart (M) John Lawrence Torley (M.) Robert Nisbet Walker M A. (P) Robert Smellie Weir (P) Clive Alan Whittingham (P M) and Kenneth John Talbot Wilson (P)

Women —Janetta Margaret Alexander (P) Christina Blair Buchanan (M) Maud Christine Cairney (M) Ann Kelly Cormack (P) Jane Beattie Davidson (M) Jessie Crawford Gilchrist (M) Florence Scott Kirk (P M) Margaret Jane Thorburn Leitch (P) Elizabeth Stewart Martin (M.) Helen Young Murdoch, M A. (M) Mary Ishbel Sinclair (P) Jane Stalker (M.) and Marion Baillie Darling Wilson (M.)

At the recent professional examinations for the degrees of M B and Ch.B the following candidates passed with distinction in the subjects indicated —

In (a) Zoology and (b) Chemistry—John E Jeffrey In Zoology—John W S Blacklock Archibald D Brown John Hewitt Robert G Howat Andrew S B Stewart Ernest J T Thompson, Mary T L. Clark Charlotte A. Douglas Margaret Logan Evelyn C M. M Gregor Caroline J Maclennan Georgina Murdoch and Muriel A. Stowe In Physics—Edward M E. Cumming In Chemistry—Gilbert Paterson, William J Payne and John Pollock. In Physiology—Alexander B Stitch In Materia Medica and Therapeutics—Margaret H Glen In Pathology—Frederick C Logan and Clive A. Whittingham. In Medicine—William E. Boyd. In Surgery—Alfred T Logan. In Midwifery—Hugh B Lawrie.

UNIVERSITY OF ABERDEEN —At the graduation ceremony on March 30th the following degrees, among others were conferred —

Doctor of Medicine.—Sebastian Valentyn Van Niekerk Edward Wood Wood Mason (old regulations) Thomas Charles McCombie Young and Robert Semple.

Bachelor of Medicine and Bachelor of Surgery —William Anderson Elizabeth Grace Berneaud Douglas Wales Berry Ronald John Bruce Patrick Thomas Catto Austin Basil Clarke Reginald Tom Cox Douglas Cran Alfred George Brown Duncan (second-class honours) George William Elder Alexander Farquhar Robert Forgan John Alexander Innes John William Innes William Hunter Kay William Leslie Herbert John Adam Longmore, John Moir Mackenzie John Moir Robert Munro, Peter Boulton Myles Eric Newton Cameron Macdonald Nicol, Forster Heddle Brown Norrie Gilbert Woolridge Rose Colin George Shearer and William Joseph Webster

Diploma in Public Health.—John McGregor Hartley Reid and Benjamin Theodore Saunders.

THE Chelsea Hospital for Women has received from the trustees of the Zunz bequest £500 for the maintenance of the Annie Zunz Ward.

A CENTENARIAN —Mr William Perkins, of Shepau Stow, Lincolnshire, has just celebrated his 103rd birthday

Hospital Robert Hugh Turner Bristol University Hugh Pennefather Warren London Hospital, Francis Eaton Gordon Watson *St. Bartholomew s Hospital*, and *Henry* George Watters London Hospital

* This *candidate having obtained* the highest number of marks in Anatomy will be recommended to the Council of the Royal College of Surgeons for the Begley studentship

ROYAL COLLEGE OF SURGEONS OF ENGLAND — At the Preliminary Science Examination for the Licence in Dental Surgery held on March 23rd, 25th, and 26th, the following candidates were approved in the undermentioned subjects —

Chemistry and Physics —Harold John Allen Middlesex Hospital, Malcolm Beverley Burton Norwich Technical Institute Cyril Dudley Melville Dorward *Guy s Hospital Kenneth Wilfred Eady* Brighton Municipal Technical College Augustus Ford, West Ham Municipal Technical Institute Ivan Jephson Gardiner and Dudley Keverne Gaskill Guy s Hospital Frank Hiam Royal Dental Hospital Charles Harold Sterne Horwitz Guy's Hospital Francis Joslin Janch Royal Dental Hospital Ernest Wilfrid Jarvis Guy's Hospital Charles George Lingford Royal Dental *Hospital*, Isidore *David* Marks Birmingham University Kenneth Marshall Walsall Municipal Institute Edgar Evan Holt Phillips Birkbeck College Ernest Henry Richards, Guy s Hospital and Norman Victor Wadsworth Birkbeck College

Chemistry —Clifford Baker Birmingham Municipal Technical School Ronald Francis Binns Polytechnic Institute Frederick George Pritchard Flanders and Stanley Godsill Guy's Hospital Norman *Leigh Simpson Cardiff and Sydney* Stamp Royal Albert Memorial College, Exeter

Physics —Iorwerth Dulyn Davies, Birmingham University Leslie Frank Fouraker Guy's Hospital Florence Goodman Polytechnic Institute John James University College Southampton and Herbert Newton Tiplady, Leeds Technical School

UNIVERSITY OF LONDON —At the Second Examination for medical degrees, for internal and external students, held recently, the following candidates were successful —

Part I Organic and Applied Chemistry —Lena Cecilia Adam London (Royal Free Hospital) School of Medicine for Women Norman Dyer Ball, University College Loveday Shackell Banes and Annie Hardy Banks *London (Royal Free Hospital)* School of Medicine for Women Monty Baranov and Henry Eric Beasley University College Levy Bernstein and Anthony Black stock, King s College, John Douglas Magor Cardell St Thomas s Hospital, Wilfred Bayley Christopherson St Bar tholomew's Hospital Charles Eric Cobb St. Thomas s Hospital Humphrey Noel Felix Cook, University College Anthony Beach Cowley St Bartholomew's Hospital *Joyce Emily* Craggs and Nora Annie Crow London (Royal Free Hospital) School of Medi cine for Women Evan Sherrah Davies King's College Idris Davies University College Cardiff Mary Day London (Royal Free Hospital) School of Medicine for Women Francis Percival de Caux St Bartholomew's Hospital, *Elizabeth Denniston* London (Royal Free Hospital) School of Medicine for Women George Wilhelm Robert W Dreiheller St Bartholomew s Hospital Abraham Eldinow, London Hospital Sylvia Victoria Elman London (Royal Free Hospital) School of Medicine for Women Frederick Augustus Evans London Hospital Donald Charles Fairbairn, St. Bartholomew's Hospital Lilian Mabel Fisher London (Royal Free Hospital) School *of Medicine for Women* Gerald William Thomas Hunter Fleming University of Durham Abraham Foner London Hospital, Wilfrid Frederick Francis St Mary s Hospital Alfred Laurence Goff and Jacob Gorsky King's College *Walter Henry Grace Guy's Hospital Gwenvron Mary Griffiths London (Royal Free Hospital) School of Medicine for Women, *Albert William Holgate, University College Henry Nevill Hornibrook St. Bartholomew's Hospital John Francis Howells University College Marshall Jackson St Bartholomew's Hospital Santo Weisberg Jeger University College Cardiff Robert David Jones University of Liverpool Noel Edward Fiarnwell Kemm University of Bristol Vasant Ramji Khanolkar University *College* **Muriel Elsie* Landau and Mary Kathleen Forsaith Lander London (Royal Free Hospital) *School of* Medicine for Women, Charles Gordon Lewis University of Birmingham Simon Sally Liebermann and Ernest Kenneth Macdonald St. Thomas s Hospital *Janet McAllister McGill London (Royal Free Hospital) School of Medicine for Women, Gerald Joseph Wyld McMichael University of Birming ham Vida Sara Maxwell London (Royal Free Hospital) School of Medicine for Women, David Chaim Mintzman and Ludlow Murcott *Moody, King's* College Edith Mary Ponsonby Morris London (Royal Free Hospital) School of Medicine for Women Edith Marjorie Newman University College Cardiff John Ernest Nicole King's College Norah Dorothy O Flyn *University College* Cardiff Marguerite Henrietta Pam London (Royal Free Hospital) School of Medicine for Women Manek Jamshedji Panthaky King's College, Rowland John Perkins St Bartholomew's Hospital George Stuart Bain Philip King s College and Charing Cross Hos pital Ruth Wade Plimsoll, London (Royal Free *Hospital*) School of Medicine for Women Leonard Duncan Porteous St. Bartholo mew's Hospital John Northley Julian Powlesland, Middlesex Hospital Dorothy Priestley Priestley Girton College and Uni versity of Leeds Mary Millicent Prior London (Royal Free Hospital) School of Medicine for Women Ernest Frank Rabey Middlesex Hospital Ronald Seton Ralph, Guy's Hospital Edward Douglas Thomas Roberts St *Thomas's Hospital Edward* Snow Rose Bartholomew's Hospital Hugh Thornton Rymer, King s College *Solomon* Nahum Samitzky London Hospital Bryan Buckley Sharp St. Bartholomew's Hospital Joseph Harold Muncheldon, King's College Arthur George Shurlock Jesus College, Cambridge William Henry Simmons *Guy's Hospital* Bertram Leslie Slater London Hospital; George John Sophianopoulos and Gilbert Patrick Staunton St *Bartholomew s Hospital* Mary Sylvia Stocks London (Royal Free Hospital) School of Medicine for Women Harold Edward Suter, St Mary's Hospital Khiam Soon Tan University College Stanley Roy Tattersall St Thomas s Hospital John Alan Tennyson Smith Dulwich College Cyril *James Thomas St Thomas s Hospital*, Howard Metherell Toop, London Hospital Robert Lawrence Walker St Mary s Hospital Austin Darley Wall St. *Bartholomew s Hospital Hygeia* Leigh Josephine Wallace London (Royal Free Hospital) School of Medicine for Women, Arthur Elston Ward St Thomas s Hospital Robert Walter Warrick Guy's Hospital and Finsbury Technical College and Eugene Wolff, University College

* Awarded a mark of distinction.

Part II —Gustave Adler London Hospital George Eric Archer, Victoria University of Manchester Eric Miles Atkinson St. Bar tholomew's Hospital Roy Douglas Aylward London Hospital *Kenneth Norman* Grierson Bailey St Bartholomew s Hospital James Reid Banks University College Claude Wells Woolloton Baxter and Eric Biddle, *Guy's Hospital Harold John Blampied*, St Thomas s Hospital, Israel Braun St Bartholomew's Hos pital, Duncan Gillard Churcher and †Wilfrid Edward Le Gros Clark, St Thomas s Hospital Apollo John Cokkinis and Joseph Monias Courtney, St Mary's Hospital Thomas *Morley Cunnington University* College George Vincent Davies St. Mary's Hospital, Simon Cyril de Silva Wijeyeratne University College Howard *Lexster* Douglas *London Hospital* Monte Edwards St Thomas s Hospital Grace Hamilton Ewart London (Royal Free Hospital) School of Medicine for Women William Feldman University College, Douglas Hugh Aird Galbraith Guy s Hospital Maximilian Walter Geffen University College †*Dorothy Gilford, London (Royal Free Hospital) School* of Medicine for Women Ernest Howard Glenny St Bartholo mew s Hospital ‡Henry Gluckman London Hospital Eryl Glynne London (Royal Free Hospital) School of Medicine for Women Alexander Fitzgerald Grattan Guinness Guy s Hos pital Hubert Oliver Gunewardene, King's College Joan Hardy, London (Royal Free Hospital) School of Medicine for Women Thomas *Lothian Heath Guy s Hospital* Kenneth Reed Hill University College Bertha Hinde London (Royal Free Hospital) School of Medicine for Women Eric Clark Hinde and Valentine Robert Hirsch Guy's Hospital Theodora Johnston London (Royal Free Hospital) School of Medi cine for Women John Isaac Kühne King s College and Charing Cross Hospital Felix Raoul Leblanc, Guy's Hospital Emily Catherine Lewis and Ethel Marion McCartney London (Royal Free Hospital) School of Medicine for Women Bruce Maclean Puthiyaveettil Narayana Menon and Martin Herbert, Oldershaw University College Alexander Edward Patrick Parker King's College and Westminster Hospital Irene Grace Parsons, London *(Royal Free Hospital) School of Medicine for* Women Arthur Edmund Beer Paul University College Edwin Seymour Phillips Guy's Hospital Frank Portas King's College and Westminster Hospital Sybil Madeline Georgina Pratt London (Royal Free Hospital) School of Medicine for Women Henry Norman Pritchett, Guy's Hospital Hywel Tegid Prys-Jones University College Cardiff Mariamme Olive Ramsay B Sc Joyce Baron Reed Frances *Elinor* Rendel Olive Rendel and Gwendolen Mary Rolfe London (Royal Free Hospital) School of Medicine for Women James Paterson Ross St. Bartholomew's Hospital Henry Bret Russell, St Thomas s Hospital Eleanor May Scarborough London (Royal Free Hospital) School of Medicine for Women Simeon Cyril Shaw Middlesex Hospital Raghunath Dadoba Shirvalkar University College Arthur Anton Thiel St. Bartholomew's Hospital Benjamin Thomas St Mary s Hos pital Daniel Jenkin Thomas B Sc. and John Herbert Thomas University College George Edwin Tilsley University of Bristol Charles Maitland Titterton, St. Bartholomew's *Hospital* Sydney Arthur Thomas Ware, St Thomas s Hospital Frederick William Arbuthnot Watt *London Hospital* Ralph Edwin Stuart Webb, Middlesex Hospital Arthur William Wells London Hospital and John Prichard Williams University College, Cardiff

† Distinguished in Anatomy ‡ Distinguished in Pharmacology

N B —*This list, published for the convenience of* candidates is issued subject to its approval by the Senate

VICTORIA UNIVERSITY OF MANCHESTER —At examinations held in March the following candidates were successful —

FIRST M.B AND CH.B EXAMINATION

Part I Inorganic Chemistry and Physics —Mary E Boullen G H Buckley T H S Bullough T E Coope George Cumming E B A Edelston F C Jones Simon Kelly James Leather W E. Mason P B Mumford, E R *Ormerod Eîmé* Ratner J S. Robinson Harry Stafford Doris M. R Tompkin and Ruth A Wilson.

Part II, Biology —Nooman Abdoh May Ashburner Mary E Boullen G H Buckley T H S Bullough T E Coope George Cumming Kathleen Doyle Georgiana M Duthie E B A Edelston Olive M Gimson F G Hamnett Archibald Harris F C Jones Simon Kelly James Leather J A. Marriott W E Mason P B Mumford J G Nolan E R Ormerod William Reikan J S Robinson A H Sadek Harry Stafford Doris M R Tompkin and Ruth A Wilson

Chemistry -Elizabeth C Davies and J G Nolan.

FIRST EXAMINATION FOR BACHELORSHIP IN DENTAL SURGERY

Physics and Zoology —E. L. Morgan.

DIPLOMA IN DENTISTRY (FIRST EXAMINATION)

C C Breakell, S K. Gibson, J C Knowles, E B Manley and Harold Walmsley

Chemistry —Bertram Wilkinson.

Physics —D M. Barnes Norman Filtcroft, A N Place, and *Matthew* Raeside

Royal Institute of Public Health 37 Russell-square W C—Demonstrator in Bacteriology

Royal Waterloo Hospital for Children and Women S.E.—Senior and Junior Resident Medical Officers Salary at rate of £150 and £[illegible]0 per annum respectively with board and washing

St Mary's Hospital for Women and Children Plaistow E—Junior Resident Medical Officer for three months. Salary at rate of £90 per annum with board, residence and laundry

Salisbury General Infirmary—House Surgeon and Assistant House Surgeon, unmarried. Salary £100 and £75 per annum respectively with apartments, board, lodging and washing

Salford Royal Hospital.—Junior House Surgeon and Casualty House Surgeon for six months Salary at rate of £100 per annum each, with board and residence.

Salvation Army Mother's Hospital, Clapton N E.—Female Resident Medical Officer

Sheffield Ecclesall Bierlow Union—Resident Assistant Medical Officer Salary £[illegible]0 per annum with board, washing and apartments

Sheffield Royal Hospital.—Assistant House Surgeon and Assistant House Physician.

Sheffield Royal Infirmary—House Surgeon and Assistant House Physician. Salary £100 per annum with board and residence

Shrewsbury Royal Salop Infirmary—House Physician Salary at rate of £110 per annum with board and apartments

South Shields Ingham Infirmary and South Shields and Westoe Dispensary—Senior House Surgeon. Salary £150 per annum, with residence board and washing

Stafford County Mental Hospital.—Female Temporary Assistant Medical Officer Salary £[illegible]0 per annum with board apartments and laundry

Stoke-on-Trent County Borough.—Female Medical Officer Salary £300 per annum.

Stoke-on-Trent North Staffordshire Infirmary Hartshill—House Physician and House Surgeon unmarried. Salary at rate of £150 per annum with board residence, and washing

Swindon Borough Education Department—School Medical Officer Salary £[illegible] per annum

Taunton and Somerset Hospital, Taunton.—Senior House Surgeon. Salary £120 per annum with board, lodging and laundry

Ventnor, Isle of Wight Royal National Hospital for Consumption and Diseases of the Chest on the Separate Principle.—Assistant Resident Medical Officer unmarried. Salary £150 per annum with board lodging &c

Wakefield Clayton Hospital.—Female Junior House Surgeon. Salary £120 per annum all found

Wandsworth Union Infirmary St John's-hill Clapham Junction S W—Assistant Medical Officer unmarried, for six months. Salary at rate of £5 [illegible] weekly with board lodging and washing

Warrington Infirmary and Dispensary—Junior House Surgeon Salary at rate of £120 per annum with board apartments and laundry

West End Hospital for Diseases of the Nervous System Paralysis and Epilepsy 73 Welbeck-street W—Clinical Assistants to Out patients Physician.

West Ham and Eastern General Hospital, Stratford, E—House Physicians Salary £120 and £100 per annum, with board, residence and washing

Whitehaven and West Cumberland Infirmary—House Surgeon Salary £150 per annum, with board, lodging and attendance

The Chief Inspector of Factories Home Office London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Irlam and at Liverpool Garston in the county of Lancaster

The Home Secretary gives notice of three vacancies for Medical Referees under the Workmen's Compensation Act 1906 for the Sheriffdom of Ayr Applications should be addressed to the Private Secretary Scottish Office

Births, Marriages, and Deaths.

BIRTHS

Donald—On March 3[illegible]th at Dean [illegible] Liskeard Cornwall the wife of John Donald M D of a son

Griffith—On March 3[illegible]th, at Cavendish-road St John's Wood to Helena (née Fletcher) and Harold Kinder Griffith F R C S L [illegible] C (T) a son

MARRIAGES

Forrester—Aylward—On April 8th at St Mary's Northiam Sussex, by the Rector the Rev A Frewen Aylward father of the bride [illegible] Thomas William Forrester M D Lond. to Mary [illegible] Mary Frewen Aylward daughter of the Rev A. Frewen and Mrs Aylward Northiam Rectory Sussex

Jones—Graham—On April [illegible] at St Mary Abbots Kensington London Hugh R[illegible] Jones M D [illegible]-square Liverpool [illegible] second daughter of the late George Graham Lockerbie Dumfriesshire

DEATHS

Daly—On Good Friday April 2nd at [illegible] Weymouth Augustine William Daly L R C S L R C P Edin aged [illegible] [illegible] House Frome Somerset second son of the late William Pennell Daly M D F S A of Teignmouth Funeral service at Frome Parish Church on Tuesday at 2.30

Hannay—On April [illegible] at [illegible] House [illegible] Lane [illegible] Walter Hannay L R C P E L F P S G [illegible]

Lyttleton—On [illegible] April [illegible] [illegible]-square Dublin Sir John [illegible] F R C S Irel aged [illegible] years

Lewis—[illegible] April [illegible] at [illegible] Harley-street [illegible] Henry Lewis [illegible] M D [illegible] aged [illegible] years

Wilson—On April [illegible] at The [illegible] Standish near Wigan [illegible] Harwood Wilson M D aged 4[illegible] years

N B—A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents.

VITAL STATISTICS OF NYASALAND

A REPORT, prepared by Mr A. M D Turnbull assistant chief secretary, on the Blue-book of the Nyasaland Protectorate for the year 1913–14 states that there has been an increase in the European population, which on March 31st 1914 was returned at 799 The Asiatic population on the same date was 408 whilst the native population is estimated at 1 055,119 Twenty six European births and seven deaths were registered during the year the birth rate being 32·54 and the death rate 8 76 per 1000 There were no Asiatic births although seven had been recorded in the previous year The deaths among Asiatics decreased from 8 in 1912–13 to 1 in 1913–14 Nine European marriages were celebrated during the year Native Christian marriages celebrated under the Christian Native Marriage Ordinance numbered 254 No organisation exists at present for the registration of marriage by native custom or for recording births and deaths among the native population The health of the Protectorate generally was satisfactory during the year and there was no outbreak of epidemic or other sickness as a factor in the death rate

The investigation of ankylostome infection amongst natives was continued in various districts and the results show that this disease prevails with about equal intensity throughout Nyasaland In regard to sleeping sickness it may be said that up to the present there would appear to be no tendency to any spread of the disease Sixty four cases were reported during the year The preventive measures which have been adopted consist mainly of clearings around villages and along some of the more frequented paths in the infected areas Where extensive clearings have been made a quite appreciable diminution in the number of tsetse flies has been noticed Only one case of small pox was recorded, the patient having acquired the infection in the adjoining Portuguese territory Measures were at once instituted to prevent any spread of infection and proved completely successful There has been no recurrence of small pox in epidemic form since the year 1909 a result which is due to the systematic vaccination of the general population and which has removed one of the principal factors militating against a normal increase of population The total number of vaccinations performed during the year was 143,052

Excluding injuries and the commoner skin affections, the chief causes of sickness in order of frequency were digestive and bowel complaints bronchitis malaria dysentery and syphilis Among the diseases with increased admission rates were malaria, respiratory disorders venereal diseases and tuberculosis Chicken pox and measles showed a considerable decrease. Malarial fever represented nearly 50 per cent of the total admissions, and was most prevalent in January, February and May or in other words at the height of and shortly after the rainy season The health of European officials has been satisfactory on the whole, and there have been no invalidings There were two cases of enteric one of which terminated fatally The general adoption of quinine prophylaxis caused an appreciable decline in the admissions for malarial fever In regard to the general European population a large proportion of the sick are treated by mission doctors and therefore do not come under the notice of the medical officers Five deaths were recorded by the medical staff—viz. one each from malarial hyperpyrexia cerebral embolism myocarditis, appendicitis and septicæmia The number of European patients admitted into the Government hospitals amounted to 73

The climate of Nyasaland falls into two main divisions. (1) that of the Shiré River Valley and Lake Nyasa and (2) the other of the remaining districts of the Protectorate, which lie at a much higher elevation There are consequently considerable variations in temperature and humidity the low levels being hotter and drier than the highlands The seasons comprise a rainy season extending as a rule from the end of November to the end of March and a dry season during the remaining portion of the year During the past five years however there has been a tendency for the rains to commence later The rainfall at Zomba observatory for the calendar year 1913 was 51 73 in whilst at Mlanje station ([illegible] above sea level) it was 57 70 in The mean temperature of the air at the observatory was 6[illegible] F, the highest temperature recorded being 92 on Oct. 15th and the lowest 47 on June 1[illegible]th

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, such information for gratuitous publication.*

Bennett F D M R C S has been appointed Temporary Honorary Assistant Surgeon to the Royal Eye Hospital Southwark

Foulerton A G R. F R C S Eng, D.P H Camb has been appointed *Lecturer in Public Health* at the London School of Medicine for Women

Fraser, Robert M B, Ch.B Edin, has been appointed Medical Officer of Health *for Chesterfield*

Gamgee Leonard P F R C S Eng has been appointed Honorary Surgeon to the Birmingham General Hospital

Hunter, J W M L R C P & S Edin, L F P S Glasg has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Ruddington District of the county of Nottingham

Letchworth T W, M B, B Ch Cantab, F R C S Eng L R C P Lond, has been appointed Temporary Honorary Assistant Surgeon to the Royal Eye Hospital, Southwark

Loosely, A E A. M.B B Ch Oxon F R C S Eng, L R C P Lond, *has been appointed Temporary Honorary Assistant Surgeon to the* Royal Eye Hospital Southwark

Mills G P M B B S Lond has been appointed Assistant Surgeon to the Birmingham General *Hospital*

Moss F W M B C M Edin, has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Carnforth District of the county of Lancaster

Murray, J J, M B, B Ch Belf has been appointed Certifying *Surgeon under the Factory and Workshop Acts for the Down*patrick District of the county of Down

Niven, A. S, M D Aberd has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Turriff District of the county of Aberdeen

Sampson H H M B, Ch.B Birm has been appointed Assistant Surgeon to the Birmingham General Hospital

Sharpe, F A M.B B S D P H Leeds has been appointed Medical *Officer of Health for Barnsley*

Vermylen Joseph (Louvain) has been appointed House Surgeon to the North Devon Infirmary *Barnstaple.*

Wharton, John M.D Cantab has been appointed one of the Medical Referees under the Workmen's Compensation Act for County *Court Circuit No 8 and for the Salford County Court Circuit No 7* for Ophthalmic cases

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Barrow in Furness North Lonsdale Hospital.—House Surgeon. Salary £150 *per annum with residence board, and laundry*

Bath, Royal United Hospital.—Resident Medical Officer

Benenden, Kent National Sanatorium —Locum Tenens Medical Superintendent. Salary 5 guineas weekly, with board and laundry Also Assistant Medical Officer Salary £120 per annum with board and laundry

Birkenhead Borough Hospital —Senior House Surgeon Salary £120 per annum; with board and laundry Also Junior House Surgeon Salary £100 per annum with board and laundry.

Birmingham and Midland Ear and Throat Hospital Edmund street.—House *Surgeon for six months* Salary at rate of £100 per annum with board, *lodging* and washing

Birmingham General Dispensary —Resident Medical Officer unmarried Salary £250 per annum with apartments attendance &c

Birmingham Yardley Road Sanatorium and the Anti Tuberculosis Centre.—*Third Assistant Medical Officer* Salary £200 per annum with board and residence.

Blackburn Union Workhouse —Resident Medical Officer unmarried. Salary £350 per annum, with apartments rations washing and attendance

Bootle Borough Hospital —*Senior and Junior* House Surgeons Salary £150 and £130 per annum respectively with residence, board and laundry

Bradford Children's Hospital.—House Surgeon. Salary £120 per annum with board residence and laundry

Bridgwater Hospital.—*House Surgeon, unmarried* Salary at rate of £125 per annum with board lodging and washing

Bristol General Hospital.—Second House Physician House Surgeon and Casualty House Surgeon; also Resident Obstetric Officer for six months Salary at rate of £150 per annum, with board, residence &c

Bristol Royal Infirmary —Three House Surgeons Two House Physicians and One Obstetric and Ophthalmic *House Surgeon* Salary at rate *of* £120 per annum, with board apartments and laundry

Bristol University —*Demonstrator in Anatomy* Salary £180 per annum

Bury Infirmary —Senior House Surgeon and Junior House Surgeon Salary £175 and £150 per annum respectively, with board residence and washing

Buxton *Derbyshire Devonshire* Hospital.—Assistant House Physician for six months Salary £100 per annum with apartments board and laundry

Camberwell, Parish of —Temporary Assistant Medical Officer for Infirmary Brunswick square Camberwell Gordon road *Institution* Peckham and Scattered Homes Salary at rate of £500 per annum with apartments board and washing

Canterbury Chartham Asylum.—*Locum Tenens* Assistant Medical Officer Salary £7 7s per week, with board, lodging, and washing

Canterbury Mental Hospital.—Assistant Medical Officer unmarried Salary £250 per annum, with board lodging washing, and attendance

Carlisle, Cumberland and Westmorland Asylum, Garlands—Junior Assistant Medical Officer unmarried. Salary £250 per annum, with board lodging and washing

Carlisle Non Provident Dispensary —Resident Medical Officer Salary *£200* per annum with apartments (not board)

Carmarthen, Joint Counties Asylum —*Temporary Second Assistant* Medical Officer Salary at rate of £200 per annum, with board *lodging washing &c*

Carshalton Surrey Queen Mary's Hospital for Children—Assistant Medical Officers Salary at rate of 6 guineas per week, with board lodging and washing

Chesterfield and North Derbyshire Hospital.—Senior House *Surgeon and Second House Surgeon* Salary £200 and £150 per annum respectively, with board, apartments and laundry

City of *London Hospital for Diseases of the Chest* Victoria Park, E —Tuberculosis Officer *Salary at rate of £100 per annum,* with lunch and dinner Also Gentleman to supply the place of Members *of the Out patient Staff of Physicians* who are on service in H.M. Forces Also House Physician for six months Salary at rate of £75 per annum with board residence and washing

Derby Derbyshire Hospital for Sick Children —*Female Resident* Medical Officer for six months Salary £200 per annum.

Dorset County Council.—Temporary Assistant Medical Officer of Health Salary at rate of £300 per annum

Dudley, Guest Hospital.—Senior Resident Medical Officer Salary £150 per annum with *board residence attendance and washing*

Edinburgh Royal Edinburgh Asylum Morningside.—Assistant *Medical Officer Salary* £175 per annum *with board rooms &c.*

Flintshire Education Committee —Temporary Assistant Medical Officer for six months Salary 5 guineas per week

Halifax Royal Infirmary —*Second and Third House Surgeons* unmarried Salary £120 and £100 per annum respectively, with residence board and washing

Hammersmith Infirmary and Workhouse Ducane-road Wormwood Scrubs W —*First Assistant Medical Officer* Salary £220 per annum, *with board lodging washing, and attendance*

Hull, Victoria Children's Hospital, Park-street.—Resident House Surgeon and Resident Assistant House Surgeon. Salary £60 and £50 per annum respectively with board and laundry Also Resident House Surgeon. Salary £100 per annum with board and laundry

Lancashire County Council, Elswick Sanatorium near Kirkham —Medical Superintendent Salary £300 per annum with board, apartments and washing

Lancaster Royal Infirmary —House Surgeon or Locum

Leeds General Infirmary —Ophthalmic House Surgeon for six months Salary £50 per annum with board residence, and laundry *Also Resident Medical Officer for six months at Ida and* Robert Arthington Hospitals Salary £60 per annum with board, residence and laundry

Liverpool, David Lewis Northern Hospital —House Physician and House Surgeon for six months Salary at rate of £100 per annum each with board residence and laundry

Manchester Children's Hospital Gartside-street —Assistant Medical Officer for Out-patient Department for six months. Salary £100 *per annum.*

Manchester Children's Hospital Pendlebury —Resident Medical Officer unmarried for six months *Salary at rate of £100 per* annum

Manchester, County Asylum Prestwich —Assistant Medical Officer *unmarried Salary £250 per* annum, with board apartments, attendance and washing

Manchester Education *Committee.—Female Assistant* School Medical Officer unmarried Salary £300 per annum

Manchester Northern Hospital for Women and Children *Park place Cheetham Hill road.*—House Surgeon. Salary £120 per annum with apartments and board

Middlesbrough *North Ormesby Hospital.*—House Surgeon Salary £150 per annum with board washing and attendance.

Middlesex Hospital, W —Two House *Physicians Board* and *residence provided*

Miller General Hospital for South East London Greenwich road S E —Senior House *Surgeon for six months* Salary £100 per annum with board residence and laundry

New Hospital for Women Euston road *N W—Female* House *Surgeon and House Physician* Also Resident Medical Officer at House of Recovery, New Barnet Salary *with this post £60 per* annum.

Newport Mental Hospital, Caerleon, Mon —*Temporary* Assistant Medical Officer Salary 5 guineas per week, *with board* rooms and attendance

Norfolk Education Committee —Temporary *Assistant* Medical Officer *Salary £300 per annum*

Northampton General Hospital.—House Surgeon Salary £120 per annum with apartments, board, *washing* attendance &c

Northern Hospital, Winchmore Hill N—*Locum Tenens* Assistant Medical Officer Salary £7 7s per week *with allowance of* £1 10s per week *in lieu of residential* emoluments

Notts Education Committee.—Female Assistant School Medical Officer Salary £300 per annum

Paddington Green Children's Hospital.—Female House Physician for six months Salary at rate *of £90 per* annum, with board *residence* and washing

Portpatrick Parish of —Medical Officer and Public Vaccinator *Salary £60* per annum and vaccination fees.

Queen Charlotte's Lying-in Hospital, Marylebone-road N W—Assistant Resident Medical *Officer for* four months Salary at rate of £50 per annum with board residence and washing.

Reading Royal Berkshire Hospital.—Second *House* Surgeon for six months *Salary £150 per* annum with apartments board, and washing

Royal College of Surgeons *of England*—Examiners

Royal Free Hospital, Gray's Inn-road W C—Senior *Resident* Medical Officer Salary *£200* per annum, with board residence and washing *Also Assistant* Anæsthetist (part time). Salary £50 Also Female Junior Obstetric Assistant. *Board lodging* and washing provided.

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

THURSDAY

SECTION OF DERMATOLOGY (Hon. Secretaries—S E Dore A M H Gray) at 5 P.M.

Demonstration of Cases (at 4.30 P.M.)

FRIDAY

SECTION OF ELECTRO-THERAPEUTICS (Hon. Secretaries—S Gilbert Scott E. P Cumberbatch) at 8.30 P.M.

Report of the Sub-committee on the Standardisation of the Opaque Meal, presented by Dr R. Morton.

Discussion

On the Opaque Meal Method of Examination.

The following will take part in the discussion —Dr Hertz, Dr R. Morton Dr A. E Barclay Mr Gilbert Scott

Those wishing to join in the discussion please notify the Hon. Secretary as soon as possible.

HUNTERIAN SOCIETY Barbers Hall Monkwell-street E.C

WEDNESDAY —9 P.M. Papers —Captain F R. Humphreys R.A.M C (T): The Work of a Field Ambulance —Dr E Maynard Experiences of a Temporary Naval Surgeon on H.M S Cornwall.

SOUTH WEST LONDON MEDICAL SOCIETY Bolingbroke Hospital Wandsworth Common S W

WEDNESDAY—9 P.M Mr F J Steward: Colitis from the Surgical Standpoint.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

ROYAL COLLEGE OF PHYSICIANS OF LONDON Pall Mall East.

TUESDAY AND THURSDAY —5 P.M. Oliver-Sharpey Lectures —Mr J Barcroft A Comparison between Some Physiological and Pathological Conditions.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W C

Museum Demonstrations for Advanced Students and Medical Practitioners —

MONDAY —Mr Shattock: Specimens of Syphilis.

POST-GRADUATE COLLEGE, West London Hospital Hammersmith-road, W

MONDAY —10 A.M. Dr Simson Diseases of Women. 2 P.M., Medical and Surgical Clinics X Rays. Mr D Armour: Operations. Dr Pritchard Bacterial Therapy Department. Mr B Harman and Mr Gibb Diseases of the Eye.

TUESDAY —2 P.M., Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Davis Diseases of the Throat, Nose and Ear Dr Pernet: Diseases of the Skin.

WEDNESDAY —10 A.M. Dr Saunders: Diseases of Children. Dr Davis Operations of the Throat, Nose and Ear 2 P.M., Medical and Surgical Clinics X Rays Mr Pardoe Operations. Dr Simson: Diseases of Women Mr Gibb: Diseases of the Eye.

THURSDAY —9 A.M Dr Bernstein Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr D Armour Operations Mr B Harman: Diseases of the Eye.

FRIDAY —10 A.M., Dr Simson Gynæcological Operations. 2 P.M., Medical and Surgical Clinics X Rays. Mr Baldwin: Operations Dr Davis Diseases of the Throat, Nose and Ear Dr Pernet Diseases of the Skin.

SATURDAY —10 A.M. Dr Saunders Diseases of Children Dr Davis: Operations of the Throat, Nose and Ear Mr B. Harman: Eye Operations 2 P.M., Medical and Surgical Clinics. X Rays Mr Pardoe Operations

THE THROAT HOSPITAL, Golden-square W

MONDAY —5.15 P.M., Special Demonstration of Selected Cases

THURSDAY —5 15 P.M Clinical Lecture.

For further particulars of the above Lectures &c., see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed exclusively "TO THE EDITOR, and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures original articles and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO., 51, Fifth Avenue New York, U S A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 7th 1915.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall	Solar Radio in Vacuo	Maximum Temp. Shade	Min. Temp.	Wet Bulb	Dry Bulb	Remarks.
April 1	30·25	S W	0·06	83	[illegible]	35	37	39	Fine
2	30·31	W	0·27	87	53	38	41	43	Fine
3	30·12	S W	—	55	53	43	45	47	Raining
4	29·5[illegible]	W	—	80	55	43	45	51	Cloudy
5	29·82	W	—	[illegible]	53	41	43	[illegible]	Cloudy
" 6	29·6[illegible]	S W	0·22	[illegible]	[illegible]	41	43	45	Cloudy
7	29·90	W	—	97	54	45	44	45	Cloudy

The following magazines, journals, &c., have been received — Indian Medical Gazette British Journal of Inebriety Caledonian Medical Journal Pharmaceutical Journal British Dental Journal Journal of the Royal Sanitary Institute Bulletin de l'Académie de Médecine [illegible] British Journal of Children's Diseases, Journal of Laryngology Rhinology and Otology [illegible] Medical Journal of [illegible] [illegible] Medical Journal of South [illegible] Practitioner [illegible] Dental Science [illegible] Medical Journal, Public Health Canadian [illegible] Journal Canadian Journal of Medicine and Surgery &c

"THE ELECTRIC TELEGRAPH ORIGINALLY PROPOSED BY A FRENCH MEDICAL PRACTITIONER

IN view of the amount of telegraphy being done in all directions in the present war it may be interesting to recall the claim of a French medical man to be the pioneer The first idea of telegraphing by means of an electric current, it appears, belongs to M. Henry, surgeon at Arnaville (Meurthe), who had so far back as 1836 established a correspondence by wires with M Lapostolle, a well known natural philosopher The wires were made to run from the villa of the former to that of the latter gentleman one shock signified A, two, B, three C, &c M Henry wrote, on Oct 31st, 1836, to the Minister of Commerce of Public Works, touching his telegraph, and received an answer stating that the invention had been submitted to the Board of Arts and Manufactures, who was of the opinion that the plan could not be applied on a large scale, and would not answer the expectations of the author The latter was discouraged at this reply, and discontinued his experiments Claims have been made on behalf of a Mr Ronalds, of Hammersmith, who experimented from 1816 to 1823, but apparently only on his lawn

" WOMEN POLICE '

IN reference to a note with the above heading which appeared in THE LANCET of March 27th, p 686, Mrs A. Gilbertson writes to us to point out that the women 'patrols' who are employed by the National Union of Women Workers at Hove alone are officially authorised, and they do not pose as policewomen or wear a uniform, but are just what they claim to be, "patrols only, wearing simply a badge

SMALL-POX IN THE PHILIPPINE ISLANDS

IN the second quarterly report for 1914 of the Bureau of Health for the Philippine Islands, Surgeon Victor G Heiser says there has been practically no small pox in the Philippine Islands for the period covered by the report save in provinces where regular vaccinations have not been carried out In Samar and Leyte several hundred cases occurred, but these were confined almost entirely to unvaccinated individuals This experience, it is pointed out, shows the great importance of prompt vaccination of all new born children and other unvaccinated individuals who may come into the community of a province after it is once freed of small pox As an example it is mentioned that in the city of Manila, where vaccination is thoroughly carried out there has not been a death from small pox since June, 1909

THE MEDICAL PICKWICK.

To the Editor of THE LANCET

SIR,—Your interesting note in THE LANCET of March 27th (p 686) on this subject draws attention to the fact that Mr Pickwick's "stormy interview with Dr Payne and Dr Slammer at the Bull at Rochester and his adventures with Bob Sawyer and Benjamin Allen are his closest relations with our profession" I am, however, inclined to think that Dickens was a reader of medical papers dealing with the anomalies and curiosities of medicine Referring to one of the few pathetic scenes in the "Pickwick Papers" (published in 1836-37), the meeting of Mr Pickwick with Mr Alfred Jingle in the Fleet Prison, we read that after Mr Alfred Jingle had told of how he had "lived on a pair of boots—whole fortnight, silk umbrella—ivory handle—week" "Oh," said Mr Pickwick, "I understand you You have pawned your wardrobe" This very closely follows the description George Alexander Stevens, author of "Satirical Songs" and a lecture on "Heads," gives of his life in the Fleet Prison in his famous letter to Dr Miller, of Doncaster, published in Wadd's monograph on "Corpulency" Stevens, after stating that he had swallowed his whole wardrobe, goes on to say, "he was about to eat his last waistcoat," and continues "Themistocles had many towns to furnish his table, and a whole city bore the charge of his meals In some respects I am like him, for I am furnished by the labours of a multitude A wig has fed me two days, the trimming of a waistcoat as long A pair of velvet breeches paid my washerwoman, and a ruffled shirt has found me in shaving My coats I swallowed by degrees, the sleeves I breakfasted on for weeks, the body, skirt &c, served me for dinner two months My silk stockings have paid my lodgings, and two pair of new pumps enabled me to soke several pipes It is incredible how my appetite (barometer like) rises, in proportion as my necessities make their terrible advances I here could say something droll about a good stomach, but it is ill jesting with edged tools, and I am sure that is the sharpest thing about me You may think I can have no sense of my condition, that, while I am thus wretched, I should offer at ridicule but people constituted like me, with a disproportioned levity of spirits, are always most merry when they are most miserable, and quicken like the eyes of the consumptive, which are always brightest the nearer the patient approaches dissolution However, to show you I am not lost to all reflection, I think myself poor enough to want a favour and humble enough to ask it here. I might make an enconium on your good nature, humanity &c, but I shall not pay so bad a compliment to your understanding as to endeavour by a parade of phrases to win it over to my interests If you could any night, at a concert, make a small collection for me it might be a means of my obtaining my liberty, and you well know the first people of rank abroad will perform the most friendly offices for the sick, be not, therefore, offended at the request of a poor (though deservedly punished) debtor"

Wadd's work was published by Ebers, of Old Bond street, in 1829, and had a large circulation, being written in a popular style and containing many humorous anecdotes in its "Mems on Diet and Dietetics" It is, however, quite possible that Dickens never saw George Alexander Stevens's letter, but if so, it is an extraordinary coincidence that Jingle, when on his last legs, should give expression to Stevens's thoughts and proclaim them in the same prison.

I am, Sir, yours faithfully,
Dublin, March 29th, 1915 GEORGE FOY

BEEF INSPECTION

THE *Annali di Medicina Navale e Coloniale* has published a supplement on beef inspection, by Surgeon-Captain Dr N Ercole, of the Italian navy The author takes a wide view of his subject dealing with the inspection of live cattle, of carcasses, and of preserved meats He discusses the tricks of the trade apt to mislead an examiner, and his statements concerning the daily length of march possible to a fat steer, and the loss of weight of overdriven cattle will be very informing to naval officers concerned with such questions As to tubercle, any portion of a carcass is condemned whose lymphatic glands, even one of them, is tuberculous, and that portion is denatured and destroyed, if, however, the lesion is single and of small extent, the rest of the carcass is allowed to be sold, but must first be boiled for at least an hour The author notes that the ilio-lumbar glands, if tuberculous, and only then give off sulphuretted hydrogen when treated with sulphuric acid.

ST LUCIA

ACCORDING to the Blue book for 1913-14 of this, the largest of the group of the Windward Islands, the population is estimated at 50,809—23,367 males and 27,442 females The birth rate (excluding stillbirths) was 34 5 per 1000 of the population, and the death rate 17·4 per 1000 There was one death from snake bite The Victoria Hospital at Castries is the one general hospital for the colony It is a fine stone building, well situated, and has been considerably improved of recent years A trained nurse matron from England assumed her duties in 1914 The daily average number of patients was 63 Small buildings are provided in the out districts at Soufrière, Dennery, and Vieux Fort, which are used as casualty hospitals for accident and emergency cases In the Yaws Hospital there was a daily average of 22 patients The voluntary influx of patients for treatment with the drug salvarsan continued unabated during the year, and 147 cases were treated, the number would have been much greater but for a shortage in the supply of the drug The medical officer in charge, Dr A. F Hughes, reports that up to the time of his report he had treated 413 cases, and that out of this number there had been only 21 cases of recurrence of the disease In the latter connexion the medical officer refers to the difficulty of distinguishing between *bonâ fide* recurrences and cases of reinfection

The average annual rainfall for the island, recorded at 25 stations, was 83 75 in, the highest was 106 65 in, at Warwick Estate in the Choiseul district, and the lowest 48 50 in, at Beausejor Estate in the Vieux Fort district The mean monthly temperature recorded in the shade at the Botanic Station in Castries was 78 2° F The maximum shade temperature of 89 5° was recorded on May 19th and Sept 4th and the minimum of 62·0° on Feb 19th

COLLOSOL ARGENTUM IN CEREBRO SPINAL MENINGITIS

Messrs Oppenheimer, Son, and Co, of Queen Victoria street London, E C, state that collosol silver as prepared in the Crookes laboratories has been recommended as a prophylactic against attacks of cerebro-spinal meningitis The series of collosols are destructive to all kinds of pathogenic bacteria, even when used in minute quantity A special nebuliser (the Optimus) is made for using collosols as an inhalation or spray It is constructed entirely of glass

COMMUNICATIONS not noticed in our present issue will receive attention in our next

An Address

ON

WOUND INFECTIONS

AND ON

SOME NEW METHODS FOR THE STUDY OF THE VARIOUS FACTORS WHICH COME INTO CONSIDERATION IN THEIR TREATMENT

Delivered before the Royal Society of Medicine on March 30th,

BY COLONEL SIR A E WRIGHT, M D, F R S,

A CONSULTING PHYSICIAN TO THE EXPEDITIONARY FORCE

(From the Research Laboratory attached to No 13 General Hospital, Boulogne-sur Mer)

(*Concluded from p 847*)

TREATMENT BY VACCINE THERAPY

I EMPHASISED at the outset of this discourse that Treatment by Vaccine therapy could take rank only as ancillary to Treatment by Physiological Methods In *treatment by physiological methods* we take the antibacterial agencies of the patient just as they are, and do our best to bring them into more effective application on the infective microbes In *vaccine therapy* we seek to reinforce those agencies We endeavour to increase the bacteriotropic power of the blood, and to modify the chemotropic sensibility of the leucocytes And, now that we have come to appreciate its importance, we should seek to increase also the antitryptic power of the blood fluids

Let us try to see how the case for vaccines and vaccine therapy stands, keeping always before us the great practical issue as to how much clinical benefit can in the particular case be secured for the patient, and arranging for the purposes of our survey the multifold applications of vaccines under six subheadings

1 *Prophylactic employment of vaccines* —This is not only from the theoretical point of view the best of all methods of employing vaccines, but it is also the method which gives in practice the maximum of advantage We have only to look to the results obtained by prophylactic vaccination against smallpox, cholera, plague, and typhoid fever

2 *Employment of vaccines in the treatment of localised bacterial inroads* —Next to prophylactic inoculations, this gives the best results And the results, in the respect that they are almost immediately manifest to the eye, are even more dramatic than those of any preventive inoculation Perhaps the most rapid and convincing results are those obtained by small doses of streptococcic vaccine in lymphangitis and erysipelas, by staphylococcic vaccine in furunculosis, when the boil is just beginning to develop and by minimal doses of tuberculin in phlyctenular affections of the conjunctiva.

3 *Employment of vaccines in dealing with unopened abscesses and other localised infections where the microbes cannot be reached from the blood stream* —Vaccines are here, so far as appears to clinical inspection, quite inoperative

4 *Employment of vaccines in the treatment of localised infections associated with heavy auto inoculations* —The scientific application of vaccines in these cases is extremely difficult and laborious, and the results which are obtained—and those obtained in the treatment of developed phthisis by tuberculin supply a good example—are not very convincing

5 *Employment of vaccines in the treatment of undrained wounds infected by sero saprophytes* —There is not yet a sufficient body of experience to decide the question as to whether benefit can be obtained from vaccines in these cases The question will be further discussed below in connexion with the wound infections of the war

6 *Employment of vaccines in the treatment of septicæmic infections, and in particular streptococcic septicæmias* —Up to the present—except perhaps in certain series of experiments relating to typhoid fever—vaccines have on the whole given very disappointing results But it will be obvious to consideration, that as we advance through the whole series of applications—from prophylactic application to the employment of vaccines in septicæmias—the conditions are becoming progressively more difficult, so that success in treatment of septicæmias, if it is ever achieved, will be the very final achievement of vaccine therapy

We have now prepared the ground for considering what has been obtained by the use of vaccines in the treatment of wound infections in this war

I have in connexion with this heard the opinion of a very distinguished French surgeon—pronounced after watching the effect of vaccines upon, I should think, undrained wounds and septicæmic infections—that they had never done any good I shall, by my general survey above, at least have put you on your guard against generalising from one class of cases to all other cases Let us now take each class of case separately, and ask ourselves whether in this vaccines have rendered any service I think we shall then see that things work out everywhere in accordance with scientific law

1 *Prophylactic inoculations of "antisepsis vaccines"*—If prophylactic inoculations of this kind have not been undertaken in our army, it has not been because a supply of antisepsis vaccines has not been at hand, but because the idea of undertaking such inoculations has not appealed to the individual medical officers who have given first aid to the wounded And if any prophylactic inoculations have been undertaken, this can have been only on a very small scale, and the fact has not transpired To be considered therefore here is only the question as to what we should on *a priori* grounds be justified in expecting from prophylactic inoculations against wound infections, undertaken upon the wounded The answer is, I think, not doubtful We might justifiably hope in a proportion of cases to sterilise the upper reaches of the wound which would be less heavily implanted, and perhaps in isolated cases—those in which we have *a* comparatively light sowing of microbes—*to* sterilise the whole wound Moreover, if we could employ vaccines in combination with *physiological drainage* (I mean by that free outpouring of lymph obtained by the use of a lymphagogic solution) we might, I think, hope to stave off infection in a fairly large proportion of cases. But—and I have already, though perhaps not emphatically enough, drawn your attention to this in connexion with prophylactic applications of antiseptics—it will, when we set out to sterilise a wound nearly always be a question of achieving either all we want, or nothing To leave behind, especially in the upper reaches of a wound, a few microbes, which immediately set to work and multiply, amounts, from the point of view of the future of the wound, to exactly

Communications, Letters, &c., have been received from—

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V.—Mrs Verers Worcester Victoria Hospital for Sick Children Hull Secretary of

W.—Mrs E J Wilson, Standish; Dr W E. Wynter, Lond Messrs. W Wood and Co New York; West End Hospital for Diseases of the Nervous System, Lond. Secretary of Woodhall Spa Co, Woodhall Spa Secretary of Dr L. A. Weatherly Bournemouth Captain S J A H Walshe D S O Mr H L Whale Lond. Dr F Parkes Weber Lond West London Hospital Post Graduate College Messrs A. J Wilson and Co Lond West Ham and Eastern General Hospital, Secretary of

Y.—Yost Typewriter Co., Lond.

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voice, and, if unanimous, perhaps even have a deciding voice.

In order to enable you to judge what changes in the system would be required to give effect to the idea that Medical Officers should bring into application the latest lessons of experience and science, I will venture to remind you how the Medical Service of the Army is at present organised.

We have in the Army Medical Service, as it seems to me, three different and distinct services—a *Service of Administration*, a *Service of Hygiene and Sanitation*, and a *Service for the Treatment of the Sick and Wounded*.

The Service of Administration—and among the three services it comes easily first in order of importance—takes charge of the wounded man on the battle field, conveys him first to the dressing station, field hospital, and clearing hospital which are ranged one behind the other at the front, thence transports him in an ambulance train to the hospitals at the base, afterwards embarks him in a hospital ship, and, at the end of his journey, provides him with hospital accommodation at home. The Service of Administration has further to see to the feeding, clothing, bedding, nursing, and medical treatment of the man in hospital, and in transit, has to look after all manner of surgical and medical stores and equipment—besides providing in a thousand other ways for the proper working of the hospitals and hospital camps.

The *Service of Sanitation* has to protect the army against epidemic disease by attending to water supply, conservancy, and antityphoid inoculation. It has to keep a watchful eye on every case of infectious disease, to detect carriers, to equip, and man, the bacteriological laboratories required for this purpose, and to intervene in ways too numerous to mention to prevent the dissemination of infection.

The duties in connexion with the aforesaid services devolve almost exclusively upon the permanent officers of the Royal Army Medical Service. Their work, as everyone at the seat of war knows, has been quite marvellously well done. And what stands already very high in the esteem of all the world, needs no more words of praise from me.

There remains the *Service for the Treatment of the Sick and Wounded*. After supplying all the multifarious duties just enumerated, there are very few Medical Officers of the permanent staff of the Royal Army Medical Corps left over. Hence nearly the whole care of the sick and wounded has fallen to the Civil Practitioners enlisted for temporary service with the Royal Army Medical Corps. For this, if for no other reason it must be the special concern of the Civil Profession to do all that in it lies to help the Medical Staff of the Army to employ to the best advantage the Civil Practitioners now serving as Medical Officers in Military Hospitals.

What has been done in the way of regulating the work of these new joined medical officers has been to transplant practically unaltered into the military hospitals the organisation under which medical practitioners work in civil life and in peace.

The treatment of the sick and wounded is committed as it is in private and hospital practice at home into the hands of individual practitioners there being assigned to each a certain number of patients, or a ward. And just as at home each medical man is in practically independent charge of his cases, and is free to follow whatever treatment appeals to him, so is it in the Military Hospitals. And just as at home the free exercise of private judgment carries with it an exclusive responsibility, saving only in those cases where a consultant is called in to advise, so also is it in the Military Hospitals.

Now, I submit that this unchartered freedom can work for good only in conditions such as those which surround us at home. At home, the practitioner finds himself practically always upon ground with which he is familiar. The cases which he deals with in his practice are similar to those he has seen treated in hospital. And if he should find himself upon unfamiliar ground he will, before he need take action, have time to inform himself. Moreover, though new science filters in slowly, it does filter in. And, finally, when the medical practitioner at home makes a new experiment in treatment, he—and this is the all important point—does learn what results. He can therefore profit from the teachings of experience.

Now, the conditions in military hospitals abroad are quite different from these. The practitioner is there on quite unfamiliar ground. He has to confront unfamiliar problems—problems in connexion with projectile wounds and wound infections. He has to take immediate action. He has very little opportunity to find out what has happened in similar cases. And lastly—and you will see that upon this point everything pivots—has very little opportunity of seeing the results of his work, and learning whether his treatment has been wrong or right. For the military hospitals in France, both at the front and also at the base, have now, through military necessity, become little more than clearing hospitals, from which cases, if at all fit to travel, are immediately sent forward upon their homeward journey.

There are thus lacking in the military hospitals in France all those provisos and safeguards which alone can make a system in which each medical man is a guide to himself successful. And carried out without those safeguards that system is unjust both to doctor and patient.

The doctor feels himself left in the lurch when he is not warned off from trying experiments in treatment which a hundred others have unsuccessfully tried. He fain looks for a lead where a successful treatment has been discovered. And, where there are a number of alternative treatments, he would be glad to see comparative experiments instituted to tell him which method is best. Nor is the doctor the only person interested. The patient, his relatives, and the whole nation would, once their thoughts were directed to the matter, feel that they had the vital interest in making the work of the medical officer as effective as possible.

If this is to be done it will, I believe, be necessary to make a fundamental change in the organisation of the Medical Service—to break away from the principle of free arbitrament in treatment for the Medical Officer, and to provide that all treatment shall be regulated by orders and instructions.

These are, as you see, very big issues. It is a question of a conflict between our cherished professional tradition that every medical man must be quite unfettered in his choice of treatment, and the very foundation principle of the Army, that every man shall work, not as he individually thinks best, but as part and parcel of a great machine.

The question as to which of these shall give way to the other must, of course, be decided by the

the same as leaving behind alive the whole original population. If one really intends a war of extermination there must be no remissions; and if our first effort with vaccines and physiological drainage fails, we must immediately follow up with further efforts.

2. *Employment of "antisepsis vaccines" in cases where the microbes make an irruption into the neighbouring tissues.*—It is in connexion with projectile wounds not very uncommon to see the infecting microbes breaking bounds, and making an irruption into the neighbouring tissues. This will occur either in a wound which has not been laid open, or where the lymph flow has stanched, and the microbes have been imprisoned in an infiltrated wall. The bacterial irruption may follow the course of the lymphatics as a lymphangitis, or it may take the form of an erysipelas or cellulitis. In these forms of infection occurring in connexion with projectile wounds, vaccines give exactly the same dramatic effects as in the small wounds of civil life—the only difference being that when the irruption has been beaten back we have in the case of projectile wounds still the original focus of infection to deal with, and have, unless we improve the condition of the wound, always to be upon our guard against a renewal of the irruption.

3. *Employment of "antisepsis vaccines" in connexion with well drained wounds.*—When we have in a wound quite unobstructed mechanical drainage—such, for instance, as is proved by amputation without flaps—we have, from the point of view of the immunologist, conditions exactly parallel to those which obtain when microbes make a first irruption into healthy tissues. In other words, we have here—and probably also where we have good physiological drainage—brought to bear upon the microbes an ample force of phagocytes in conjunction with a rapid, as the case may be, percolating or outflowing stream of lymph. As a consequence, vaccines give in these cases results which are so strikingly favourable as to arrest the attention of every beholder.

4. *Employment of "antisepsis vaccines" in imperfectly drained wounds.*—An overwhelming proportion of projectile wounds which are under treatment in hospital would, regarded from the point of view of the mechanical conditions, come into the category of imperfectly drained wounds. And this is as it must be. The conservation of the wounded limb is clearly the first object of the surgeon, and the treatment of the bacterial infection is quite subordinate. For example, no one could ask that a leg which had been perforated by a bullet should be cut free from all its attachments to give better drainage to the infected track.

Now it might be legitimate to say that these undrained wounds were analogous to the unopened abscesses referred to above, were it not that this comparison would do much less than justice to the difficulties which confront the immunisator in the wound in which pus accumulates. Not only have we in the recesses and backwaters of such a wound conditions which make it impossible for the antibacterial agencies of the body to establish by their mass effect a position of superiority over the microbes, but we have in the corrupted discharges and the multiform bacterial growth which they harbour, obstacles to successful immunisation such as are never encountered in an unopened abscess cavity. It is therefore not to be expected that we should in these cases see—and in point of fact we do not see—after the exhibition of vaccines any diminution in the pus which pours from the wound.

None the less we shall do well carefully to consider in connexion with the employment of vaccines in the treatment of imperfectly drained wounds certain questions. It is clearly a matter for consideration whether—despite the fact that the output of pus from the wound is not diminished—there may not be some useful clinical result from the vaccines. It is quite likely that there is such an effect; and that it takes the form of a "nibbling" at the infection in those parts of the wound lying above the ground level of the pus; a better entrenchment against the microbes, and, behind this, a massing of reserves which would be brought to bear if the microbes were to irrupt into the surrounding tissues. In short, it is not unreasonable to think that the antisepsis vaccines might aid the surgeon in his conservative surgery, and might enable him to hold on longer when trying to save a limb.

Two further questions—questions which also cannot yet find answers—come up for consideration in this place. The one is the question whether it would not be possible in many cases to convert by physiological drainage an undrained into a drained, wound, and then to obtain good results by the use of vaccines. The other is the question as to whether or no the bacteriotropic substances produced in response to antisepsis vaccines would come into operation upon serosaprophytic microbes in corrupted discharges, and in lymph whose antitryptic power has been artificially diminished.

5. *Employment of "antisepsis vaccines" in septicæmias supervening on wound infections.*—On this question there is nothing that can be usefully said other than that, until scientific knowledge has progressed much beyond where it is now, it might be well to act upon the suggestion made above with regard to the possible utility of antisepsis vaccines in staving off septicæmic infections.

We now at the end of our survey come to the summary.—That summary would clearly be, that the results of the inoculation of "antisepsis vaccines" have conformed in everything to scientific expectation. Of the five possible applications of vaccine therapy, the *second* and the *third* have, according to anticipation, given strikingly favourable results. The *fourth* and the *fifth*—but perhaps certain reserves may be made in connexion with the *fourth*—have given, as anticipated, very unfavourable results. And that prophylactic employment of antisepsis vaccines, which has not yet been put to probation, would seem eminently deserving of an extended and careful trial, preferably in conjunction with physiological drainage.

EPILOGUE

And now, except for a few concluding words, I have completed what I had to say. Up to this point we have considered only the scientific problems which confront us in wound infections. What we have now to consider is how this, and similar researches, and all that new clinical experience which has won in this war, can be made useful to the wounded.

This is a question of setting up machinery for directing and coördinating the work of the Medical Officers engaged in the treatment of the sick and wounded. And, I take it, on a question of that kind the Medical Profession at home will have a intestine at two points (*a*) in the ileum, at a point about 3 ft above the ileo cæcal valve, and (*b*) in the sigmoid colon at the junction of its iliac and pelvic portions These are the points at which the ileum and colon respectively cross the brim of the true pelvis to enter the pelvic cavity (See figure)

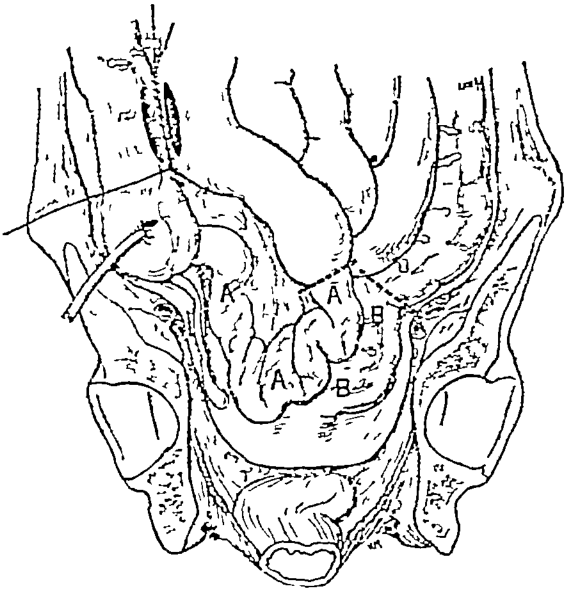

Diagram illustrating the pathology and treatment of ileus duplex AAA The paralysed segment of ileum. BB The paralysed segment of the pelvic colon. The dotted lines indicate the level of the obstruction in the small and large intestine A lateral ileo-cæcostomy is being performed between the distended ileum well above the obstruction and the cæcum To relieve the temporary obstruction of the large intestine a catheter has been tied into the cæcum. The catheter is subsequently brought out through the abdominal wall

The segments of intestine paralysed are two in number first, the portion of ileum contained in the pelvis—that is to say, about the lower 3 ft, excluding the last 2 in, and secondly, the portion of the large bowel contained in the true pelvis—i.e., the lowest portion of the pelvic colon and the upper portion of the rectum

On account of the special liability of the pelvic peritoneum to bacterial invasion my subject is one of great importance I deem it worthy of your attention for three main reasons first, because the condition, though curable by appropriate treatment in the early stage, often passes unrecognised under the pseudonym of general peritonitis, secondly, because the duplex character of the obstruction, as indicated in my title, has not hitherto been appreciated, and thirdly, because, as might be expected, defects in the pathological conception of the condition have been reflected in imperfect treatment And in this condition delayed or defective treatment means certain death

Etiology

Ileus duplex may result from any one of the many causes of pelvic peritonitis. Restricting myself to those causes included within the scope of my own experience, it may result from 1 Appendicitis 2 Ascending infection of the genital tract gonorrhœal or septic. 3 Rupture of the bladder 4 Carcinoma of the rectum To these classes may be added from the experience of my gynæcological colleagues, Messrs Berkeley and Bonney[1] 5 Septic conditions of the pelvic genital organs or operations for their relief (pyosalpinx, carcinoma of the cervix) It seems likely that further experience will extend the list of causes which I have considered

Appendicitis is by far the most frequent cause of ileus duplex, and for obvious reasons nearly always the appendix is pelvic in position The special liability of pelvic appendicitis to give rise to ileus duplex joins with ambiguity of its earlier symptoms to make it perhaps the most dangerous form of the disease I believe that its present mortality can be very appreciably lowered by a general recognition of the danger

MORBID ANATOMY OF ILEUS DUPLEX AS OBSERVED DURING LIFE

It frequently happens in cases of pelvic peritonitis that pus is found in the pelvis lying free among practically normal coils of ileum, which though congested have not lost their lustre The bowel may contain gas, its wall is not œdematous, it has evidently not lost its motor power The peritonitis remains superficial, and the wall of the gut does not become inflamed Drainage of the pelvis, and the subsequent use of turpentine enemata, suffice for the successful treatment of such cases, which form a large majority of cases of pelvic peritonitis

In other cases, and these alone interest us to day, the coils of the pelvic ileum, bathed in pus, show evidence of acute inflammation of the bowel wall Their peritoneal surface is dull, intensely congested, and covered with pus and flakes of lymph The bowel wall itself is swollen and œdematous The affected coils are empty, passively contracted and motionless, and between adjacent coils are sharp angular kinks sometimes fixed by flakes of sticky lymph My colleague Victor Bonney, who gave what is perhaps the earliest detailed description of the condition of the ileum in these cases,[2] noted that the bowel is flattened like a strap, and he found that it is impossible by manipulation to force the gas from the intestine above into the inflamed segment of ileum, an important observation directly showing the impermeability of the inflamed bowel

The conditions described, which involve the lower two or three feet of the ileum, immersed in the pelvic basin of pus, extend to within about two inches of the ileo cæcal valve The terminal two inches of the small intestine extending from the brim of the pelvis to the ileo cæcal valve is usually collapsed and normal

This condition of the pelvic ileum may, no doubt, coexist with a hopeless general peritonitis involving the whole area of the peritoneum But in the cases we are considering the suprapelvic abdomen, though often not shut off by any lymph barrier, affords no sufficient evidence of peritonitis except to one obsessed by a preconceived idea. The pelvic ileum only is inflamed Higher up the ileum presents its normal shiny appearance or is at most slightly congested No pus is present amid its coils A fairly sharp boundary line separates it from the inflamed pelvic ileum If the case is an early one distension is absent Soon, however, the suprapelvic ileum begins to be distended, owing to the block produced by paralysis of the pelvic ileum It fills from below upwards, for I recollect one case in which the jejunum was still empty while the ileum was distended But in what may be regarded as the typical stage of ileus duplex the suprapelvic small bowel, though quite uninflamed, is greatly balance of public advantage And we cannot seriously doubt to which side that balance inclines We have only to consider what has been achieved in this war by antityphoid inoculation, and the preventive injection of antitetanus serum, and to compare the brilliant results of these measures, carried out as they are by direct instructions from headquarters, with the results which would have been obtained if the carrying out of these measures had been committed to the individual arbitrament of medical men who had not had before the war any opportunity of convincing themselves by personal experience of the utility of either antitetanus or antityphoid inoculation

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[1] Victor Bonney, On Post-operative Paralytic Obstruction of the Intestine with Special Reference to its Treatment by Jejunostomy, Arch. of the Middlesex Hospital, vol. xxi, p 23

[2] Loc cit.

If now, as we see is the case, considerations of public utility commend the control of treatment of the sick and wounded by orders and regulations, let me in conclusion very briefly consider with you how under such a system there might be obtained a maximum of advantage with a minimum of disadvantage. I shall, of course, indicate only in very broad outlines what would seem to me to be the requirements

I believe there would require to be a Professional Head to the Service for the Treatment of the Sick and Wounded He would, of course, be subordinated to the Director General, and his duties would be to bring up the work of the medical officers everywhere to the highest standard, and to coördinate their work from hospital to hospital

It would further, I think, be necessary to have an Advising Committee who should be charged with the duty of synopsising the clinical experience won in the war, of finding out what results the various therapeutic procedures had given, and of drawing up on the basis of these inquiries general instructions and recommendations for the treatment of different categories of cases On a Committee of this sort one would, of course, wish to see representatives of surgery, of medicine, of the various specialities, and of pathology and bacteriological science But one would wish to see the membership restricted to those who were actually at work at the seat of war, and who were prepared to take full responsibility, and carefully to watch the working of the recommendations, and at any moment to revise them in the light of accumulating experience, or further laboratory experiments

Finally, one would wish to see attached to such a committee a Research Department for the resolution of all bacteriological questions arising in connexion with hygiene, surgery, and medicine And I may perhaps be allowed, in connexion with this last, to point out that the Medical Research Committee of the National Insurance Act, under whom I have the honour to serve as Director of Bacteriological Researches, has since the outbreak of the war been placing not only large funds but a carefully selected corps of skilled workers at disposal for the prosecution of researches directly contributory to the better treatment of the wounded. It is for you to see that the results, as they are obtained, shall be taken full advantage of

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NEW CONVALESCENT HOME FOR SOLDIERS — On April 23rd Mrs Mildmay, wife of Colonel F. Mildmay, M P, formally opened a new convalescent home for soldiers at Salcombe, Devon The home has been given as a memorial by the parents of the late Lieutenant R N Vereker, of the Grenadier Guards It stands on three acres of ground on the slope of Bolt Head, and will provide accommodation for 25 soldiers The institution will be worked by the British Red Cross Society, Dr H Wilcox being the medical officer

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ABSTRACT OF

Hunterian Lecture

ON

ILEUS DUPLEX

(INFLAMMATORY ENTERO COLIC ILEUS)

Delivered before the Royal College of Surgeons of England on March 8th, 1915,

BY W SAMPSON HANDLEY, M S LOND, F R C S ENG,

HUNTERIAN PROFESSOR SURGEON WITH CARE OF OUT-PATIENTS TO THE MIDDLESEX HOSPITAL CAPTAIN R.A.M C. (T.F)

MR. PRESIDENT AND GENTLEMEN,—On the four previous occasions when the Council of this College has honoured me by election as a Hunterian Professor I have brought before you work which was the joint product of the laboratory and of the hospital ward I believe that every surgeon who wishes to advance his subject ought throughout his career to spend a portion of his time in the laboratory, following in this respect the great example of Lister But the segregation of pathology from practice has unfortunately tended to the exclusion of the clinician from the laboratory, and thus it comes about that he is more and more restricted to the field which Moynihan has described as the pathology of the living On the present occasion I wish to bring before you some gleanings from that field

NATURE AND CAUSES OF ILEUS DUPLEX.

Adynamic or paralytic ileus is a condition in which non-mechanical intestinal obstruction results from muscular paralysis of a length of the intestinal canal Most surgeons recognise it, though some deny its existence The best classification of its causes is given by Murphy[1] (1) Muscular paralysis from trauma or exposure, (2) local traumatic peritonitis; (3) local or general septic peritonitis, (4) embolism of the mesenteric vessels, (5) pylephlebitis, and (6) strangulation of pedicles by mass ligatures with reflex intestinal paralysis

Though adynamic ileus is well recognised, it nevertheless remains a kind of limbo to which obscure cases may be relegated The subject is surrounded by that indefinable haze, the result of imperfect knowledge, which, to the despair of the student, envelops certain chapters of surgery, such, for instance, as those dealing with shock or with osteo arthritis It can only be clarified by patient methods similar to those which have lately been applied to the group of insects known indiscriminately to Artemus Ward as "skeeters" My attempt to day is to pin out and dissect one variety of adynamic ileus which has characters so definite that it needs a distinctive name. For reasons which will appear I propose to call it ileus duplex. Let me remind you that the word "ileus" is a synonym for intestinal obstruction, and that it has no connexion with the word "ileum."

In order to place you at once in possession of my point of view, and to enable you to weigh the evidence later to be adduced, I shall begin by giving a brief dogmatic description of this condition.

Definition

Ileus duplex is a condition in which, as the result of a pelvic peritonitis, there is obstruction of the record of failure in inflammatory ileus puzzled and depressed me It seemed clear that in inflammatory ileus an unrecognised factor was at work, but I was unable to identify it, and the text-books did not assist me The first ray of light on the problem came in 1910 from the following case which I shall ask you to allow me to consider in full.

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[1] J B Murphy Keen s Surgery, vol. iv., 1908

Pelvic appendicitis, ileus duplex, ileo sigmoidostomy, recurrence of symptoms of obstruction, cæcostomy, recovery (*Case 5*)—At the request of Dr W M G Glanville, of Hampstead, I saw with him in 1910 an old lady of about 70, suffering with acute abdominal pain rather more severe on the right side than on the left, but not definitely localised in the right iliac fossa Chronic constipation had been a marked trouble The temperature was slightly raised and the pulse somewhat quickened. These symptoms had been present for about 24 hours There was no abdominal rigidity, nor could any tumour be felt in the right iliac fossa. There was in this region some tenderness on deep pressure No tenderness was elicited on vaginal or rectal examination On opening the abdomen in the middle line, within 24 hours of the onset of symptoms, I found a gangrenous appendix hanging down into the pelvis It proved to be impossible to remove it without making a second incision in the right iliac fossa. The coils of the pelvic ileum were intensely congested, but there was no pus present, nor did there seem to be any indication that the congested ileum was paralysed

During the succeeding 48 hours, although the patient's pulse and general condition were fairly good, no flatus was passed, and the abdomen became much distended. It was obvious that there was complete inflammatory obstruction of the lower ileum, and that the patient would die unless something further was done The median wound was opened up, and a lateral ileo-sigmoidostomy was performed as quickly as possible Dr D Embleton, pathologist to the University College Hospital, was asked to examine the pus, and on his advice a large dose of antistreptococcic serum and a stock vaccine of staphylococcus aureus were administered shortly after the operation Sixteen hours later no flatus had passed, and the patient's condition was extremely grave, indeed apparently hopeless The pulse had become very rapid and feeble, and abdominal distension had increased. Small doses of calomel by the mouth caused sickness, and turpentine enemas were ineffectual Dr Glanville urged that strong purgatives should be administered, and to this course I consented because I thought the case was hopeless He carefully passed a stomach tube, but it was repeatedly returned Another anæsthetic was therefore given 60 hours after the first operation so that the stomach could be washed out and placed in a condition to retain purgatives Dr Glanville then administered through the stomach tube 5 grains of calomel, an ounce of magnesium sulphate and a minim of croton oil These heroic measures were followed the next morning by a copious evacuation and the patient's condition then began to improve, although there was suppuration of the incisions owing to the virulence of the bacteria An autogenous vaccine was prepared by Dr Embleton and administered, apparently with good results A week later, however, abdominal distension recurred and became extreme although flatus in small quantities continued to be passed Partial obstruction evidently persisted and paresis of the sigmoid below the ileo-sigmoidostomy was apparently the cause of it I therefore opened the cæcum through the wound without an anæsthetic and tied in a catheter The relief was immediate From this time the patient slowly recovered strength and she is now in excellent health has been able to take a long railway journey and is free from the chronic constipation which had troubled her for years before the operation The cæcostomy closed spontaneously

I have never seen a case recover in which death appeared so imminent and certain The main part of the credit belongs to Dr Glanville, who refused to despair when I had given up hope though I may congratulate myself that my ileo sigmoidostomy was able to stand the strain imposed upon it by his heroic and almost veterinary cathartics

Evidence afforded by Two Crucial Cases

The successful result of this case clearly indicated to me the reason of my previous failures In my early cases I had been dealing with one obstruction and had ignored a second. My tentative and halting treatment of this case is obviously open to criticism in the light of my present knowledge But it has this great value, that it affords an experimental dissection of ileus duplex into its three pathological elements of pelvic peritonitis, ileal obstruction, and colic obstruction It is a crucial instance In the first operation the peritonitis and its cause were treated In spite of this the morbid picture continued to develop, and obstruction became manifest The second operation short-circuited the small intestine obstruction Its success was temporary only, and the purgatives which followed it produced but a transient result The third operation, aimed at an assumed obstruction in the colon, gave immediate and permanent relief. In the first two stages the conditions present within the abdomen were determined by direct inspection.

The history of this case has a demonstrative value rare in clinical work, and only attained as a rule in precise and carefully planned laboratory experiments Let me remark especially that it clearly indicates three stages of the obstruction in ileus duplex (*a*) Stage of obstruction of the ileum alone, (*b*) stage of obstruction of the ileum with paresis of the colon, and (*c*) stage of complete obstruction of both ileum and colon. The late onset of the colic obstruction is an important point to which I must return

But it is frequently said that one case proves nothing Let me then draw your attention more briefly to a second and later case

This case, too, was one of pelvic appendicitis in a woman of middle age, in which though the pelvic ileum was inflamed and congested, no evidence of intestinal obstruction had manifested itself prior to the first operation I accordingly contented myself with the removal of a gangrenous appendix and the drainage of a pelvic collection of pus On the fifth day after the operation complete intestinal obstruction developed The abdomen was reopened a lateral ileo-colostomy was performed, and, in view of the lessons of the previous case, a catheter was tied into the cæcum. After a severe struggle the patient recovered

So far this case has less probative value than the preceding one The colic obstruction was not obvious at the operation, and a critic might assert that it would have been sufficient to short circuit the inflamed ileum without providing any relief by the cæcostomy for a purely hypothetical colic obstruction lower down

A very instructive incidence of this patient's convalescence effectually disposes of the criticism Shortly after the spontaneous closure of the cæcostomy opening the abdominal distension recurred It could not be overcome by purgatives or enemata, but after reaching a serious degree it was relieved by the spontaneous bursting open of the recently healed cæcal fistula.

It is impossible to inflict upon you detailed accounts of all my cases Anticipating what I have to say on treatment, let me then point out Table II, which shows that, if treatment is directed only to one of the two obstructions present, death may be expected in 75 per cent of cases But if my hypothesis of a double obstruction is acted upon the mortality falls to 20 per cent The evidence for the duplex character of the obstruction derived from the two crucial cases I have given you in distended owing to the obstruction lower down That in this stage it is not paralysed is shown by the results of treatment

It must be clearly recognised that distension of the suprapelvic small bowel even when accompanied by slight congestion is not adequate evidence of general peritonitis If, however, the case is allowed to run its course paralysis of the distended intestine supervenes, bacterial penetration of its walls occurs, and a general peritonitis may be found at the necropsy

We must now turn to the condition of the large intestine Usually at the time the operation is performed the large intestine shows no evidence of inflammation, perhaps because it is situated further from the inflamed appendix, and shielded from early infection by the ileal coils Clinical evidence, however, shows conclusively that in the course of a few days the pelvic colon, though its involvement is later and less constant than that of the pelvic ileum, shares in the inflammation and paralysis which have already overtaken the small bowel To this point I shall later return, for its recognition is essential to success in treatment

The portion of the large bowel, situated between the ileal obstruction and the obstruction in the pelvic colon, usually contains some flatus and is neither collapsed nor distended

PATHOLOGICAL ANATOMY

In many cases after death the necropsy fails to reveal the real secret of the condition. What is found is a general peritonitis with general paralytic distension of the intestinal tract, a misleading confirmation of the usual diagnosis made during life At the time it was made this diagnosis was nevertheless incorrect No series of necropsies can establish the morbid anatomy of ileus duplex. In it two processes—namely, a spreading peritonitis of pelvic origin and an intestinal obstruction—are running a race In the early stages seen by the surgeon the obstruction is well ahead, and there is no peritonitis above the pelvic brim. In the post mortem room stage the peritonitis has had time to overtake it, and may be more or less generalised Moreover, since obstruction ends in peritonitis and peritonitis in obstruction, it may pass the wit of man to say after death which was the primary and which the secondary cause of death The recognition of ileus duplex is a product of operating theatre pathology, not of dead house pathology, and supplies one more example of the truth of Moynihan's belief that intra-vitam rather than post mortem inspections are at the present day the key to further advances in knowledge

CLINICAL SIGNS AND SYMPTOMS

The signs and symptoms of ileus duplex are those of acute intestinal obstruction, superposed on those of the pelvic inflammation which has caused it A detailed description is perhaps superfluous, but a few special points need emphasis Vomiting, though not invariably an early symptom, is almost a constant one An initial vomit is the rule in appendicitis, but continued vomiting is very exceptional It is a most useful danger signal When repeated vomiting occurs the possibility of ileus duplex must be promptly considered, and careful instructions must be given to the nurse to watch for and record the passage of flatus The cessation of flatus, in spite of enema and the use of the rectal tube, establishes the diagnosis of intestinal obstruction, and if the subcutaneous injection of eserine fails recourse must be had to operation. Owing to the late and slow onset of the large intestine paralysis enemata may at first succeed in relieving the paretic colon If subsequently vomiting and other symptoms persist this delusive success must be ignored, or surgical intervention will come too late

In typical cases there is moderate general distension of the abdomen, but owing to the acute onset of the obstruction no opportunity occurs for those intestinal gymnastics which produce visible coiling in obstructions of slower development Visible peristalsis is absent Abdominal rigidity is also absent, except possibly in the hypogastric region This absence of rigidity is a salient and important point in ileus duplex.

Abdominal rigidity depends upon inflammation of the parietal peritoneum of the anterior abdominal wall, and in operable cases of ileus duplex this district of the peritoneum is not inflamed except at its hypogastric margin Care must be taken not to mistake for true rigidity that tension of the abdominal wall which results from the intestinal inflation. Abdominal respiration is embarrassed by the general distension, but is still present

In untreated cases the later signs merge completely into those of general peritonitis.

PROOF OF THE DUPLEX CHARACTER OF THE OBSTRUCTION

Let me now attempt to justify the dogmatic statements I have made

Inflammatory obstruction of the lower ileum is a well recognised condition, and this lecture will fail in its principal object if I fail to prove that in most cases of the kind there is also an obstruction in the pelvic colon To this point I must now direct your attention

Failure of Treatment if Directed Solely to the Ileal Obstruction

In cases of obstruction of the lower ileum I have found by experience that a lateral anastomosis between the ileum some little way above the point of obstruction and the cæcum or ascending colon is, on the whole, a very successful method of treatment except in ileus of inflammatory origin The table which follows indicates my experience up to about 1908

TABLE I—*Cases of Acute Obstruction of the Lower Ileum treated by Ileo-cæcal Lateral Anastomosis*

	Number of cases	Deaths.	Recoveries
Obstruction by the appendix acting as a band (appendix also removed)	5	0	5
Obstruction by bands	3	1	2
Inflammatory ileus secondary to pelvic inflammation ..	5	4	1

This table shows an extraordinary difference in the prognosis of obstruction of the lower ileum according as the obstruction is inflammatory or non inflammatory The contrast is even more striking than the table would indicate, for the fatal case of "obstruction by band" recovered from the operation, only to die from phthisis

The extraordinary difference in the prognosis of non inflammatory and inflammatory cases might be explained by assuming that death in the inflammatory cases is due to general peritonitis and not to obstruction But, as we shall see, clinical observation does not bear out this view

The contrast between my successful results in cases of obstruction by band and my mortifying

The Colostomy Opening

In dealing with the large intestine element of the obstruction it is to be borne in mind that the obstruction is temporary only, and that in cases which recover within ten days or a fortnight at most the large bowel will have recovered its propulsive power If during this period provision is made for the escape of gas it appears to be unnecessary to provide for any evacuation of solids, especially as the patient will be taking only small amounts of food For these reasons it is unnecessary to make a full sized colostomy opening, and all needs will be met if a large rubber catheter is passed through an aperture in the wall of the colon and held in place by a purse string suture, which also transfixes the catheter It probably matters little whether the catheter is introduced into the cæcum or at any lower point situated above the pelvic colon As a matter of convenience, when an ileo cæcostomy has been performed the cæcum is the most accessible point to choose Probably the best form of catheter is a so called "self retaining female catheter," since this is less likely to be blocked by fæcal debris Should the cathether become blocked it must be cleared by syringing through it a small amount of saline The catheter will come out spontaneously about the fifth day, and a small fæcal fistula remains which will rapidly close as soon as it has become superfluous

Enterostomy

The old treatment of enterostomy will, no doubt, occasionally save a case of ileus duplex. The method is, however, a crude and almost barbarous expedient It is true that it removes the obstruction completely, but in order to do so it robs the patient of much of the nourishment elaborated in the upper intestine and of most of the fluid taken by the mouth This latter loss is the more important one The effects of an enterostomy upon the patient's general condition may be compared to the effects of persistent vomiting Even in cases where collapse and starvation are averted the miseries the patient has to endure from the escape of the intestinal juices upon the skin are so great that the operation should, I think, never be performed except as a last resort The evils of enterostomy may be diminished considerably if there is a free passage into the large intestine below it, and in one of my cases which recovered I performed an ileo cæcostomy combined with an enterostomy, but though this patient recovered his sufferings from dermatitis of the abdominal wall made me resolve to abandon the operation even when combined with an ileo cæcostomy

ILEUS DUPLEX FREQUENTLY MISTAKEN FOR GENERAL PERITONITIS

In cases of pelvic suppuration when signs of intestinal paresis show themselves it is easy to jump to the conclusion that the paresis is due to the onset of a general peritonitis and that useful interference is limited to drainage of the peritoneal cavity In the post operative group of cases as a rule drainage has already been provided, and a diagnosis of general peritonitis means the abandonment of any further effort to save the patient

It is a remarkable fact that in the current edition of his work on "Intestinal Obstruction," which has been the guide of more than one generation of surgeons Sir Frederick Treves has recanted his belief in the existence of ileus paralyticus He says

> The [illegible] pathology of ileus paralyticus is summed up in the assumption that a portion of the bowel has become incapable of peristaltic movements, and as a result of this acute symptoms follow I venture to think that ileus paralyticus, as described in the text-books and in the previous edition of this book, has no clinical existence
>
> How often it is that the symptoms persist and rapid death follows the liberation of a coil of intestine strangulated by a band. Such death however, is due to peritoneal infection or septicæmia, and not to ileus paralyticus Those however who still claim that ileus paralyticus exists would maintain that the persistence of the symptoms and the final dissolution of the patient are due to the fact that the damaged coil of intestine remains paralysed
>
> I have never met with an example of such a case as this in which a diffuse peritonitis was not met with after death

Note that the basis for Sir Frederick Treves's disbelief in paralytic ileus is to be found in the last sentence I have quoted He assumes that the general peritonitis found, as he truly says, in all cases at the necropsy is the sole and sufficient cause of death, and that cases of so called "paralytic ileus" are really cases of general peritonitis This false assumption, based on post mortem pathology, is negatived by a study of the order of events in the living abdomen. As I have shown, observations in the operating theatre show marked evidence of obstruction before the appearance of any signs of general peritonitis The general peritonitis found after death is a late result of the obstruction This conclusion is amply borne out by the successful results of treatment directed towards the short circuiting of the segment or segments of bowel which are presumed to be paralysed On Sir Frederick Treves's hypothesis such treatment would be absolutely useless

The evidence on this point derived from my cases of ileus duplex is fortified by a consideration of the results of short-circuiting operations in cases of obstruction by band It has been my practice in such cases, wherever there was definite evidence of strangulation, and after the band had been divided, to short-circuit the affected loop by a lateral anastomosis In cases thus treated I have found that recovery is the almost invariable rule

The question is not merely one of academic interest To label a case of ileus duplex as general peritonitis is to make a prophecy, not a diagnosis In the course of a few days that prophecy will deplorably fulfil itself at the cost of the patient's life I submit that upon the question at issue the views of Sir Frederick Treves may be rightly described as reactionary and dangerous in proportion to the distinction and authority of their author

DIAGNOSIS OF ILEUS DUPLEX FROM GENERAL PERITONITIS

Some of the ordinary criteria which distinguish general peritonitis from intestinal obstruction fail in the cases of ileus duplex, since, in addition to the obstruction, pelvic peritonitis is also present Thus general peritonitis and ileus duplex present a close general resemblance In both conditions there are general distension, vomiting, complete constipation, raised temperature and rapid pulse, with abdominal pain and distress and embarrassed abdominal respiration

The points of difference between the two conditions, though few in number, are happily sufficient to distinguish them In general peritonitis general rigidity of the anterior abdominal wall is the rule In ileus duplex rigidity is absent or is present only in the hypogastric region Moreover, the diffuse abdominal tenderness of the whole abdomen which characterises general peritonitis detail is thus borne out by the appeal to statistical results The fact that no two blades of grass are precisely alike, still less two cases of disease, is the fallacy of all statistics, which relegates them to the place of secondary or confirmatory evidence The precise study of single cases is, in my opinion, of much greater value But when, as in this instance, the one method of investigation confirms the other a high degree of certainty is reached

PREVENTION OF ILEUS DUPLEX

Although, thanks to a general recognition of the need for prompt operation in appendicitis, the mortality of that disease is now becoming a residual one it is susceptible of further reduction if the danger of ileus duplex is borne in mind in cases where the appendix is pelvic in position It is of great importance to detect and treat infection of the pelvis in its earlier stages

In every case of appendicitis, unless it is certain that the mischief is securely shut off by adhesions and confined to the right iliac region, a small median subumbilical incision should form the first step of the operation With a pair of sponge forceps a fold of gauze is carried to the bottom of the recto vesical or recto uterine pouch. If no inflammatory fluid is present on the gauze when withdrawn the finger with great caution explores the limits of the inflammatory mass in the right iliac region, thus gaining valuable information The incision is then sewn up, and the appendix subsequently removed through an incision made over it in the usual way

If the rule thus laid down be carried out, in a certain proportion of cases, even of localised appendix abscess, unsuspected dirty or semi purulent fluid will be found free in the pelvis By the introduction of a drainage tube through the median exploratory incision to the bottom of the recto vesical pouch these cases will be saved from the pelvic abscess, or spreading peritonitis, or ileus duplex which they would probably have developed if the median incision had not been made

When pelvic infection is found it is a matter to be decided in each case whether to prolong the incision and remove the appendix through it, or to make a subsequent second incision directly over the offending organ.

Two other points must be borne in mind for the prevention of mortality from ileus duplex. At every operation for pelvic appendicitis the ileum must be examined for inflammatory paresis and the suprapelvic ileum for distension After every appendix operation the nurse must be instructed to report carefully on the passage of flatus, for early recognition of ileus duplex is essential to its successful treatment

TREATMENT

The treatment of ileus duplex may be conveniently studied in the light of Table II, which records the results of my experience during a period of eight years The condition is neither rare nor common I have met with it 14 times among some hundreds of abdominal cases of all kinds Though the figures of my table are small, they are, I think, very significant as to the merits of different modes of treatment They show especially that forms of treatment which take into account only the small intestine element in the obstruction give a high mortality Thus 4 out of 6 cases of simple ileo cæcostomy died. The two cases which recovered indicate that the large intestine obstruction, besides being later in onset, may not always become complete

TABLE II —*Results of Treatment in the Lecturer's Cases of Ileus Duplex, 1907–1915*

	Recovered.	Died.
Enterostomy	0	1
Enterostomy with ileo cæcostomy	1	0
Ileo-cæcostomy alone	2	4
Ileo-sigmoidostomy	0	1
Colostomy alone	0	1
Ileo-colostomy with cæcostomy*	3	0

* In one of these cases the cæcostomy was performed some days after the ileo-colostomy on account of the persistence of symptoms and with immediate relief

On the other hand, I have no death to record among the 3 cases treated by ileo colostomy combined with cæcostomy This is the ideal treatment It appears to matter little whether the anastomosis is made between the ileum and cæcum or the ileum and sigmoid, provided in either case that a safety valve to the exterior is supplied by tying a catheter in the large intestine I believe the anastomosis with the cæcum is safer as being further removed from the inflamed area.

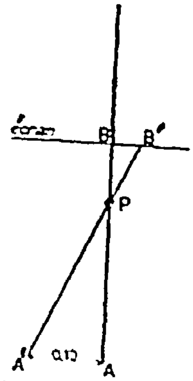
On a recent occasion, forgetful of the results of my own experience, I performed an ileo sigmoidostomy for ileus duplex without draining the cæcum The case was one of pelvic appendicitis in a woman of advanced years, with mingled signs of pelvic peritonitis and obstruction The pelvic ileum was obviously paralysed, but at the time of operation the pelvic colon wore a deceptively normal appearance Lateral anastomosis of the supra pelvic ileum with the sigmoid was followed by some days of complete relief But the anastomosis, subject to the strain of oncoming paresis of the pelvic colon, finally yielded, and the patient died from septic peritonitis and fæcal extravasation So difficult is it not to forget the lessons of one's own experience

In at least one of my cases treated by ileo cæcostomy and cæcostomy natural actions of the bowels per anum occurred within a day or two of the operation This must not be taken to prove that the drainage of the cæcum was unnecessary It has already been shown that the colic element of the double obstruction is late in its onset, and it must be obvious, moreover, that drainage of the cæcum will relieve distension of the large intestine, and will thus facilitate its blood supply and tend to *prevent* paralysis of the pelvic colon.

I am prepared to admit that a cæcostomy is superfluous in a minority of cases The recovery of two of my cases of ileo cæcostomy, cases in which the cæcum was not drained, shows that the third stage, that of paralysis of the pelvic colon, does not constantly follow the others if the peritonitis is treated by pelvic drainage. But it cannot be right to trust to this in any particular case My figures indicate that the surgeon who trusts to ileo cæcostomy and peritoneal drainage alone will repent his decision in at least two out of three cases If obstruction persists he may still be able to save the patient by a timely cæcostomy, as one of my cases shows, but the undesirability of secondary operations in acutely ill patients is so generally recognised as to need no emphasis It is far better to perform simultaneous cæcostomy as a routine precaution in all cases where an ileo-cæcostomy is necessary requiring radiographic reproductions, and of being too complicated Much of the apparatus employed by civil radiologists in their consulting rooms, where various instruments requiring delicate and long manipulation can be provided is not practicable within the zone of a fighting army For the last three months we have been working with a Gaiffe transport cart for radiology, midway between the front and the base—that is to say, in a district that has been largely devastated, and where we are reduced to find our own material and to use only such as presents no necessity for frequent repair We have to work quickly and surely to give information to the surgeons, who have an enormous task before them and very little time to lose in fruitless investigations The simplest means to fit to the circumstances are required and we have consequently adopted for the localisation of projectiles a method which while its construction can be managed with the means at our disposal, gives the surgeon accurate information by a simple consultation of the screen The method is based on the principle of triangulation and has been adapted to radiology

We left Paris with a radiographic and radioscopic plant, but with the belief that the latter would prove the more valuable a view that was quickly confirmed At the front the localisation of projectiles by a plan on the screen direct, and a sketch, is the method of choice and we have had the gratification of meeting with the approval of eminent surgeons who previously had given their preference to radiography But to be useful and satisfactory radioscopy must be done in a special way The sufferer reclines with the bulb below and the screen above—this is the best method of examination In this way we are prepared for all eventualities in the region to be examined whatever the state of the wounded without having to modify the disposition of our apparatus and without loss of time The bulb furnished with a protective top and iris diaphragm has a slide fixed on the edge of the table which permits every movement in the same horizontal plane The screen, supported by another slide fixed on the opposite edge of the table will move at the will of the radiologist above the patient. The patient can remain on the stretcher which is placed on the table, all useless and painful movement being thus avoided We then make a radioscope of him from head to foot stopping at the injured spots to construct a diagram on the screen which replaces with advantage the perishable radiograph which takes so long to obtain For we seek no fine details of bony structure, but only fractures bullets, and pieces of shrapnel or shell all of which things are perfectly visible on the screen wherever situated, when this is placed in the right position and the Chabaud bulb is properly manipulated In order to be able to make every movement we arrange the radioscope by fixing the bulb on its support at a given distance from the surface of the table We measure the distance of the focal point of the anticathode from the upper surface of this table—call it x cm If now we place the horizontal screen in contact with the top of the table we shall mark on the screen that distance x in centimetres and we shall adjust that scale so that when the screen is fixed for an examination we read directly the distance AB exact from the focal point of the anticathode to the screen This done, the use of a small cleat allows us in the darkness to displace by 10 cm the bulb on the slide in the direction of the length of the table

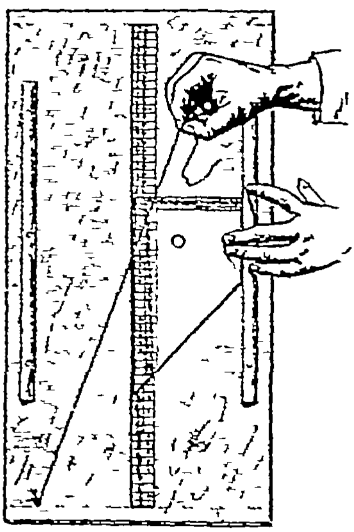
FIG 1.



To localise the depth of a projectile during radioscopy the screen is placed in contact with the skin over the part affected, the normal ray is made to pass by the projectile and a shadow is obtained on the screen which is marked with a soft (*gras*) crayon as point B (Fig 1) Then the bulb is moved the length of the slide for the distance A-A', which we have fixed as 10 cm and the projectile gives us a second image B' which we also mark. We can measure the distance B-B' of the two images of the projectile on the screen The focal point of the anticathode in its two displacements and the two images of the projectile are in the same plane as the projectile

It is sufficient, then, for recognising the depth of the foreign body, to construct in the space the two triangles BPB' and A'PA, which have two sides BP and PA in a straight line The sides BB' and AA' are perpendicular to the straight line AB and we know by simply reading them off the distances BB' and AA', if we join by a thread the points A'B' we obtain on the line BA a point P at the apex of the two triangles, which is the exact point at which the projectile is situated, the distance BP, which can easily be read off is the distance of the projectile from the skin

FIG 2.



For practical purposes we have devised the following plan On a flat board (in this case the cover of the coil) is glued a dressmaker's metric tape measure of which one edge, the left, for example (Figs 2 and 3), represents the line AB, and at A' we fix a fine thread We then take a set-square whose two sides containing the right angle are graduated in centimetres To locate the situation of the projectile will then be very simple For a thickness AB, we place the apex of the right angle of the square at the point B on the edge of the tape corresponding to the number of centimetres indicated by the support of the screen On the side BB' of the square we note the figure found for the variation of the shadow of the projectile. If with the thread we then join A B' the thread cuts the line AB at a point P such that PB is the distance of the projectile from the skin

When for any reason we cannot apply the screen directly to the skin we perform the same operations by noting the difference of level between the place where the screen is applied and that whence the normal ray leaves the skin, we shall only have to diminish this distance on the figure found

To sum up The depth is determined by the following operations —

1 Contact of the screen with the skin at the affected point.

2 Marking on the screen of the normal ray passing by the projectile

3 Displacement of the bulb (10cm) along the slide.

4 Marking of the new shadow of the projectile on the screen

5 Measuring the distance between these two marks

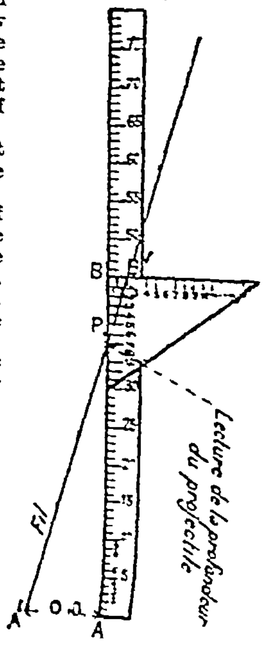
6 Reading off on the stem of the screen of the anticathode-screen distance

7 Placing the apex of the right angle of the set square at the figure corresponding to this distance on the tape measure

8 Stretching the thread from A to the figure of the edge BB of the square corresponding to the difference in centimetres of the two marks of the image

9 Reading off on the vertical edge of the square of the figure at which the thread cuts this line, this gives the depth of the projectile from the skin

FIG 3



is not found in ileus duplex, nor does the pulse, however rapid, present the wavering quality of the peritonitic pulse

When I speak of these differences you will understand that I refer to the earlier stages Ileus duplex is no exception to the rule that intestinal obstruction ends in general peritonitis

CONCLUSIONS

Let me now attempt to sum up my conclusions Peritonitis of the serous surface of the intestine, when it reaches a certain degree, is accompanied by complete paralysis of the involved segment of intestine General peritonitis means general paralysis of the intestine, and is accordingly not amenable to surgical treatment But if the peritonitis is partial, though unlimited by any adhesion barrier, certain segments only of the intestine are paralysed If the paralysed segments can be thrown out of circuit by surgical measures recovery is in such cases possible and even likely Unfortunately, in these cases the surgeon's hand has been paralysed by a facile assumption, based upon the general abdominal distension, that general peritonitis is present

The position of the subject in 1903 is thus summed up by Douglas[3] —

> Post-operative sepsis resulting in peritonitis produces paresis of the muscular wall of the intestine, and the resulting intestinal obstruction is the conspicuous symptom of the general peritonitis In septic peritonitis, with conspicuous symptoms of obstruction, experience has taught us that secondary operations are so uniformly fatal that surgeons are discouraged in undertaking them. Enterostomy has been frequently done without avail

This pessimistic view was held by Douglas, though he recognised that the paralysis might involve only small segments of bowel, because he wrongly assumed the presence of general peritonitis in such cases

The observations I have made in the operating theatre and the successful results of my cases show conclusively that septic ileus of pelvic origin is not accompanied by general peritonitis when it first comes under observation, and that it is perfectly amenable to surgical treatment, subject to a clear recognition of the fact that two segments of the bowel are involved, and that accordingly two obstructions require to be circumvented

You may complain that the name ileus duplex adds a new terror to medical nomenclature It is the acknowledged privilege of the poet to give to airy nothing a local habitation and a name I fail to see why the humble scientific observer, whose trammelled imagination must dance in tune with the facts of nature, may not assert at times the same right of fixing in language his comparatively dull realities And in the present instance the name ileus duplex, whatever its defects, will, I believe, give such definition and precision to the condition I have described as to hasten its general recognition, and thus to save lives which might have been sacrificed

[This lecture will appear in full, with case notes and illustrations, in an early number of the *British Journal of Surgery*]

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[3] Douglas s Surgical Diseases of the Abdomen p 181

LITERARY INTELLIGENCE —In view of the new issue of the British Pharmacopœia Messrs Cassell and Co, Limited, will very shortly publish a new edition of "Materia Medica and Therapeutics," by Dr J Mitchell Bruce, assisted by Dr W J Dilling, rearranged and rewritten to correspond thereto

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RADIOSCOPY WITH THE 3RD FRENCH ARMY

BY LIEUTENANT COLONEL A W MAYO ROBSON, R A M C, C V O, F R C S ENG

With a Note by DR HARET *and* DR SCHLESINGER

DURING a recent visit to France (kindly permitted by the Director General of the Army Medical Department and at the request of the French Embassy) for the purpose of installing the Urgency Cases Hospital for the French wounded, I had the opportunity of seeing Dr Haret, the radiologist to the 3rd Army, at work in one of the hospitals near the front I think it may interest the readers of THE LANCET to know how excellent are the arrangements for carrying out radioscopy in the scattered hospitals near the front where it would be impracticable to instal a permanent apparatus

A large covered motor ambulance carries, not only the operator and his assistant, but also a dynamo, which can be worked by the engine of the motor, and a transformer that can be used in those hospitals where there is an electric supply It also carries a folding couch, stretchers, and all the apparatus necessary for radioscopy This ambulance mobile regularly visits in turn the hospitals over a wide area, but if required for any special case it is available on giving short notice

Dr Haret told me that he had made as many as 50 radioscopic examinations with localisations in one morning and with each case is furnished a chart and drawing It was most interesting to witness the celerity and skill with which the drawings were effected In our hospitals in England radiography is more generally employed, and where a fixed apparatus is available and the necessary photographic chamber installed it presents many advantages over radioscopy, but in the crowded hospitals close to the battle line where 50 to 100 badly wounded cases may be brought in any morning, nothing but the most expeditious methods can be made use of, and here I have no hesitation in giving the preference to radioscopy

In the Urgency Cases Hospital attached to the 3rd French Army we have an excellent X ray outfit, which was supplied by Messrs Watson and Sons, of Great Portland street, London, W, under the kind supervision of Sir James Mackenzie Davidson, and Mr J G Everitt, our skilful radiographer, carries out the work with great celerity and accuracy For instance, in the case of a recent shell wound of the shoulder with enormous swelling, I saw the X ray examination made and localisation of a large fragment of shrapnel casing effected by the method suggested by Sir James Mackenzie Davidson, and then a radiograph was made within a quarter of an hour, and half an hour later the fragment was removed by Mr J Cairns Forsyth, F R C S, the "medecin chef" of the hospital

In the greater number of our cases we give the preference to radiography, but in simple cases radioscopy alone is employed

Appended is an extract from a paper given to me by Dr Haret which demonstrates his methods

A Simple Method for the Localisation of Projectiles by Radioscopy by DR HARET *and* DR SCHLESINGER[1]

Localisation of projectiles becomes of more practical value as the means and methods are more accurately constructed, but all the technique has the defect of temperature was 103 1° F An intravenous injection of hypertonic solution (Rogers) 4 pints was given, also pituitary extract At 2 P M the temperature was 103 4° Morphine, 1/4 grain, and hyoscine, 1/100 grain, were given. The vomiting stopped for six hours At 6 P M rigors occurred, the temperature was 104° CaCl$_2$ 30 grains was given At 10 P M the temperature was 101 6° On the 21st the patient had had no sleep HbO was present in the urine At 2 A M there were rigors, the temperature was 104 7°, falling at 6 A M to 99 5° At 10 A M there were again rigors, the temperature was 104° Neosalvarsan, 0 9 grm, was given intravenously with 2 pints of saline Two hours after the infusion the patient said that he felt cured, the vomiting ceased, the temperature was 101° On the 22nd he had slept well The urine contained a trace of HbO The temperature was 100 1° at 6 P M, and then ranged between 99 3° on the 23rd (6 P M) and 97 6° on the 25th (noon) being 98 6° on the 26th (8 P M) HbO was completely gone from the urine on the 23rd, on the 24th a trace of albumin was present, but no trace on the 25th On the 24th the spleen was not palpable The patient was given CaCl$_2$, 10 grains, twice daily and an iron and arsenic tonic He felt desperately weak but rapidly improved, and joined the Mounted Forces on August 8th

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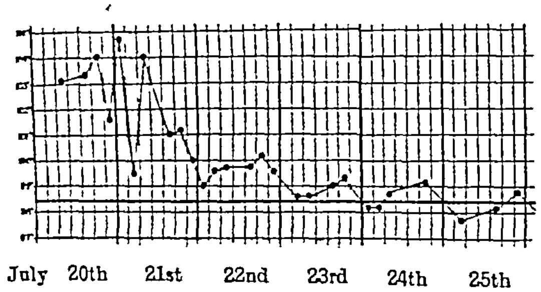
[1] Inspector General Mignon has authorised the publication of this note

Four hour Chart



CASE 2 —The patient aged 50, married, was robust and of very temperate habits He had had "blackwater" very badly 25 years ago and migrated from Rhodesia to British East Africa to try to get rid of the effects of it which kept him weak for five years For the last four months he had been having "fever" on and off and had been taking a good deal of quinine both by mouth and needle During the past few weeks he had been getting very low He had been trading for the last four months in Uganda and Kavarondo The laboratory report on the blood which was taken at 6 P M on Dec 17th 1914 just before the infusion of '914' showed that there were no parasites On the 15th the patient had fever all day feeling very ill On the 16th he had had no sleep He was retching all day and was very ill The urine was acid and normal At 10 A M the temperature was 100° F He was given quinine 10 grains which was vomited At 10 P M there was very high fever, but the temperature was not taken He had quinine 10 grains, which was retained On the 17th he had had no sleep He was retching all day and was very ill In the afternoon he was jaundiced At 2 P M there were very severe rigors, the temperature was not taken The urine was as black as ink very thick and hard to pass At 6 P M the temperature was 100° He received an intravenous injection of neosalvarsan 0 9 grm with two pints of saline, also morphine 1/6 grain and hyoscine 1/100 grain The laboratory report on the urine before the infusion stated that it contained an enormous quantity of oxyhæmoglobin a certain amount of methæmoglobin and an immense quantity of debris At midnight the temperature was 98 4° On the 18th he had slept well all through the night The urine contained no HbO, there was a slight trace of albumin The temperature was 97 6° On the 19th the temperature was 97 6° There was no trace of albumin in the urine The patient was very weak but was improving rapidly CaCl 10 grains twice daily was given and an iron and arsenic mixture On the 23rd there were no parasites or pigment in the blood there were poikilocytes and polychromatophilia The white cell count was polymorphs 56 5 per cent large mononuclears 13 5 lymphocytes 23, and eosinophiles 2 per cent

Nairobi

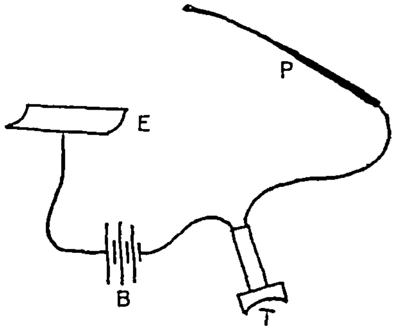
THE THEORY OF THE TELEPHONE PROBE

By R G CANTI, M.R C S Eng, L R C P Lond,
JUNIOR DEMONSTRATOR OF PATHOLOGY ST BARTHOLOMEW'S HOSPITAL, LONDON

WHILST nothing but the simplest electrical phenomena are involved in the theory of the telephone probe, nevertheless an exact knowledge of it is necessary both that the operator may appreciate what is happening when the sounds reach his ears, and that the instrument may be so employed or modified that the most satisfactory results may be obtained

The instrument was designed for the location of bullets and other foreign metallic matter within the human body It consists essentially of a telephone receiver, one terminal of which is electrically connected with the skin of the patient by means of a flat electrode covered with wet cloth, whilst the other terminal is connected with a metallic probe A dry battery may or may not be inserted in series with the telephone The probe is introduced along the track of the bullet, and on contact being made with the latter a sound is produced in the telephone (Fig 1)

FIG 1



Telephone probe B Battery E, Electrode P Probe T Telephone

r = Resistance of the tissues and telephone (a constant) r^1 = Resistance of the area of contact of the probe with the tissues r^2 = Resistance of the area of contact of the bullet with the tissues It is proportional to the area of the surface of the bullet and therefore approximately to its size

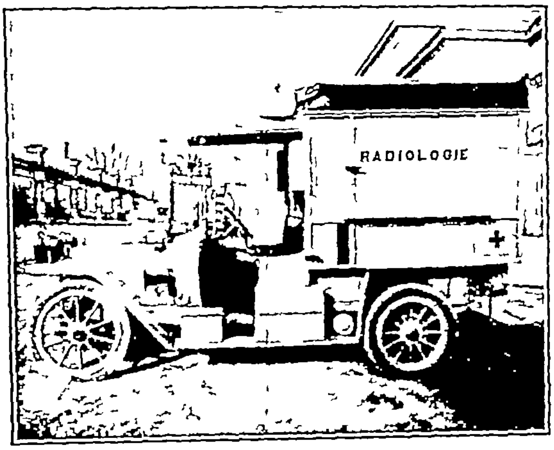
The intensity of the sound in a telephone is proportional to the current which is suddenly made to flow through it (within the limits for which the telephone is designed), and this is equal to the electromotive force divided by the resistance of the circuit Or, $C = \frac{E}{R}$

Now, suppose an attempt is made to locate a bullet in a patient Directly the probe touches the tissues the resistance of the circuit is lowered from infinity to some high figure, and a current begins to flow A click is heard in the telephone, but instantly the flow of current becomes even, and the sound ceases because the diaphragm of the telephone is again stationary The current which caused the sound and which is now flowing is represented by $C = \frac{E}{r+r^1}$ The diaphragm, however, is slightly drawn in towards the magnets so that if the probe is withdrawn from the wound, at the moment of breaking contact another click is heard which is caused by the return of the diaphragm to its original position These sounds are always heard but must be ignored When the

This little device seems to us so simple that we make it known to those of our *confrères* who are deprived, as we are, of the fragile apparatus for localisation, but who can always find available a dressmaker's tape measure, a piece of card to make a set-square from, and some thread

Since the outbreak of war various designs have been brought out to meet the requirements of radiographers who are working in the field and clearing hospitals, but none seems more completely thought out than the "radiologic automobile," particulars of which have been kindly furnished me by the distinguished Présidente of the Croix Rouge Française

FIG 4

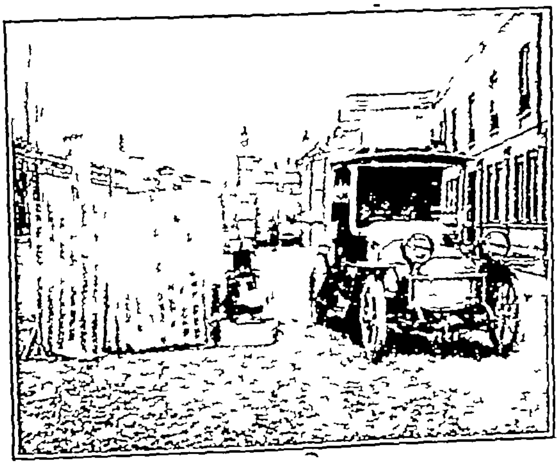


The "Radiologic Automobile

Briefly, the outfit consists of a powerful modern motor chassis, upon which is mounted a van body divided into two compartments, the inner of which is a completely equipped photographic dark room for developing X ray plates, the remainder of the car being most ingeniously fitted to carry the whole of the appliances and stores required (Fig 4) Driven from the motor is a dynamo, which generates electricity, not only for lighting the interior and exterior of the car, but also for the X ray work itself. Included in the equipment carried on the car is a dark tent in which the actual examinations take place, and the necessary table on which the patient is placed, and, in fact, no detail seems to have been forgotten (Figs 5 and 6.)

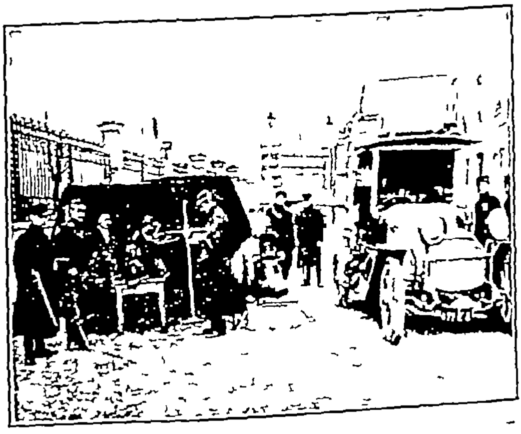
By means of one of these cars radioscopy or radiography can be performed anywhere, and as one outfit will serve a considerable number of hospitals great economy both in personnel and in money is effected The cost of each complete installation is £850, and the Society of the Croix Rouge Française, 9, Knightsbridge, London, S W, is anxious to name each car after a donor, whose name would be placed on it

FIG 5



The automobile together with the dark tent in position.

FIG 6



Interior view of the dark tent during X ray examination.

The appended photographs, with permission to make use of them, have been kindly lent me by the Presidente of the Croix Rouge

Basil-street S W

BLACKWATER FEVER

BY R W BURKITT, F.R C S IREL

SEEING that "blackwater fever" is a disease with such a frightful mortality and that its treatment so far is not satisfactory, I consider that I am hardly justified in waiting for further cases before recording what seems to be the wonderful effect of neosalvarsan on it, as judged by these two cases (the only cases of this disease on which I have used it) The earlier case was in practically a hopeless condition and having rigors continuously when I gave him the neosalvarsan The latter case was given neosalvarsan four hours after the blackwater appeared.

CASE 1 —The patient aged 28, a professional white hunter, of temperate habits, had had "fever' on and off for a year Quinine had been taken very irregularly The spleen was a little enlarged The laboratory report on the blood on July 20th, 1914, stated that no malarial parasites were present, some unknown bodies were seen, on the 28th no malarial parasites were seen The urine report on the 20th stated that there were oxy and methæmoglobin (very heavy), epithelial and granular casts, and an enormous quantity of débris The progress of the case was as follows On July 20th the patient had had no sleep The urine was inky black acid, and HbO was present Jaundice was deep and increasing There was constant vomiting, the vomit was quite black The spleen was just palpable At 10 A M the contact with the latter should be reduced to a minimum In order to achieve this the probe should be made of silver or some other non corrodible substance, with a small knob at the end, and with the shaft covered with white gum elastic material which will not deteriorate by the ordinary methods of sterilisation This insulated probe is further advantageous in that instruments not connected in the circuit may be passed along it without creating sounds in the telephone

N B—Since the above description was written, Mr Gillies has afforded the benefit of his experience by the following valuable suggestion The lead usually connected with the probe is connected to an electrode secured on to the operator s arm, whilst the probe is held in the hand and used without any metallic connexion with the rest of the apparatus By this means the current is made to flow through the body of the operator in addition to its usual course This it will do without appreciable loss of efficiency, the only points to be observed being that the hand must be wet and must not be covered with a rubber glove The advantages are that instruments do not have to be attached and detached continually, and that any instrument can be used which has not been specially made to fit the apparatus

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THE SIGNIFICANCE OF NUCLEAR VARIATIONS OF NEUTROPHILE LEUCOCYTES (ARNETH COUNTS) IN WEST AFRICA.

By J W SCOTT MACFIE, M A., M B CANTAB,
WEST AFRICAN MEDICAL STAFF

RECENT investigations into the effect on white men of residence in a tropical climate have shown that a definite change may be observed in the blood—namely, a "shift to the left" of the Arneth count Chamberlain and Vedder (1911) made Arneth counts on 72 American soldiers in the Philippines, and for comparison on 50 Filipinos They concluded that 'the average Arneth picture showed a marked shift to the left in the case of Filipinos and a slight shift in the same direction for Americans resident more than one year in the Philippines" More recently Breinl and Priestley (1914) performed Arneth counts on 150 school children living in tropical Queensland, and found that they showed "a marked shift to the left, the Arneth index being 74 5 as compared to 40 for normal individuals (Arneth) in Europe," and they expressed the opinion that this change was "due to the effect of a tropical climate upon the white race living in the tropics"

The exact significance of this "shift to the left" in the Arneth count is not yet determined with certainty, but is by most authors considered to be "the expression of a lowered resistance of the body to infection Arneth himself believed the neutrophiles of his Classes I and II to be immature leucocytes Breinl and Priestley, however, dissent from this view, pointing out that according to Busse (1910), and to some experiments of their own, no difference in the phagocytic power of the neutrophile leucocytes belonging to the different classes distinguished by Arneth could be demonstrated *in vitro* These authors express the opinion that the shift is the outcome of purely climatic influences, and point out that it *becomes more* pronounced after a prolonged residence The phenomenon is at any rate an extremely interesting one in view of the tendency at the present time to deny that climate in itself affects Europeans in the tropics

A number of Arneth counts were performed at Accra during the latter months of 1914 on sick and healthy Europeans and natives The investigations are still being carried on, and a complete account of the results obtained will be delayed until later It may, however, be stated at once that malaria infections appeared to have a marked effect on the Arneth blood picture In a number of cases of malarial fever in which there was a heavy infection with the subtertian parasite (P falciparum) there was found to be a well marked "shift to the left" of the Arneth count, and this phenomenon persisted after all parasites had vanished from the blood, and after the patients had recovered from the attacks Details of only one case need be given here (see Table) This was a fatal case of malaria in which 47 65 per cent of the red blood corpuscles were invaded by parasites On performing an Arneth count it was found that no less than 95 5 per cent of the neutrophile leucocytes belonged to the Classes I and II The great majority of the neutrophile leucocytes had sickle shaped nuclei

Table showing Arneth Count in an Exceptionally Intense Malarial Infection (P falciparum)

—	Arneth classification per cent.					Index
	I	II	III	IV	V	
Normal in Europe (Arneth)	6·0	35·0	41·0	17·0	2·0	40·0
Intense malarial fever	78·0	17 5	4·0	0·5	0·0	95 5

In this case the neutrophile leucocytes had ingested a large number of malaria parasites which were clearly visible in their cytoplasm It was therefore possible, using the number of these as an index, to gauge the phagocytic power of the various cells *in vivo* As, however, the leucocytes of Classes I and II predominated to such a marked extent, it was difficult to find a sufficient number of those belonging to the higher classes for comparison It was nevertheless noted that the leucocytes in which the ingested parasites were most numerous were almost always those of Class I, some of which contained as many as 30 or 40 crowded into their cytoplasm This observation would seem to indicate that there is at least no reduction of the phagocytic activity in the neutrophile leucocytes of Arneth's Class I The observation also supports the view of Breinl and Priestley that "the Arneth picture is an expression of the functional activity of the leucopoietic system", for if their hypothesis were true, it would be in such diseases as subtertian malaria, that profoundly affect the spleen and the bone marrow, that one might expect to find a marked "shift to the left" indicating a morbid activity of these tissues

It is not my intention to discuss the matter further at present as I hope to return to the subject at a later date, but it may be pointed out that in interpreting the significance of a "shift to the left' in the Arneth blood counts in West Africa the bearing of malarial infections, both recent and more remote will have to be carefully considered

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The Laboratory Accra.

probe is pushed further and further into the wound the quantity of r_1 is decreased, by reason of the increased area of contact of the surface of the probe with the tissues, and the flow of current through the telephone is therefore increased This takes place very gradually, and the diaphragm is attracted evenly and slowly towards the magnets and no further sound is produced

Now suppose the probe touches the bullet There is now an additional path of flow open to the current —that is, from the bullet itself to the tissues—and its resistance, r^2, being added in parallel to r^1, the total resistance of the circuit is suddenly lowered, the current therefore is increased and a sound is heard The current now flowing is represented by $C = \dfrac{E}{r + \dfrac{r^1 r^2}{r^1 + r^2}}$. (When two resistances are in parallel the total resistance is equal to their product divided by their sum) If the area of the bullet is large the resistance r^2 will be low and the sound in the telephone loud, and conversely a small piece of metal will give rise to a comparatively weak sound Should the contact between the probe and the bullet be now broken another sound will be audible in the telephone, and, further, an irregular grating sound will be heard as long as the probe is rubbed up against the bullet and the contact continually broken and remade

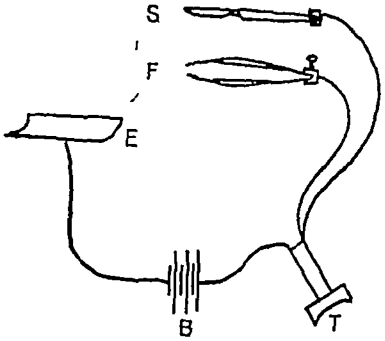
As regards the various factors which determine the efficiency of the apparatus, the following points should be noted

1 *Sterilisation* —All those portions of the instrument which come in contact with the tissues or the surgeon's hands should be capable of being easily detached for sterilisation and made of such material as will not deteriorate by boiling or other means employed for rendering them aseptic As it is not necessary for the leads to be highly insulated, they may conveniently be made of bare flexible woven copper cord, which can be boiled along with the other instruments and has the advantage of not easily becoming entangled or kinking

2 *Uses and limitations* —Any good electrically conducting body, even if extremely small, is readily detected, and other solid material such as bone gives rise to no sounds whatever Bullets, shrapnel, and other pieces of metal can thus be located where the simple probe fails to give any tactile sensation, or when the tactile sensation of bone may lead the operator astray The instrument should comprise, besides probes of various sizes, one or more pairs of forceps for extracting bullets which can be rapidly and easily placed in the circuit in like manner to the probe In the case of the forceps each limb should be separately connected with the lead, as otherwise sounds may be obtained by the rubbing together of the two halves of the forceps Should other instruments be required for use at the same time they may be all connected up to the same lead by copper cords, placed in the instrument tray when not in use, and used if necessary more than one at a time, being all of the same potential they will not produce sounds in the telephone when they touch one another Since a piece of metal the size of only a small fraction of a needle can so readily be detected, this method used with a scalpel and dissecting forceps connected in the circuit should prove very valuable for the difficult and tedious surgical operation of searching for a needle in the hand (Fig 2)

It should be distinctly understood that the instrument is only of real value when the ordinary methods of detection are of no avail, and when the X ray, if obtainable, is deceptive

FIG 2



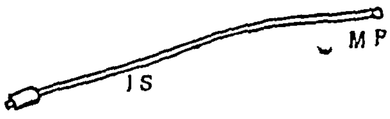
Same as Fig 1 with scalpel and forceps in place of probe S Scalpel. F Forceps

3 *The telephone* —This part of the instrument should be highly sensitive to the slightest variations in current, and should be by a reliable maker, as an inferior article gives poor results A pair of telephone receivers should be used connected together with a head piece, and having a total resistance somewhere between 100 and 1000 ohms

4 *The source of the current* —Many telephone probes are not supplied with a battery, but are designed to be used with the small current generated at the area of contact of the body with the electrode, which is sometimes made of metal and sometimes of carbon The potential of this skin current is only a small fraction of a volt Much louder sounds are obtained, and much smaller pieces of metal can be located by employing a few dry cells in series with the telephone. Two batteries as used in small flash lamps and having a potential of 6 volts are sufficient The reason why a higher voltage is more advantageous is that, all other conditions being the same, there is a greater difference in the amount of current flowing through the telephone before and after contact with the bullet, and therefore louder sounds are obtained By referring to the formula $C = \frac{E}{R}$ it follows that, when the probe *touches* the bullet and the value R is suddenly lowered, the higher the value of E, the greater will be the current made to flow suddenly through the telephone

5 *The probe* —Finally the instrument can be rendered markedly more efficient if an "insulated probe" be used in place of the ordinary bare probe

FIG 3



The probe I S., Insulated shaft M P Metallic point

(Fig 3) By again referring to $C = \frac{E}{r + r_1}$ (before contact with the bullet) $C = \dfrac{E}{r + \dfrac{r_1 r_2}{r_1 + r_2}}$ (after contact), it is seen that a much greater increment of current will result if the resistance r_1 is high. And as r_1 is the resistance between the probe and the tissues, the area of the former coming into

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF ANÆSTHETICS

The Influence of Preliminary Narcotics on General Anæsthesia

A MEETING of this section was held on March 5th, Dr HAROLD LOW, the President, being in the chair

Dr J BLUMFELD, after referring to the previous discussion on this subject four years ago, when the procedure was novel and very diverse views were put forward as to its value said that further experience had enabled us to exercise discrimination and to declare that there were cases where this method was of the greatest value and others where it should not be employed. The first point which he wished to raise was the routine use of preliminary narcotics His own view was that none of these drugs should be employed as a routine except atropine. It was not a reasonable course of action to prescribe morphia and scopolamine for patients whom they had not seen beforehand or unless at least they had satisfied themselves that in every probability these drugs would not upset the patient It was also necessary that the patient should not have to walk or be disturbed before the operation It was particularly in hospital practice that he objected to their routine use, because it often happened that the experienced anæsthetist who was expected did not actually give the anæsthetic, which then fell to the lot of an inexperienced junior, who would not have had a preliminary injection given had he known he was to be the anæsthetist These remarks did not apply to atropine which rendered convenient the free use of open ether Again, the case might turn out to be one in which deep chloroform anæsthesia was indicated, and he thought that was not a method to be safely practised The advantages to be derived from the use of these narcotic drugs were, firstly, a quiet induction with a patient indifferent or asleep, secondly, a diminished consumption of anæsthetic, and, thirdly diminution or absence of all deleterious after-effects Scopolamine alone, or combined with morphine was more potent and gave great help in highly nervous individuals Yet there were cases in which these drugs caused nausea or excitement Again these drugs, in his opinion prolonged induction and particularly delayed complete muscular relaxation With regard to after effects the balance of evidence was in favour of the good results from scopolamine with or without morphia. Sickness was sometimes delayed, more often it did not occur or was slight He preferred to use these drugs in highly nervous individuals in all long nose and throat cases and in all very muscular plethoric or alcoholic individuals In the nose and throat cases a light degree of narcosis was possible with unabolished cough reflexes

Sir FREDERIC HEWITT said that he had a high opinion of the use of preliminary narcotics provided care and discretion were exercised Whenever practicable the anæsthetist should see his patient some time before the operation. In certain special cases a trial administration might be made a day or two before the operation. He had no doubt as to the general advantages of the plan of preliminary narcotisation Atropine was very valuable in preventing nasal or oral secretions He had never seen any contra indications to its use He had of late become rather shy of scopolamine except in cases where definite pre anæsthetic stupor was indicated Provided there were no contra indications he was inclined to use morphine and atropine ¼ gr for adult males 1/6 gr for women with 1/150 gr of atropine before practically every operation He preferred freshly prepared solutions to tabloids Morphine should not be given to patients suffering from respiratory difficulties nor in throat nose and mouth operations liable to be attended by hæmorrhage unless a light anæsthesia was maintained He did not think the profession fully realised the importance of a rapid return of the reflexes after the operation He agreed that the sleep-like breathing of morphinised patients sometimes rendered the [illegible] He [illegible] [illegible] case in which [illegible] marked [illegible] dangerous [illegible]

Dr W H TATE was entirely in favour of the preliminary use of narcotics, either morphine and atropine alone or combined with hyoscine Hyoscine was not advisable in old and feeble patients In his experience, which embraced operations chiefly on the lower abdomen, there had been no difficulty in obtaining satisfactory relaxation. In many cases the patient s senses were partly dulled in some there was entire freedom from nervous tension. It was quite an exception for any troublesome sickness to occur

Dr JANE TURNBULL agreed with Dr Blumfeld that the use of atropine alone was very satisfactory, and the use of morphine and atropine in operations on the nasal passages was of great value

Dr Z MENNELL completely agreed with Dr Blumfeld s conclusions He thought it must be generally allowed that scopolamine sometimes made difficult complete relaxation in high abdominal cases

Mr H E G BOYLE thought that the discussion had emphasised one point—viz, that anæsthetists ought to see their patients a day or two before the operation It was obviously wrong to prescribe a routine dose of any narcotic without first seeing the patient It was an important point that patient and anæsthetist should not be strangers on the morning of operation He had found recently that a fairly strong dose of morphine and scopolamine with atropine had been of benefit during the induction of soldiers who, although outwardly calm, were one and all nervous A great drawback was the intense thirst and dryness of the mouth produced

Dr G A. BARTON had practically adopted the administration of narcotics before anæsthesia as a routine method during the last three years He thought solutions were better than tabloids Owing to the depression of the respiratory centre induction was slower than usual unless as in his own practice, ethyl chloride were added to the chloroform, or ether or combinations of these agents used for induction Struggling was less marked. The best results during anæsthesia were obtained by a full dose of morphia and scopolamine say ¼ gr and 1/100 gr as a routine, with more morphia for strong big men, with the subsequent use of the minimal dosage of open ether He liked to keep a brisk corneal reflex With this form of narcosis shock practically never occurred He had practically given up strychnine or pituitrin saline infusion and artificial respiration. He deprecated the use of chloroform with narcotics After referring to the dangers of chloroform and the work of Dr A. G Levy he said that following the use of alkaloids and open ether the patient generally slept comfortably, and was rarely troubled with vomiting or other discomforts One occasionally came across cases of idiosyncrasy to morphine and scopolamine

Dr F E SHIPWAY said he was entirely in favour of preliminary narcotisation whenever possible It was a kindness to the patient and a help to the anæsthetist He preferred morphine and atropine for the majority of cases with the addition of scopolamine for very nervous patients Scopolamine sometimes made induction slow, and delayed the onset of complete muscular relaxation in operations upon the upper abdomen Small doses of morphine with atropine were an advantage in operations upon the nose throat, and mouth As regards after results patients made a better recovery if narcotics had been given He thought that flatulence was not on the whole increased Chloretone could be substituted for morphine in selected cases, he had found it useful sometimes for patients who had on previous occasions been much troubled by vomiting

The PRESIDENT said that most anæsthetists were now able to give an expert opinion as to the advisability of using narcotic drugs as a preliminary to anæsthesia He quite agreed with Dr Blumfeld that their routine use in hospital practice was not advisable In unskilled hands their use was not free from risk At St Thomas s Hospital the resident staff were not allowed to use narcotic drugs Deep chloroform anæsthesia should never be induced subsequent to their administration He had never seen any ill effects from the use of atropine He was in favour of the use of morphine and atropine in skilled hands and in selected cases but he was not so certain of scopolamine the action of which was not always to be depended upon Following the use of morphine and atropine the patient was asleep or in a state of quiescence less anæsthesia was required and post anæsthetic sickness was rare He hoped that if he had ever to undergo an operation he might be given a preliminary narcotic injection

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

◆

EXTRA UTERINE GESTATION SIMULATING APPENDICITIS

BY E MANSEL SYMPSON, M A, M D CANTAB, M R C S ENG,
MAJOR, R.A M C (T F) HONORARY SURGEON, LINCOLN COUNTY HOSPITAL

ON April 18th, 1914, a married woman, aged 22 years, was admitted into the County Hospital, Lincoln, under my care, suffering apparently from an attack of appendicitis The following history was given The first serious attack of pain in the right side of the abdomen came on on April 13th and continued off and on till another more serious attack on the evening of the 17th, accompanied by vomiting The patient had had two children, the last of whom was born on Dec 1st, 1913 A menstrual period had ceased at the beginning of April, but some loss appeared on April 13th and continued till the day of operation There was tenderness in the right iliac fossa on deep palpation, but no definite swelling, and the abdomen moved freely on respiration The temperature was normal, the tongue only slightly coated As she was menstruating and the pain seemed to be leaving her, I decided to wait a few days before operating

On April 29th I made the usual incision for appendicectomy, and on opening the peritoneum found that part of the abdomen occupied with blood clot and some fresh blood This at once suggested extra uterine pregnancy, so I closed the wound, opened the abdomen in the middle line, washed out the hæmorrhage, found, tied, and cut off the right ovary and tube, of which the outer third was much enlarged, and in which the gestation sac was situated This had burst intraperitoneally, and was probably, judging also from the patient's history, of about 11 to 12 weeks' growth The uterus was somewhat enlarged, and slight hæmorrhage had occurred through the cervix

The after history is unimportant, as the patient made an excellent recovery, and was discharged from hospital on May 19th, 1914

A very similar case came under the care of my colleague, Major D J G Watkin, at the hospital, almost simultaneously

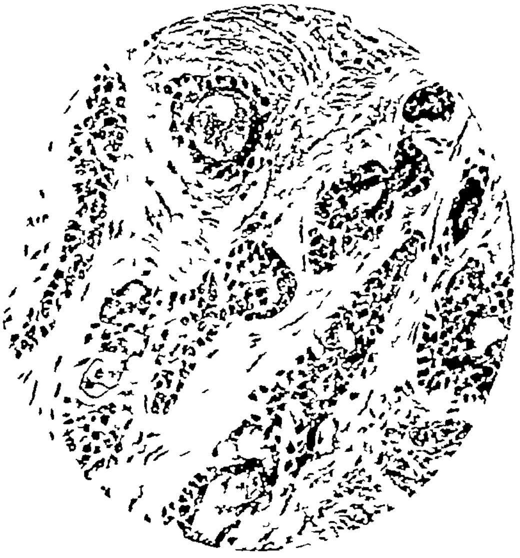
Lincoln

NOTE ON A TUMOUR OF THE MAXILLARY ANTRUM

BY H N TAYLOR, M A. CANTAB, M D DUB, F R C S EDIN,
MAJOR, R A.M C (T F) SURGEON EBBW VALE HOSPITAL, MONMOUTHSHIRE

ON Feb 15th last Mrs ——, aged 34 years, came to the hospital as an out patient, complaining of pain "in the right side of the face" On examination there were pain and tenderness over the right cheek, with apparently some little bulging of the affected side, with symptoms of neuralgia of the right infra-orbital nerve There was no nasal discharge, no obstruction of the nasal duct, and no exophthalmos The teeth had been extracted some months previously with an idea of relieving the pain, but the symptoms had become more pronounced rather than improved Internally there was a distinct prominence of the antral wall over the alveolus, with a sensation that the wall of the cavity was "thinned out" On transillumination the right side was found to be quite opaque, in marked distinction to the rosy glow transmitted through the left maxillary region

I admitted the patient to the hospital and subsequently opened somewhat freely the antrum over the alveolus A hard, indistinctly lobulated tumour presented itself, which was, with some difficulty, delivered through the opening It proved to be a dense greyish white conical growth about two and a half inches long with a base of about an inch, one edge of which was partly attached to a small bony ridge in the antral cavity, which I snipped off to complete the removal On cutting into the growth the appearance suggested a fibroma with a few small hæmorrhages into the substance of it I however, sent a piece of the growth to the Clinical Research Society, and append the society's report and a micro photograph —



This is a very unusual form of growth, and its nature is quite obscure It is largely composed of tough, fibrous tissue, but all around near the surface there are masses of gland like elements and lymphatics with proliferating epithelium This portion suggests an endotheliomatous growth not unlike some forms of parotid endothelioma, and if this is the true nature of the tumour, then the bulk of it must represent a fibrous transformation There is no normal tissue present, so that we cannot say whether there is any infiltration, but the appearances do not suggest malignancy The magnification is × 200

The cavity rapidly filled up and the patient left the hospital in a fortnight very satisfied that the constant pain she had suffered for over 12 months was now completely—and I hope permanently—removed

Ebbw Vale, Mon

DONATIONS AND BEQUESTS —Subject to certain life interests the late Mr Thomas Ballington, of Edgbaston, Birmingham has left by will £2000 each to five Birmingham hospitals, £500 to the Birmingham General Dispensary, and smaller sums to 10 other medical charities in Birmingham —By the will of the late Mr A Sutton, of West Bromwich the Eye Department of the West Bromwich District Hospital and the Ackrill Nursing Home will each receive £1000 —The St Albans Hospital and the West Herts Hospital will receive £2000 and £1000 respectively under the will of the late Mr Charles Woollam proceeding, and also to notify the insurance company" The pathetic story is told of the troops in Egypt in 1801 whose biscuits were so full of worms "that the men could only eat them in the dark" The discussion of the pathogenic activities of flies takes two chapters, and this without entering on the subject of malaria at all Mites, ticks, and leeches are fully illustrated, and their many activities described in detail, with apt quotations and illustrations These chapters first appeared in the columns of the *British Medical Journal*, they are well worth reproduction in their present form

There are rather more misprints than would be expected—"von Hinderberg" might be passed, but "*Hydrophylus*" hardly We have to thank Dr Shipley for a most useful and entertaining book

Students' Text book of Hygiene

By W JAMES WILSON, M D, D Sc Belf, D P H Cantab London William Heinemann 1915 Pp 270 Price 8s 6d net

THIS text book, which Dr Wilson has based on courses of lectures given during the past seven years to the hygiene class of the Queen's University, Belfast, forms a handy little volume, well printed, light to hold, and essentially readable It succeeds, we think, in going over the enormous territory which is now occupied by "hygiene" in a way well calculated to interest the student, and without burdening him overmuch with the laws, forms, and official schemes necessary for the practical administrator it gives a large amount of essential information Reservations have occasionally to be made—for example, to the statements that on an average a quarter of a ton of refuse is produced per head of population per year, that carburetted water gas contains 30 per cent of carbon monoxide, that good cheese usually contains three times as much fat as the same weight of meat, or that water "reservoirs should hold at least 150 days supply" But if in practice things are not so simple and straightforward as they may be represented in the lecture room, the student is none the worse for being put somewhere there or thereabouts on such questions

It is evident that Dr Wilson's book is the product of wide reading, and his short accounts of different matters are usually in very good perspective Perhaps an exception may be made in respect of the chapter on infectious diseases, which seems to give too little consideration to their natural history, their occurrence as epidemics, and the degree to which they attack race, sex, and age Dr Wilson draws freely on recent contributions to knowledge in the matter of spread of infection by carrier cases, but we think that the present day student, besides being taught the large number of difficulties which the carrier has removed, might well be given a caution as to the new difficulties which are thus created Gilbert's saying that when everyone is somebody no one is anybody deserves to be remembered when the carrier is pressed over much in explanation of epidemic diseases

MISCELLANEOUS VOLUMES

THE public owes a debt of gratitude to the Trustees of the British Museum for their many excellent and cheap handbooks to the collections of specimens exhibited in their galleries Another handbook to the series has just been added which explains in a succinct and admirable way the measure of the interest which attaches to the discovery of the Piltdown skull to which there have been many references in the pages of THE LANCET A *Guide to the Fossil Remains of Man in the Department of Geology and Palæontology in the British Museum* (Natural History) is a little book of 30 pages which summarises the evolutionary theory of man through the primates and describes the Piltdown man, so far as we are able to conceive him, from the skull which was discovered by Mr Charles Dawson in 1912. The reproductions of photographs of the fragments of the skull and the drawings of teeth, together with flints found in the river gravel at Piltdown, are admirably done, and the handbook should certainly find a place among the literature of the subject The Guide can be obtained, price 4*d*, in London, at the Museum (South Kensington) of Messrs B Quaritch, and of Messrs Dulau and Co, in Birmingham, from the Midland Educational Company, in Manchester, from Messrs Sherrat and Hughes, and in Glasgow, from the Grant Educational Company

The war naturally continues to claim wide attention, and the output of books relating thereto is extensive. In *Thou Art the Man the Story of a Great Crime* (London T Werner Laurie, Limited. 1915 Pp 94 Price 1s net), by Mr SIDNEY DARK, the author endeavours to help those who do not read Blue books to form a clear understanding as to why the war began what exactly are the forces against which the Allies are struggling, and why we must fight until those forces are subdued He tells the story of the German Empire and the atavism which now characterises it to impress the public with the fact that Prussianised Germany desires to force other peoples to be German whether they will or no ——In *How Belgium Saved Europe*, by CHARLES SAROLEA, with a preface by Count GOBLET D'ALVIELLA, Belgian Secretary of State, and a map of Belgium (London William Heinemann 1915 Pp 226 Price 2s) the author who is the Belgian Consul in Edinburgh, has written a very readable book which, like the preceding, throws a great deal of light on Germany of to day as distinguished from Germany of Lessing and Goethe, though its primary object is to present a record of Belgium's sufferings as a consequence of her rigid adhesion to duty A chapter is devoted to a character sketch of King Albert, one of the most popular monarchs of to-day, while others give in well chosen words a vivid picture of Belgium's martyrdom ——In *Nietzsche the Preacher of War*, translated by HELEN ZIMMERN (London and Edinburgh T N Foulis Pp 268 Price 1s net), we are presented with views on religion, on virtue, on what is noble, and so on, but the views are not in accord with accepted principles of right and wrong As a specimen of the teaching of Nietzsche the book is interesting

JOURNALS AND MAGAZINES

The Military Surgeon (*Chicago*)—In the March number Colonel H P Birmingham, Medical Corps, United States Army Chief Surgeon of the United States Expeditionary Force in Vera Cruz, April 24th to Nov 23rd, 1914 reports on the sanitary work done during the occupation The sanitary problem was grave as there was small pox in the city and the population was unvaccinated, flies were a "terrific" pest from want of scavenging, cerebro spinal meningitis had been recently prevalent, the time for malaria was approaching, yellow fellow had indeed been mastered during the preceding five years still there was tuberculosis (very prevalent) to beware of Immediately on landing houses occupied as barracks were thoroughly cleaned and disinfected company kitchens and messes were promptly screened, and 3-grain doses of sulphate of quinine were issued daily to the force The army was protected against small pox and typhoid fever, so these diseases caused no anxiety to the medical officers Water carriage of excreta was generally available, but where necessary latrines were dug fitted with fly proof covers and burnt out (with 7½ lb hay and 1 gallon crude oil) twice daily Manure and rubbish were sent to the destructors picket lines were kept clean and burnt over every week Baths were installed, the disposal of waste waters was carefully watched, and 69 000 gallons of crude oil were used for oiling stagnant water while in addition 61 miles of drainage ditches were dug The hospitals and sanitary administration of Vera Cruz were taken over the port and quarantine by that most capable body, the United States Public Health Service the rest by the army A small corps of specialist sanitarians was sent up from the canal zone and many of the Mexican staff were induced to remain, and did well 46,420 vaccinations were done The city was inspected throughout every five days and foods were all regularly examined Deaths from malaria fell to one tenth of the average Venereal disease was limited by the issue of prophylactic packets to civilians as well

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF STATE MEDICINE

The Recent Outbreak of Cerebro spinal Meningitis in the Dublin Military District

A MEETING of this section was held on April 16th, Dr T P C KIRKPATRICK, the President, being in the chair

Dr G E NESBITT gave an account of the recent outbreak of cerebro-spinal meningitis in Ireland Eighty nine cases had been notified to the Local Government Board since Jan 28th last, of which 30 had occurred in the Dublin Military District, with which his remarks were chiefly concerned The mortality rate, so far as his figures were available, was 50 per cent The features of the outbreak were in accordance with general experience No source of infection could be ascertained in the majority, and no two cases occurred in the same building He emphasised the importance of early diagnosis, if necessary by lumbar puncture, and pointed out that in Ireland in civil practice too little attention was paid to the examination of contacts In military practice the greatest importance was attached to this matter, and careful search was made for carriers He sketched briefly the routine method of examination and the steps employed to limit the extension of the disease.

Professor E J MCWEENEY said the disease was one that had an intense attraction for the pathologist He suggested as an explanation of this disease that the cases of cerebro-spinal meningitis that occur only constitute a small minority of the cases of an epidemic catarrhal affection, the mystery of the disease would then disappear, leaving a widespread catarrhal affection all over the country, with here and there a meningitic complication How the diplococcus got from the pharynx into the cranial cavity had been under investigation for a long time, and light had recently been thrown on this by the discovery of the meningococcus in the blood He recommended that in a case of suspected meningitis 10 c c of blood should be removed from the arm for examination He also impressed upon clinicians the necessity for doing lumbar puncture early, and said it would be found to be a matter of extreme simplicity if the proper needle was used He pointed out that one of the leading features of this bacillus was its extraordinary tendency to die off, and he considered that this might be due to the fulminating character of the micro-organism, and it was just possible that the fulminating cases were the ones in which there was difficulty experienced in getting the organisms

Sir JOHN MOORE compared the statistics of cerebro-spinal fever with those of whooping cough In the 13 weeks ending April 3rd the deaths from the latter disease numbered 98, as compared with 8 from cerebro spinal fever, and notwithstanding the enormous toll exacted by whooping cough amongst infants it was not a notifiable disease He was glad that Dr Nesbitt did not allude to that most misleading term "spotted fever," and he would like to know if any of his cases were marked by purpuric eruption

Dr J A MATSON mentioned two cases of the disease which came under his care One of them was so spotted that he thought at first it was a case of typhus fever, and the other showed no spots In both cases the patients recovered

Dr J MARSHALL DAY said six of the cases came under his care Two of them came from outside the city, and were therefore not notifiable in the Dublin registration area All the patients died with one exception All patients admitted to hospital were given spinal injections, but he had very little success with serum except in the one case Referring to cases of a prolonged type he recalled the case of a child in which he tried injections of fibrolysin, and the patient rapidly improved and was discharged, but came back a fortnight afterwards stone deaf. In another case a child was nearly blind, fibrolysin was tried and the sight came back Although full investigation was made in two of the cases admitted, no connexion with any previous cases could be found

The rest of the meeting was occupied by a paper by Sir JOHN MOORE on the exploitation of medical men in the matter of medical certificates We notice the communication elsewhere

Reviews and Notices of Books.

The Minor Horrors of War

By A E SHIPLEY, Sc D, F R S, Master of Christ's College, Cambridge London Smith, Elder, and Co 1915 Pp 166 Price 1s 6d

THIS little book can be recommended, not only to the medical staff of the Expeditionary Force, but to all who are living in camp, bivouacking, travelling in hot countries, or are in any way deprived of the means of securing an ideal cleanliness of person It tells all that anyone can need, and more than most people desire, to know about insect plagues and how to circumvent them, and, secondly, it has been, as the author admits, "written in a certain spirit of gaiety," and thus makes entertaining the study of a subject in itself rather repulsive

Beginning with the louse, the author mentions that typhus fever has been proved to be spread by P vestimenti in a recent outbreak in Ireland, both this species and P capitis spread relapsing fever The first rule in dealing with the parasite is to search the person as often as possible for signs of its presence, and then to apply petrol, paraffin, or other insecticide, and to examine and treat the clothing The wearing of sulphur in calico bags, about 2 inches square, next the skin is also recommended. In regard to the bed bug Professor C J Martin's statement is quoted, that there is really no evidence to incriminate this insect in the case of either typhus or relapsing fever, and no epidemiological reason for supposing that infection by its means takes place to any extent in nature Fleas and lice suck blood several times a day, but bugs "show no disposition to feed for a day or two after a full meal, their dejections were found to be fully digested, almost free from protein, and consisted mostly of alkaline hæmatin." It is pointed out that the wooden huts which have been erected to so great an extent recently will afford convenient quarters for bugs Against them fumigation with sulphur is recommended it is much less expensive and less dangerous than using hydrocyanic acid gas, also the "flares" used by painters for burning off paint have been found to exterminate them from match boarding and wainscoting The establishment of the fact of the conveyance of plague by means of fleas has removed them "out of the category of those animals which it is indelicate to discuss," though, compared with the company to whom Dr Shipley has already introduced his readers, the flea is socially unobjectionable The common idea that the chief occupation of monkeys (at any rate in the Zoological Gardens) is the chase of the flea is declared to be erroneous, we are told that "no fleas have been found truly parasitic on monkeys," although usually in confinement a human flea attacks them, which implies that it is the monkey that has ground for complaint The relation of fleas to plague is described, and the efficacy of cowdung floors for keeping them away is vouched for

The ingenious and important researches of Lieutenant Colonel W W O Beveridge, R A M C, and Mr Durrant on the moth which infests army biscuits (Ephestia Kühniella) are summarised The best way of getting rid of the pest is thorough fumigation of the flour mill premises with carbon bisulphide, but it is judiciously recommended that "as this substance is not only poisonous but inflammable, it is well to get a chemist to undertake the strength of this statement that the allowances for abatement, earned income, and small income relief are made The declaration is required to show, in the first place, the professional income that has already been returned in Section B, and in addition the receipts from public appointments, unless these have been included in calculating the general professional income Under the head of "property" should be entered the annual rentals, less one-sixth for premises that the owner repairs and less one-eighth in the case of land Where the practitioner both owns and occupies the property the figure to be entered is the net assessment on which income tax, Schedule A (property tax), has been paid, and it will often be found convenient to adopt this basis for all property The space provided for income from the occupation of land applies only to persons occupying land other than an acre of garden round a house the profits from such other land being taken at one third the rental value Interest and dividends which have been taxed before receipt (or entered in Section B) should be shown in the space provided, on the basis of the 1914 income unless there is reason to suppose that the 1915 income will be materially different, in which case an estimate might be made Full details are not usually required under this head, nor under the following head of Wife s Income, provided the income can properly be described as "taxed before receipt." Although a wife s income is required to be included in the statement, a practitioner who prefers not to set it out separately may include it with his own under the various heads and make a note on the form that he has done so It may be remarked that where husband and wife conduct independent practices or otherwise earn money independently of one another, and the total joint income is under £500, they are entitled to two separate abatements

There follows on the form a space for "charges on income," in which should be entered annuities, interest, ground rent and other sums which the recipient of the income has to pay away to others In making such annual payments income tax should be deducted from them at the *full rate of tax, and the full rate will accordingly* be charged on these sums whatever relief may be allowed on the practitioner s other income

Section E, which is provided for particulars of the life assurance premiums presents no difficulty, and Section F the claim for relief for children, calls merely for a list of the children born after April 6th, 1899, and before April 7th, 1915

Partnership Income

Section G of the form is devoted to a return to be made by the leading partner in a firm, or where there is no precedence by the partner whose name usually appears first in partnership documents The partner on whom devolves the completion of this declaration is responsible in the first place for making the combined return of the partnership profits in one sum in Section B, and then for showing in the section now under consideration the manner in which the assessment should be apportioned between the partners The return in Section B will be the total average profits of the joint practices for the three years 1912 1913 and 1914 (after deduction of all expenses including the expense of any separate professional establishments of the partners) and the idea of Section G is to indicate how this figure would be apportioned between the partners at the rate of division that will apply in the year 1915-16 Where the proportionate shares have varied over the three years that fact is immaterial only the current rates of division have to be considered The completion of this section is often found troublesome but becomes comparatively simple if it is borne in mind that the object is to show how much each partner would draw in 1915 if the partnership profits for that year were equal to the sum returned for assessment Thus suppose the average profits to be returned at £1000, subject to a charge of £100 a year for interest or annuity to a third party the sum to be divided will be £900 A is perhaps entitled in the year 1915 to draw £60 by way of special salary or interest and two thirds the balance B receiving the remaining one third The apportionment will then be shown as A £620 (£60+£560) and B £280 (one third of £840). There are of course cases in which the proper allotment of the sum returned for assessment will have to be a matter of agreement between the partners or consideration of the normal professional expenses of each

It is to be observed that although a combined return is required to be made of the partnership profits, each partner is personally entitled to a deduction from his share of the assessment on account of whatever allowance may be due to him in the way of abatement, life assurance, earned income relief, &c , and these he must claim on a separate form by completing Sections D, E, and F in the manner explained above

Successions

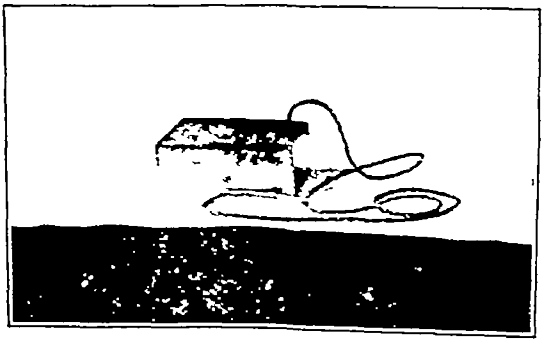
The successor to a practice is required to declare the average profits of the practice for the past three years to the best of his ability with the information at his command , the profits that he himself may have made elsewhere do not come into the computation. If he should take over the practice in the course of the year he will be liable for his portion of the assessment, but in such a case should communicate with the surveyor of taxes in order to ensure that the allowances to which he is personally entitled are made from the assessment A successor who finds the profits less than the sum on which he has been charged may always claim relief, but if his profits should be greater that fact does not invalidate the assessment

New Inventions.

A NEW TELEPHONE PROBE

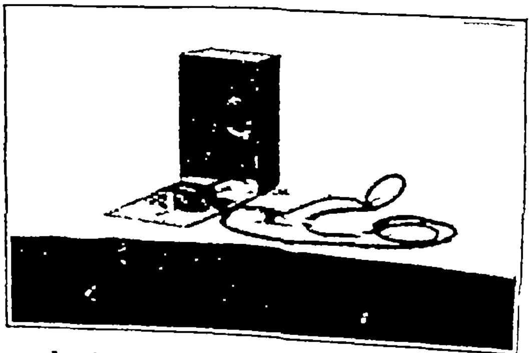
FOR a telephone probe provisionally protected by me last December certain advantages are claimed over others already in use It should prove useful to the general practitioner for locating needles &c , as well as to the military surgeon for detecting the presence of bullets or pieces of shrapnel and the like in wounds The probe consists of a silver rod insulated from a sheath of the same metal forming the two electrodes They are attached to a plug by insulated wires encased in rubber tubing In the lid of the box are fixed the plug holder a specially wound telephone, and a dry cell of the ordinary flash light pattern The latter, when exhausted can be replaced for a few pence almost anywhere.

FIG 1



Plug of the telephone probe in its holder and the probe ready for use

FIG 2.



Interior of the box with the telephone probe detached.

as to troops, and by the weekly examination of all suspected women, and the instructive figures are recorded that of registered women 25 per cent, and of clandestine prostitutes 90 per cent were diseased No typhoid fever occurred and no cerebro spinal meningitis Dysentery, fly carried, did appear, in a few cases amœbic, in 76 cases bacillary (Shiga) with one death The military hospital of 216 beds was established in a new and hitherto unoccupied school A bacteriological laboratory was there established, was much used, and controlled all important clinical diagnoses. In consequence of all this "the occupation of Vera Cruz was attended by no higher percentage in the sick rate than for the troops in the United States" The details given in the paper are most interesting, and should be widely read, and Colonel Birmingham and the United States Army Medical Corps must be warmly congratulated on their splendid success

The Eugenics Review—The April issue opens with the second Galton lecture by Professor J A Thomson to which we referred at length in our issue of Feb 27th This, together with a criticism of M Guénot's "Pre-adaptation" by R A. Fisher and C S Stock, and the Causes of Rise and Fall in the *Population of the Ancient* World, by Professor J L Myres, Wykeham *Professor* of Ancient History at Oxford, form the principal contents of the Review The latter article gives us a "sample of ancient eugenics," covering 1000 years, and under the guidance of Professor Myres we see "populations overtaking the means of subsistence in a limited region, the relief of this congestion by colonisation oversea, the complete occupation and development of colonial regions, the pacific penetration of the regions *of stable or less progressive culture by aggressive civilisation*, itself in rapid development, *forcible dispossession* of obstructive occupants, and no less forcible elimination of competitors for maintenance within the home circle of the conqueror" "History," he says, "is as surely as geology a comparative science, and in the light of fossil politics we can estimate the outcome of policies and modes of life" He recognises, however, that we cannot be sure that no catastrophe will occur to change the course of nature altogether, and with this reservation the article is opportune when we are all speculating *as to the probable course* of history after the war

The Cornhill—To the May number of the *Cornhill* Mr Gilbert Coleridge contributes a very human and valuable article, entitled "Thinking in Open Order" "We are," he says "apt just now to blame the Kaiser personally for the atrocities committed by the German army in Belgium and France, but he is only responsible in so far that he has made no effort to discourage acts which were the logical result of the collective military training and habits of thought of his people The point of view is well expressed in 'Friedens- und Kriegsmoral der Heere,' which Mr William James quotes in his 'Varieties of Religious Experiences,' where the following frank statement appears 'If the soldier is to be good for anything as a soldier, he must be exactly the opposite of a reasoning and thinking man War, and even peace (*sic*), require of the soldier absolute peculiar standards of morality The recruit brings with him common moral notions, of which he must seek immediately to get rid For him victory, success, must be everything The most barbaric tendencies in man come to life again in war, and for war's uses they are incommensurably good' Whereupon Mr James justly remarks 'When we gravely ask ourselves whether this wholesale organisation of irrationality and crime be our only bulwark against effeminacy, we stand aghast at the thought, and think more kindly of ascetic religion' How far the German soldier has been 'exactly the opposite of a reasoning and thinking man' his exploits in towns and in the open field will testify The nation in its drunkenness has set out to paint Europe red, and is making a night of it, but 'after the shrimps the bill', after the orgy comes the headache in the morning, and when the light of truth breaks in upon a hungry peace and shows to the reveller the havoc of the night it is possible we may keep a grain of pity for the deluded people who took no heed of what other nations thought, stifled independent criticism and carefully arranged their thinking in close order But not till after the handcuffs are on. It may be that they will readopt 'common moral notions' Possibly they may come to realise that cleverness and thoroughness are not incompatible with sheer stupidity"

THE MEDICAL MAN'S INCOME-TAX.

(*Concluded from p 878*)

Circumstances in which Relief is Allowed

THE importance of the accurate completion of the form of return under "Schedule D" may be gathered from the fact that there are at least five classes of relief which are allowed only when they are duly claimed—that is to say, the allowances for life assurance premiums, abatement, and children, and the separate reductions of duty admitted on earned incomes and on all incomes below certain limits

The circumstances in which each description of relief is allowed are as follows —

Life Assurance—All annual premiums payable in 1915-16 on the life of the practitioner or his wife up to a limit of one sixth of the total income, including annual sums paid for deferred annuities and on accident policies that cover the risk of death, and also a proportion of the premiums paid on combined (sickness and accident) policies that cover the risk of death

Abatement of £160, £150, £120, or £70, where the total joint income of husband and wife does not exceed £400, £500, £600, *or* £700 *respectively*, *total* exemption where not exceeding £160

Earned Income Relief—A reduction of duty on the portion of the income that is earned, governed by the amount of the total income from all sources The relief at present is at the rate of 1*s* in the £ where the total income is under £1001, 9*d* where under £1501, 6*d*, under £2001, and 2*d*, under £2501, and the reduction is allowed on the income remaining after the deductions for abatement, &c, have been made

Small Incomes Relief—This applies, in effect, to the income that would otherwise be charged at the full rate of tax, and is limited to cases where the total income from all sources does not exceed £500, the allowance being at the rate of 2*d* in the £, unless the total income does not exceed £300, when the allowance is 6*d* in the £

Children—An allowance of £20 from the assessment for each child or stepchild living and under 16 years of age on April 6th, 1915, where the *total income* does not exceed £500

The cumulative effect of these rebates will best be explained by means of an example Suppose a practitioner to earn £450 a year, to own a small property assessed to income-tax Schedule A on £25, to pay £30 in life assurance premiums, and to possess two children under 16 years of age, and a wife who has an income of £20 from dividends His "total income from all sources" will be £495, of which £450 is earned He will be entitled to an abatement of £150, allowance of £40 for the two children, and £30 for the life assurance premiums, leaving £230 professional income on which tax is to be charged This £230 will, if present rates continue, be charged at *the rate* of 1*s* 6*d* (after allowance of the 'earned income" relief of 1*s* proper to an income below £1001) and *he will further* be entitled to the "small incomes" relief *of* 2*d* in the £ on his property and on his wife's dividends He should therefore be charged on £230 at 1*s* 6*d*, less £45 (£25 + £20) at 2*d*, making £16 17*s* 6*d* net in addition to the tax paid on the property and dividends

The Completion of the Return

In completing the form the first *step is to* enter in Section B the amount of the professional profits on the average of the *three years* 1912, 1913, and 1914, *after deducting the professional* expenses, as previously explained, but without deduction for life assurance premiums The words "including receipts from public appointments" should be added if such *receipts* have been included, otherwise the appointments *should* not be referred to on this page In Section B should also be entered any other untaxed income that the practitioner may receive such as bank interest, but not dividends paid "free of tax," an *expression* which means that the company has deducted the tax in computing the dividends If the practitioner desires that his return should not come *before* the local Commissioners and collector he should here apply to be assessed by the Special Commissioners in London, a course frequently adopted by medical men

The statement of total income from all sources to be made in Section D is of the greatest importance, since it is on the

THE LANCET.

LONDON: SATURDAY, MAY 1, 1915.

Nerves and War: The Mental Treatment Bill.

IN the campaigns of the last century, and notably in the Franco-Prussian War of 1870, the strain of battle and the arduous conditions of active service were recognised as prolific sources of nervous and mental disorder. The development of military art since then, characterised as it has been by great and rapid progress in the discovery of increasingly powerful explosives and in their utilisation for destructive ends, has added very materially to the nerve shattering influences of war, while with the larger scale of operations and the employment of huge conscript armies the range of these influences has been enormously multiplied. As a result the problem of dealing with cases of nervous and mental disorder in soldiers on active service has become at the present day a matter of serious difficulty and of considerable practical importance.

The procedure which has been followed hitherto in regard to cases of this sort occurring in the Expeditionary Force is very similar to that adopted in ordinary surgical and medical practice in the field. Specialists of acknowledged standing in the profession are attached to the large hospitals over seas, and are called in to examine and report on all cases of traumatic neurasthenia and the milder psychoses. Under their instructions the patients are sent home to one of two clearing hospitals—viz., the Royal Victoria Hospital, Netley, and the 4th London Territorial Hospital at Denmark Hill, where special neurological sections have been organised, and they are thence transferred according to the exigencies of the individual case either to one of the London hospitals for nervous diseases or to one of the institutions taken over by the military authorities for use as hospitals. The fact that several of these latter institutions were formerly lunatic asylums has given rise in some quarters to a feeling of anxiety lest the soldier patients sent there for treatment are being relegated to the category of the insane and may suffer in after life from the prejudice which the vulgar unfortunately entertain against the victim of mental disease. This feeling has found expression in a memorial to Lord KITCHENER suggesting that arrangements should be made for treating soldiers suffering from nervous shock in specially organised departments in connexion with general hospitals. It is possible if we may judge from the terms of the memorial that some supporters of this view have been influenced by a needless suspicion of the lunacy expert and have quite erroneously supposed that the alienist goes about seeking whom he may certify, but that qualifying consideration should not prevent us from recognising that the feeling voiced in the memorial is in itself a natural and proper feeling, and one, moreover, which we venture to think is shared by the large majority of alienist physicians. For years past alienists have been striving to impress on the public mind the urgent need of bringing the treatment of insanity into closer association with general medicine by the establishment of psychiatric clinics in connexion with the universities and the larger hospitals, and they have confidently maintained that by making proper provision in this way for the early treatment of incipient and undeveloped mental disorder it would be possible to save many patients who under the present system drift into incurable insanity.

A statement of this view was formulated shortly after the outbreak of the war by one of the members of the Board of Control, Dr. C. H. BOND, in his introductory address at the opening of the winter session at the Middlesex Hospital[1], and it is hardly necessary to recall that the Maudsley Hospital, which will perpetuate the name and the generosity of one of the foremost living alienists, was designed by its founder to embody the same ideal. The advocates, therefore, of what may be termed the abortive treatment of the nervous disorders occurring in our soldiers under the strain of war can count on the sympathy and coöperation of the specialists in psychiatry, and this the more certainly because the cases which we are considering are peculiarly amenable to this mode of treatment. It is, in fact, well known that a very large proportion of the psychoses of soldiers on active service are of an eminently recoverable character. Dr. P. M. AWTOKRATOW, who, as the medical officer at the head of the organisation for the care of the insane in the Russian army during the Manchurian campaign, had exceptional opportunities for studying this question, found[2] that most of the cases of epileptic psychosis and neurasthenic insanity—the commonest forms of mental disorder occurring amongst the Russian soldiers—recovered completely under appropriate treatment within three or four weeks. Presumably the same good results may be looked for in the majority of the confusional and neurasthenic cases sent back from the battlefields of Flanders, so that it would be obviously undesirable to apply to such cases the methods of certification and legal restraint that have to be used in dealing with graver and less curable forms of insanity. And as these invalid soldiers are subject to military discipline, the difficulties which unfortunately compel the resort to certification in similar cases occurring in civil life do not arise; in the army patients suffering from these incipient and unconfirmed disorders can be kept in hospital as long as competent medical opinion considers necessary without putting upon

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[1] THE LANCET, Oct. 17th, 1914, p. 965.

[2] Die Geisteskranken im Russischen Heere während des Japanischen Krieges, Allgemeine Zeitschrift für Psychiatrie, 1907.

When the plug is in its holder an electric current is established on inserting the probe into a wound, contact between rod and sheath being effected through the moist surfaces Any disturbance of the flow or interference with the lines of force of the current, such as occurs when a piece of metal is touched by the probe, will be instantly indicated by an audible noise in the telephone The chief points claimed for this probe are its simplicity, efficiency, and small liability to get out of order, and it can be used by one having no knowledge of electricity, as efficiently as by one well acquainted with its uses There is nothing to fix on the head of the operator, nor on the body of the patient The noise in the telephone has not to be listened for, it is quite audible to everyone in the neighbourhood. The probe can be bent about as freely as the ordinary surgical probe and with its connecting wires and plug forms a unit that can be sterilised by boiling as often as required It would be an easy matter to make the electrodes the blades of a pair of forceps, or to add a bell indicator, &c , but while these might add to its interest the possible gain in efficiency would, generally speaking, be more than counterbalanced by the loss in simplicity

These probes will be obtainable from Messrs Allen and Hanburys, Limited, and other surgical instrument makers

DAVID FINDLAY, M D Edin ,
Medical Officer in Charge Electrical Department West End Hospital for Nervous Diseases

Reports and Analytical Records

FROM

THE LANCET LABORATORY

(1) OXYNTIN , AND (2) ENZYMOL

(MESSRS FAIRCHILD BROS AND FOSTER, ALBERT CHAMBERS, 64, HOLBORN VIADUCT, LONDON, E C)

1 Oxyntin is a light cream coloured powder containing albumin combined with hydrochloric acid It is miscible with water, the solution having a slightly acid taste We found that the amount of acid present was just under 5 per cent Oxyntin usefully replaces dilute hydrochloric acid in the treatment of gastric disorders It is convenient for administration, and provides in that way a standard amount of hydrochloric acid 2 Enzymol is a clear solution which shows great proteolytic activity analogous to that of the gastric juice According to our examination, it acts rapidly on blood fibrin It is specially prepared for external application as a solvent of albuminous matter, as, for example, false membrane in diseased and sloughing tissues Its active proteolytic properties allow septic matter to be easily removed by irrigation.

DIFFUSOL

(W MARTINDALE, 10, NEW CAVENDISH STREET, LONDON, W)

Diffusol is an alkaline, soapy solution of specially purified ortho , meta and para cresol For surgical purposes the selection of a practically water white and nearly odourless cresol is important The diffusible and penetrating properties of this preparation were referred to in the recent Hunterian oration We confirmed the statement that diffusol contains 50 per cent of cresol by decomposing it with calcium chloride and caustic soda On filtration the cresols are obtained in alkaline solution from which they are readily separated by the addition of an acid

MALT EXTRACT WITH PARAFFIN

(A. WANDER, LIMITED, 43, COWCROSS-STREET, LONDON, E C)

In spite of this preparation presenting the appearance of a crystalline compound it contains, according to our analysis, no less than 50 per cent by weight of petroleum, which confirms the statement made by the makers With water it forms a perfectly uniform emulsion resembling milk The fluid so obtained readily liquefies starch jelly, ultimately converting it into dextrin and sugar The taste is pleasant, and the preparation affords an agreeable and effective way of administering petroleum for its laxative properties The digestive action of the diastase present has therapeutic advantages also

ANTIFORMIN

(MESSRS SUTTON AND PHILLIPS, THE FACTORY, STOWMARKET)

Antiformin possesses both powerful detergent and antiseptic properties It is a carefully balanced combination of hypochlorite of soda with sodium hydrate We found present 4 12 per cent of available chlorine and 7 6 per cent of alkali Its dissolving action on various organic matters, dirt and grease is of great assistance in the work of disinfection, while chlorine, of course, is a powerful germicide Besides of use in the refinements of antiseptic practice as for sterilising surgical instruments and application in diluted form in skin diseases, it is useful for household cleansing Recent studies have shown how very powerful the hypochlorites are as germicides in the sterilisation of water, so that very dilute solutions are effective These considerations suggest application in surgical and medical practice more than has hitherto been the case Antiformin has already been used with advantage in the bacteriological diagnosis of tuberculosis

CREAMWORT

(THE GLENN COMPANY, GARWICK, ISLE OF MAN)

This is a preparation of milk soured by a special lactic acid ferment Lactic acid bacillus therapy has been on its trial for some time, and no doubt in many cases gives good results, but it is important that the sour milk should contain no adventitious matters or organisms Creamwort reminds us of the curdled milk preparation called yaghourt which is consumed so largely in Turkey and in Bulgaria. It has a strong but pleasant acid flavour Our analysis gave the following results Moisture, 89 53 per cent , mineral matter, 0 76 per cent , fat, 3 00 per cent , milk sugar, 2 30 per cent , lactic acid, 1 97 per cent , and casein, 2 44 per cent It thus shows the composition of sour milk It possesses both nutritive and therapeutic properties, the lactic acid development being useful in intestinal auto intoxication

MINERAL WATERS

(RICHARD DAVIS, 20, MADDOX STREET, REGENT STREET, W)

It is reported by this well known manufacturer of mineral waters that the demand for these beverages has grown considerably since the war, which has led him to pay still further attention to their preparation He has submitted to us samples of dry ginger ale, lemonade, tonic water, and ginger beer We have examined these and find they are well made, and in no case was any trace of objectionable preservatives or metallic contamination found They are quite wholesome beverages and we are glad to note that the amount of sugar present is not excessive The ginger ale may well be described as dry, and it has a quite delicate flavour It was free from sulphurous acid The stone ginger beer is also a well made beverage. Being fermented it contained a small amount of alcohol equal to 0 66 per cent. by volume, which is well below the limit laid down by the excise military hospitals has the appearance of military organisation, but, as a matter of fact, the routine pursued must be very much that which, tested by experience and hallowed by custom, is pursued in big civilian hospitals Now in civilian hospitals, and still more in general practice, which follows the lessons learned in the hospitals, work tends to conform to a pattern. Its variety is great, but the points between which variation occurs are at small distance from each other There are answers which it is recognised should be given to most large questions of diagnosis or treatment which arise, and every step can be taken with authority, either because the men who move are in a position to know, or because the course to be pursued has been pursued previously by such tried men How has this position been arrived at? We all know that it is the outcome of years of intelligent routine in a sphere whose limits are bounded by the circumstances and possibilities of civil life, a sphere which has been enlarged as our recognition of the facts of pathology has widened, and which has contracted as medical science has been able to combat and remove certain diseases from among us, or to alter the frequency of their occurrence In the civil hospitals by careful study of the conditions within their sphere a line of treatment has been arrived at Not a hard and fast line, but a line of common consent, admitting of much fluctuation and ready to alter its situation upon good cause being shown But the mark of authority is there, and can be constantly maintained by the watching of cases remaining long under the eyes of intelligent observers, and by the collation of opinions derived from others, where the medical press has played, and plays, a great part In our military hospitals the whole situation is entirely different The injuries which are found most commonly in their wards are for the most part extremely rare in civil practice The circumstances in which these injuries have been received are no less novel, for the size of the armies engaged in itself introduces problems, while the advances made in the manufacture of weapons of destruction have endowed projectile wounds with features which have never come within the experience of those employed in treating them The medical men who are serving in the military hospitals can meet the calls of civilian practice of all sorts, but they are, in their present posts, without the assistance of strong precedents, and without much opportunity of benefiting by the opinions of their colleagues In the new conditions there are no recorded experiences of value, and few of the cases remain for a sufficiently long time under treatment in one hospital for the medical officer to know if his measures have taken good effect The service in the military hospitals is weakened by a want of central direction which is all the more needed that peripheral efforts are individual, and have never obtained the force of collective actions

Our sick and wounded are receiving extraordinarily good attention in the military hospitals, and it is far from our intention to be alarming One injury does to a great extent imitate another, and some of the best informed exponents of our art are with the Expeditionary Forces Again, adaptability to the new work has already distinguished a great many of the civilian doctors engaged, while the absence of disease has been notable and the percentage of recovery from serious injury quite gratifying But none the less we think that SIR ALMROTH WRIGHT has made out a case for the introduction of central guidance in questions of treatment, premising, of course, that any authority set up should be entirely subordinated to the Director General of the Army Medical Service The principle has to some extent been recognised by that service, for we published last week a Memorandum on the treatment of bacterial infections of projectile wounds by SIR ALMROTH WRIGHT and three other distinguished civilians, serving in a consultative medical capacity with the Expeditionary Forces, in which these leading surgeons and pathologists give a synopsis of their experience in connexion with the wounds in this war[1] This synopsis they have supplemented by setting out the chief data furnished by a bacteriological study of the wounds, and they have laid down certain broad maxims of treatment for the instruction of those who have not seen the conditions in the present war, or who have seen only an early or a late phase in the history of the wounds Moreover, it is promised that this Memorandum will be followed up, as soon as certain researches are completed, by similar information on the employment of antiseptics and vaccines respectively It is certain that all who have the charge of the sick and wounded in the war must welcome such publications warmly, the question only remaining, whether a step further should not be taken and a regular authority constituted to promote the utilisation of such first hand knowledge, and to facilitate the adoption, as general measures of treatment, of the lessons so conveyed. We see no inconvenience in the proposal from the point of view that scientific freedom would be interfered with The dictator in medicine is impossible, but organisation is not tyranny, and leadership based on first-hand experience is not tyranny either It must be taken for granted that no new machinery introduced would alter in the least the paramount position of the Director General of the Army Medical Service, and it could only work with the approval of the consulting medical officers, who have been chosen as fully representative of British medical science But we feel that SIR ALMROTH WRIGHT has made out a good case for the institution of an Advisory Committee charged with the duty of synopsising the clinical them the stigma of legal insanity. And here we may remark in passing that a modification of the law, giving to the physician in charge a similar power of limited control, is a necessary preliminary to the establishment of psychiatric clinics for the treatment of incipient mental and nervous troubles in civilian patients. The critics of our present lunacy system would do great service if they would devote some part of their energies to promoting this reform.

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[1] Memorandum on the Treatment of the Bacterial Infections of Projectile Wounds by Colonels F F Burghard Sir W B Leishman F R.S Sir B Moynihan and Sir A. E Wright, F R.S

In the meantime a Bill, the Mental Treatment Bill, has been introduced into the House of Commons by Mr CECIL HARMSWORTH, the Under Secretary for Home Affairs, the purport, briefly stated, being "to facilitate the early treatment of mental disorder of recent origin arising from wounds, shock, and other causes." Its text has now been issued, and a Memorandum attached to it gives a brief summary of the law and the changes which it is proposed to effect in it. The object of the Bill is to secure the proper treatment of such cases by making the law less rigid than at present. It removes the necessity for formal certification in the case of persons suffering from mental breakdown of recent origin and arising from wounds, shock, &c. In this respect it assimilates the English law to the law which has been in force in Scotland for 50 years and which has worked satisfactorily [Lunacy (Scotland) Act, 1866, section 13]. This Bill will enable a man who, in the service of his country, has suffered a nervous breakdown, to accept the treatment without being certified, but only for a period not exceeding six months and under conditions which should provide security against misuse. The measure will be criticised as annulling the protection of the Lunacy Act by providing for detention in cases that are not properly certifiable, and as introducing unnecessary legislation, because there is nothing in the Lunacy Act which precludes medical care being bestowed upon such cases in homes or institutions where, moreover, invalid soldiers can be required to remain by military authority, but the medical advisers of the War Office are, of course, alive, we must believe, to the special conditions of the problem, and we feel that they should be trusted to ensure that soldiers suffering from nervous shock will be treated by the best possible methods and with the help of all the resources of medical science. We do not think that there is ground for fearing that resort will be had without real and urgent necessity to any procedure likely to be prejudicial to the patient's prospects in after life. It is right, however, that public attention should be drawn to this side of the situation, the interest awakened thereby should do much to promote a more sympathetic attitude towards the general problem of the treatment of the insane, and should materially assist the efforts of those alienist physicians who are striving to break down the artificial and mischievous barriers which, in popular belief, and to a regrettable extent even in medical practice, separate insanity from other conditions of disease.

The Treatment of the Sick and Wounded in the War

SIR ALMROTH WRIGHT'S address to the Royal Society of Medicine closes with an outspoken statement on the organisation of medical service at the war, in which he makes the distinct point that in the existing circumstances medical opinion at large should carry great weight. He points out that military medical activities fall under three heads—treatment in the field, sanitation in the field, and treatment in military hospitals, where the differentiation between base hospitals and clearing hospitals cannot in this enormous struggle be maintained with any rigidity. The energies and organisation of the Royal Army Medical Corps are all employed, and at full stretch, in coping with the exigencies arising under the first two heads of the classification—and how well, with what courage, resourcefulness, and adaptability they have met those exigencies the world bears witness—leaving the treatment of the sick and wounded in the large hospitals mainly in the hands of civilian physicians and surgeons who have met the call upon them with enthusiasm. This state of affairs must continue, and the question which Sir ALMROTH WRIGHT puts is whether the medical service of the hospitals as a whole would not gain by official pronouncements in respect of procedure — whether the patients would not benefit by treatment according to some accepted principles, accepted, of course, after anxious investigation by recognised authorities, and whether the physicians and surgeons concerned would not welcome general guidance, seeing that their individual experiences must vary so much.

The classification of medical work at the war into the three headings of sanitation, treatment in the field, and treatment in hospitals, is perfectly sound, and it is a fact that the third section of labour, the treatment of the sick and wounded in the military hospitals, has largely devolved upon civilian practitioners, who are justly proud of their responsibilities. That being so, it is the duty of us all to consider whether the methods under which this work is being done are those that are calculated to extract from the members of the medical profession engaged the fullest value to their country in her need. And an expression of opinion on that subject from the medical profession at large will not be considered by the Army Medical Service as intrusive, for that service has been, from the moment that the scope of the task before the country could be envisaged, ready in every way to rely upon the best coöperation of national medicine. It is not a question of civilians criticising army orders, rather it is a question of the medical profession deliberating whether their share in maintaining an army with which to fight the Germans would not be more fruitful if those of them now serving as commissioned officers were put in receipt of more orders. Of course, all the treatment of the wounded in the

PELVIC ABSCESS AFTER THE USE OF THE FOWLER POSITION

THE Fowler position has proved a valuable advance in the treatment of cases of suppurative peritonitis In the *New York Medical Journal* of Feb 13th Dr H B Delatour has called attention to a complication which may follow its adoption after operations for appendicitis While in the majority of cases the septic material which gravitates into the pelvis drains away, in a few cases pelvic abscess results His attention was first called to this complication by the following case A young man underwent operation for acute appendicitis The abdomen contained a large quantity of purulent serum. The appendix was perforated and gangrenous about the middle After its removal as much of the fluid as was in the wound was sponged away and a cigarette drain was introduced into the pelvis The wound was partially closed and the patient placed in the Fowler position He was recovering satisfactorily when, at the end of a week, he began to complain of pain in the left iliac region and the temperature rose Two days later an incision was made on the left side, and an abscess in the left iliac fossa was opened and drained The temperature fell, but not to normal He then suffered from diarrhœa and pain on defæcation, which he attributed to "piles" When seen by Dr Delatour he had an almost continuous desire to defæcate, but passed only scanty motions containing much mucus Examination showed no hæmorrhoids or evidence of ischio rectal abscess Introduction of the finger was painful, and just beyond the prostate a mass was discovered bulging into the rectum This felt so like a distended bladder that this organ was emptied before proceeding further The mass was still present and gave a sense of fluctuation Under ether the sphincter was dilated and a speculum introduced The bulging anterior wall of the rectum was cleansed with sponges, and a longitudinal incision led to the escape of 3 oz of pus A drainage tube was introduced and brought out through the anus On the fourth day it was removed, as all drainage had ceased After the evacuation of the pus the temperature became normal and the general condition began to improve Two weeks later recovery was complete This complication does not appear to be very rare, for since the occurrence of this case three years ago Dr Delatour has observed six similar cases They were all treated in the same way except one In this, as the abscess was small and far from the anus, aspiration was tried Two ounces of pus were withdrawn and recovery followed Dr Delatour concludes that if after operation for appendicitis the wound looks healthy and careful examination shows no undrained pockets and yet there is pyrexia a rectal examination should be made, especially if there is frequent defæcation with tenesmus and discharge of mucus If an abscess is present he recommends drainage by the rectum There appears to be little danger of infection from this source To wait for the abscess to be reached easily from the front would be to lose valuable time, and the incision through the abdominal wall would leave a weak point for the development of a hernia, as drainage must be continued for some time While aspiration may prove satisfactory in some cases Dr Delatour recommends incision whenever possible Incidentally, he remarks that a large percentage of cases reported as general suppurative peritonitis are not so In many cases of acute appendicitis he has found the abdomen full of serum clouded with lymph For some reason an unusual amount of serum has been exuded without changes in the peritoneum which could be recognised as inflammatory In such cases it has been his custom for years if the appendix, though gangrenous, is not perforated to close the abdomen without irrigation or drainage, and the results have justified the procedure The success of many cases of this kind appears to have been credited to postural treatment

MEASURES FOR DISINFECTION

THE Local Government Board for Scotland has recently issued a circular to public health authorities requesting information as to the measures adopted in the district of the local authority for the disinfection of clothing and dwellings With the circular a form of inquiry is enclosed to be filled up by the medical officer of health or the sanitary inspector Section A in this form relates to wearing apparel, bedclothes, and bedding infected by persons suffering from the ordinary infectious diseases, as typhoid fever, diphtheria, scarlet fever, measles, whooping cough, and chicken pox The questions in this section refer to whether it is the practice to remove to one or more central stations any or all of such articles, and if so whether the disinfection method is by steam, gaseous or liquid disinfectants In the case of the disinfection being carried out at home information is asked as to the disinfectant employed and the duration of the exposure of the infected articles to the disinfectant, together with the measures adopted for the disinfection of the dwelling apart from clothing Section B refers to wearing apparel, bed clothes, and so forth infected by patients suffering from tuberculosis The questions asked as to procedure are much the same as in Section A, but any difference in regard to treatment of pulmonary and non pulmonary tuberculosis is requested to be notified The issue of this circular would appear to mean that there is a desire to place methods of disinfection on one effective level A system of uniformity in this matter is certainly needed, and it is to be hoped that the information asked for will be supplied in order that standard and effective methods may be universalised

THE DEFICIT IN THE INSURANCE DRUG FUNDS

OWING to a shortage in the amount allotted for the payment for dispensing and medicines for insured persons panel chemists in many districts have suffered both in 1913 and 1914, but especially in the latter year, the uncomfortable experience of being confronted with the prospect of having their bills discounted more or less heavily But the situation has now been considerably relieved by a statement made by Mr E S Montagu, chairman of the National Insurance Joint Committee, to a deputation from the Pharmaceutical Society which waited upon him with regard to this and related topics He said he had come to the conclusion that a case had been made out for some relief to be given to chemists whose bills had suffered a heavy discount, and he therefore proposed to make available, for the purpose of *ex gratia* payments on this account, the special drug fund, for which a sum of £60,000 had been granted by Parliament in 1913 and 1914 These payments, he said, must perience of the war, being themselves at the seat of war and prepared to take full responsibility for their recommendations. Such a body would instruct and reinforce those responsible for the treatment of the sick and wounded in something the way that past teaching, opportunity for consultation, and familiarity with the conditions support the practitioner in civilian practice. Moreover, such a committee would lead directly to international coöperation. It would enable the good work done by the British medical profession to be more readily available for our Allies, and would give a basis upon which the British procedure could be compared with and modified in accordance with the scientific procedure of our Allies.

Annotations.

"Ne quid nimis."

MEDICAL CERTIFICATES AND THE EXPLOITATION OF THE MEDICAL PROFESSION

Sir John Moore read a paper recently before the Section of State Medicine of the Royal Academy of Medicine in Ireland, in which he drew attention to what he regarded as a serious professional grievance. He referred to the fact that the demand made upon the time, patience, and responsibility of registered medical practitioners in respect of medical certification for State or personal purposes was always made with the offer of a nominal fee, or, as in the case of the medical certificate of the cause of death, with no fee at all. Sir John Moore gave as an extreme instance of the situation the ordinary certificate of death which all medical men are compelled to furnish under penalty. This certificate, he pointed out, is solely for the use of the registrar, given in order that the Registrar General may be able to compile reliable statistics. For giving this certificate, which is primarily for the use of the Government, medical men are paid no fee, and, we may add, in agreement with Sir John Moore's view, that the circumstances in which such certificates can be given are highly unsatisfactory. Sir John Moore then referred to the arrangements for medical certificates under the Infectious Diseases Notification Act, the Public Health Amendment Act, the Tuberculosis Prevention (Ireland) Act, and the National Health Insurance Act, and criticised with particularity the various circumstances. Under the Public Health Amendment Act the medical officer of health is required to give certificates free of charge to school children who have recently recovered from infectious fevers; under the Tuberculosis Prevention (Ireland) Act a medical man must notify cases under penalty, and for doing this he will get a fee of 2s. 6d. if the case has not already been notified by someone else; and under the National Health Insurance Scheme certification is allowed to be quite unsatisfactory, as may be gathered from the Report of the Departmental Committee on Sickness Benefit Claims under the National Insurance, July 24th, 1914. The committee then expressed the opinion "that in view of the difficulties with regard to certification, it is necessary that there should be established as soon as possible a system of medical referees." The Chancellor of the Exchequer did not provide for remuneration out of State funds for the medical profession who would be called upon to certify under the Bill; he made provision for the Approved Societies and for the insured, but the medical profession did not enter into his calculations. Sir John Moore claimed that the State can be seen to place but a small, an insignificant, financial value on medical certificates—that, in fact, it "exploits" the medical profession on the matter of certification. We have often in THE LANCET called attention to the demands made by the general public on the medical profession for certificates of good or bad health for insufficient fees or with no fee at all, and we find ourselves wholly on Sir John Moore's side. The public does not understand the justice of the medical claim for adequate remuneration for certificates; a false estimate has been established in the mind of the public as to the value of the medical certificate, and we fear that it will be a long time before the position of scientific medicine in this connexion will be appreciated.

MINISTRIES OF PUBLIC HEALTH

CONGRESS after congress dealing with public health questions has met in England and on the continent. During the course of such proceedings convincing arguments have been adduced and emphatic resolutions passed advocating the institution of a Ministry of Public Health. Nevertheless, nothing of the sort has been done in any of the countries concerned. Will the war now bring about what all these assemblies, some of them of great importance, have failed to accomplish? There are rumours to that effect. With regard to France, 20 years ago Dr. Pierre Bonnier studied and discussed a scheme for a Ministry of Public Health with his party colleagues, M. Millerand and M. Jules Guesde. (It is significant that to-day the former is Minister of War and the latter a Member of the French Government.) M. Vaillant, the *depute* who, when an exile here qualified as a Member of the Royal College of Surgeons of England, drew up a scheme more recently which was submitted to the Chamber of Deputies for the creation of a Ministry of Public Health. Nothing was done then, but the signs are now propitious, and if the reform comes it may come all in a moment. At congresses innumerable, and on many public occasions, more was said for years against absinthe than has ever been said in favour of a Ministry of Public Health. To-day the sale of absinthe has been abolished with a stroke of the pen. Russia, which abolished vodka with similar ease and expedition, is also stated to be contemplating the possibility of calling into existence a Ministry of Public Health, and from Roumania we hear of the same intention being manifested. The swift compliance with the demand for a Public Health Ministry in France would have its origin in the circumstances of the war. The mobilisation of the ambulance services in France was not at first as satisfactory as might be desired. Centralisation with expert knowledge would have done better. And if to-day we hear that proposals have once more been brought forward in France to instal a new Minister of Public Health it is in order to have someone who will be in authority over civil State medicine and give official help to military medicine, Red Cross work, and national and international public health services. Thus it may happen that the stress due to the war will bring into existence in France, and with but little difficulty or resistance, what has been talked about in vain for so many years. If a Ministry of Public Health is instituted in France it may not be long before this country follows suit.

of the fact that when the medical man was sent for Alfred Day was ill beyond hope of recovery, but, at the same time, the mother was at liberty to summon another medical man Going below the surface, however, in order to inquire why Dr Tod Thyne did not attend, the coroner was informed by him that he had treated the child before, that he knew that it was in very bad health, but did not know that there was immediate danger, and that when he was first summoned he had not had his clothes off for 42 hours To quote his own expression in explaining to the coroner, he was "done up" At this time, moreover, a Sunday evening, his surgery was full of patients waiting to see him and he promised to visit the case early next day In the night he was, however, called to a confinement which kept him up till 7 A.M., and on Monday morning when he was once more sent for, his surgery was again full The coroner made various suggestions he thought that the medical man might engage an assistant, he said that he might have left his patients waiting in his surgery in order to relieve the mother's anxiety, adding that the patients in the surgery "could not have been more ill than a dying child," a statement which presumed knowledge on Dr Tod Thyne's part that the child was, in fact, dying Dr Oddie concluded by saying "the mother felt very cross when she could not get the doctor who knew the child, and I am inclined to agree with her" This appears to us to be unjust and uncalled for criticism, and, moreover, to be concerned with a subject outside the scope of the coroner's inquiry All the circumstances of a medical man's professional practice, his own interest no less than the calls of humanity demand that he should do his utmost to attend all the patients in need of his aid whenever it is possible to do so, and that he should neglect none The conditions under which illness occurs do not, however, allow of anything but a general organisation of the work to be got through, such as, for example, a practice of being at certain times of the day in his surgery and at certain other times out upon his rounds It is not possible for any man to be in two places at once, but the alternative was suggested by Dr Oddie that Dr Tod Thyne should engage an assistant Whether a medical man will take an assistant or not is entirely his own affair, and at the present time assistants are difficult, or impossible, to obtain Besides, even with an assistant, a rush of work or the clashing of two serious cases which demand simultaneous attention may lead to complaints on the part of someone We think Dr Oddie does not recognise the difficulties of general practice, and possibly he is not aware of the practical impossibility of obtaining an assistant

DENTAL CARIES

Two papers on dental caries of more than passing interest have recently appeared, the one by Dr H. P Pickerill[1] and the other by Dr H. Ewan Waller[2] Dr Pickerill's paper is written in the form of a report to the Sixth International Dental Congress and, although the greater part summarises well known facts in connexion with the disease, there are sections recounting valuable researches he has undertaken He is particularly insistent on the disastrous effects of alkalies, and states that they have a depressant action on salivary secretion. The continuous dosage of alkalies he maintains produces alimentary stasis and therefore toxæmia, the latter in its turn producing secondary (nervous) salivary stasis by the direct action of endotoxins, and in this way oral stasis is set up and predisposition to caries brought about With regard to the question of foodstuffs he gives many facts to show that food prepared in a soft state plays but little part in the incidence of caries, but he thinks that an active factor is the fine subdivision of the food stuffs The resistance of the tooth tissue he regards as an important thing, and shows that there is a marked difference in the enamel of the teeth of Maoris, who are comparatively immune to caries and of Europeans, who are liable to the disease On the question of heredity as an etiological factor in dental caries he refers to the well-known experiments of Brown Sequard on the division of nerve tracts in guinea-pigs The guinea-pigs, Brown Sequard claimed, produced offspring with lesions similar to those produced in the parents by section of the nerves Dr Pickerill remarks "If these views are correct the bearing on the occurrence of dental caries is this that at increasingly early ages, long before marriage, adolescents are, either by disease or by operations suffering section or destruction of the nerves supplying trophic function to the teeth. If, then, Brown Sequard was right, we must expect the offspring to reproduce these organs (the teeth) in a degenerate or diminished condition—possibly in a condition of lowered resistance to the attacks of caries. We presume that Dr Pickerill feels that the question of heredity remains quite obscure Dr Waller's paper is devoted to the question of the influence of insufficiency of the thyroid gland upon dental caries. He considers that it is unwarrantable to assume that the disease is merely a question of diet, and in his opinion the presence or absence of caries is due to the alkalinity of the saliva, and this is intimately associated with the effect of the thyroid gland on calcium metabolism. The increased thyroid activity, he considers, either causes increased elimination of calcium or perhaps by interaction with other ductless glands prevents the proper assimilation of calcium, and so, by leading to defective alkalinity of the saliva, permits the occurrence of dental caries The increased thyroid activity he attributes to brain work Both these papers are interesting but inconclusive

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[1] British Dental Journal, April 1st and 15th.

[2] Proceedings of the Royal Society of Medicine Odontological Section vol. viii No. 2.

THE King has granted Dr George Ernest Morrison, Political Adviser to the President of the Republic of China, authority to wear the Insignia of the First Class of the Order of the Excellent Crop, which decoration has been conferred upon him by the President in recognition of valuable services

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BRITISH NEOSALVARSAN —Messrs Burroughs Wellcome and Co have obtained a licence from the Board of Trade for the manufacture of neosalvasan After passing biological tests under arrangements approved by the Board of Trade, this product is now being issued under the name of "Neokharsivan" brand neosalvarsan For "Neokharsivan" there is claimed the same advantages over salvarsan that are claimed for neosalvarsan of German manufacture and it is employed in the same manner and dosage. There are six strengths 0 15 grm., 0 3 grm. 0 45 grm. 0 6 grm., 0 75 grm., and 0 9 grm., each dose being issued in a hermetically sealed tube The supplies are for the moment limited, but the manufacturers state that they will soon be able to cope with the demand not be regarded as a precedent, and were intended solely to meet the abnormal conditions which had arisen in the first two years of the operation of medical benefit This sum will be far short of sufficient to enable the whole of the deficits to be made up, but those panel chemists whose bills have been heavily discounted are nevertheless to be congratulated on the fact that through the *instrumentality of the council* of the Pharmaceutical Society they will receive a substantial proportion of money which there seemed reason to believe was irrecoverable It is to be hoped that this unbusiness like system of discounting bills will be discontinued, and that some means will be devised of putting the pharmaceutical finances of the Insurance Act on some equitable basis which conforms with established notions of business transactions Mr Montagu also outlined an arrangement by the operation of which panel chemists will not be kept waiting so long for the payment of their bills

"LEARNING FROM OUR ALLIES '

IN another column Dr Dundas Grant draws attention to the collection of special classes of cases in certain military hospitals of France These hospitals constitute centres to which cases from far separated regions are brought together, and we agree with his suggestion that those called upon to deal with these special forms of injury may derive a considerable amount of information by visiting such centres Evidently the plastic surgery of the face is richly illustrated in such "services" as those of Dr Morestin at the Hospital of the Val de Grâce in Paris and of Dr Moure and Dr Dubreuilh at Talence, near Bordeaux. The *stomatological department* at Bordeaux appeared to Dr Dundas Grant to afford great advantages for the study of the methods of repairing damage to the masticatory apparatus and impressed him with the immense importance of the dental surgeon's chair in the treatment of injuries to the jaws occurring in warfare We hope that a regular system of interchange of experiences between the military medical services of the Allies will soon be instituted, there is every indication that both the present needs of the wounded and the progress of medicine in the future would be helped by such a pooling of the results of actual work.

DIAPHRAGMATIC HERNIA OF THE STOMACH AND OMENTUM ON THE RIGHT SIDE

A CASE which is probably unique has been reported by Dr Kakels and Dr Basch in the *New York Medical Journal* of March 13th It was found at the operation which was performed for the relief of the symptoms that the whole of the stomach except its pyloric end, together with the whole of the great omentum, was in the thoracic cavity on the right side, outside of and behind the pericardium The hernial protrusion, which was a true hernia, the wall of the sac consisting of peritoneum and pleura, had passed upwards through an opening high up in the diaphragm on the left side and behind the liver near the left crus between the pars vertebralis and pars costalis The entire hand could be introduced into the opening and the sac itself extended as high up as the second rib The stomach itself was enormously enlarged, being three times its natural size and near its pyloric end there was a distinct constriction The patient succumbed soon after the operation, at which it was found quite impossible to close the hernial opening The patient was a man, aged 54, and nothing in the history suggested the presence of a diaphragmatic hernia. He had not been subject to unusual strain, and up to two years ago had had good health Then he had an attack of sudden and gradually increasing pain across the upper abdomen with a feeling of abdominal distension and a condition of mild shock The further course of the case resembled that of chronic gastric or duodenal ulcer, whilst in the later stages the loss of appetite, weight, and strength suggested malignant disease There occurred also periodic vomiting of large amounts of gastric secretion Test meals in this case showed the possibility of an erroneous conclusion being arrived at as to the gastric motility, for in this case only 30 c c total contents were removed, suggesting abnormally rapid motility and emptying, but really due to the withdrawal of contents from only one sac of the hour glass stomach The X rays were of assistance, and the hour glass condition was recognised, and the radiologist also suggested the possibility of a diaphragmatic hernia Some of the plates are reproduced in this paper, and in them may be seen the pushing down of the liver a few minutes after the bismuth meal, and the "oblique white line" of the stomach can be seen on the right side extending upwards and inwards from the eighth rib to the pericardium

THE CRITICISMS OF CORONERS

THERE is a tendency constantly to be observed among those occupying judicial positions to criticise members of the medical profession severely who exercise their undoubted discretion as to the acceptance or refusal of patients for treatment in accordance with the circumstances in which such treatment is asked for This is particularly observable in the case of coroners, who not infrequently hear a story of how a medical practitioner was asked to come at once to the deceased person on whom an inquest is being held, but who declined to do so If the medical man received the call, and was not physically prevented from answering it, there is a tendency to consider him *ipso facto* convicted of brutality A refusal to attend a patient who afterwards dies causes grief and resentment among the bereaved relatives, and it is the duty of a coroner to satisfy himself that there is no evidence of neglect to lay before the jury in fixing responsibility for the death in question Beyond this, however, his duty cannot lie, except that he should be careful to protect a professional man against groundless attacks by excited and naturally prejudiced witnesses There is no excuse for a coroner who, in the circumstances indicated, lends an ear to complaints which he should know are unjustifiable, he should not give them even a qualified support But such would appear to have been the line taken by Dr S I Oddie at Wandsworth recently when holding an inquest on the body of a child named Alfred Day, who died from pneumonia, and whom Dr J Tod Thyne admittedly was asked more than once to attend during the last 24 hours of life without complying with the request to do so On the face of this story there may have been a case of hardship suffered by the mother of the child, in spite the part of the authorities, fellow surgeons, and money providers They will require much room, much mechanical assistance, and much material, including metal both precious and other

The enormous number of French in the field has of course, provided an amount of material such as we—perhaps happily—are unable to command, and *the agmination of cases of special character in* "*centres*" allows of a concentrated study of their nature and requirements such as we can scarcely obtain at home I cannot help thinking that a visit to one or more of the "centres" in France in a somewhat less casual way than my recent one was made, would be of interest and possibly of profit to those who have to deal with the wounded man for decoration as well as repair

Cavendish-square W

IRELAND

(FROM OUR OWN CORRESPONDENTS)

The Water supply of Londonderry

IT is satisfactory to be able to report that Londonderry is at last waking up to the importance of obtaining a really adequate water supply At a meeting of the corporation, held on April 20th, the city surveyor submitted a report, in which he recommended the adoption of a scheme for bringing water from Banagher Glen, a place that is the junction of three rivers, which here unite to form the Owenrigh, a tributary of the River Roe Of the 6000 acres proposed to be utilised, there are only 174 acres of arable and grass land, and of this only 100 acres are under cultivation, the remaining 5826 acres being all mountain upland The quality of the water and the geological conditions have been reported as most satisfactory, and the quantity of the water would be quadruple that of the present supply The elevation is sufficient to send this water into the present reservoirs, and it is estimated that the scheme (including filtration and an aqueduct across the river Foyle) would cost about £209,000 It has been arranged that the corporation of Londonderry in a body shall inspect the site

The Alcohol Question

Some of the Belfast papers have published references to an interesting article by the late Dr Thomas Andrews, F R.S —the distinguished chemist who did such original work in the liquefaction of gases, and who for many years was Vice President of Queen s College, Belfast The paper is called Suggestions for Checking the Hurtful Use of Alcoholic Beverages by the Working Classes, and was contributed to the annual meeting of the Social Science Association, which met in Belfast in 1857 In this communication Dr Andrews recommended that no house should be licensed as a public house for the sale of alcoholic beverages unless it be provided with ample appliances for cooking and serving food that the licence should be withdrawn if it be found that these appliances are not made use of and that the public house is devoted solely to the sale of stimulants and that no licensed publican should be allowed to sell, or keep in store, any liquor containing more than 17 per cent of alcohol

The King Edward Memorial in Belfast

The Executive Committee decided unanimously at a meeting on April 23rd, to request the Lord Mayor of Belfast, who presided, to invite the Lord Lieutenant of Ireland to open the King Edward memorial buildings at the Royal Victoria Hospital, Belfast, during his coming visit next month Owing to the war the special laboratories (X ray, vaccine-therapy, and bio chemical) are not yet fully equipped, and it was agreed to defer their inauguration until a future date

April 26th

PARIS

(FROM OUR OWN CORRESPONDENT)

Rice Flour in Bread Making

WITH a view to augmenting the national supply of breadstuffs, Dr Maurel has brought to the notice of the Académie de Médecine the use of a mixture of 20 per cent of rice flour with 80 per cent of wheat flour The mixture is free from hygienic objections and gives a bread presenting nutritive qualities equivalent to those of all-wheat flour The bread thus prepared is of good appearance and taste and it is rather less in price Another important advantage lies in the fact that France would thus find in the supplies of rice from Cochin China all that is necessary to balance any future deficiency in the wheat supply It should be further noted that scientific methods make it possible easily to determine the proportion of rice flour in the mixture, thus establishing a check on fraud The country would find a great economic gain in adopting this use of rice, for a million tons of rice flour at 27 francs the metric quintal would cost France only 270 millions of francs, whilst a million tons of wheat flour would cost 420 millions All that would be necessary would be that the Government should authorise the mixture, so that it would not be penalised as fraudulent

Rapid Cicatrisation of Atonic Wounds by Biokinetic Measures and Intermittent Dressings

Wounds occurring in war, if without bone lesions, ordinarily heal very quickly under established methods of treatment, such as dressings of iodine, oxygenated or boiled water, or dry gauze, each method having its special indications and advantages There are, however, certain kinds of wounds which resist all these methods of treatment M. François Debat recommends that in such cases every antiseptic of whatever kind should be dispensed with At first a soft dressing should be applied of fine gauze slightly moistened with saline solution and covered with a layer of cotton wool The wound, he says, should be exposed daily to the air for a period of exposure progressively increasing in proportion to the decrease of any oozing On the first day it may be exposed for two hours, the duration ordinarily increasing by an hour a day When there is no longer any oozing the saline solution may be replaced by the application of a thick paste of zinc oxide or "innotyol" Every hour the muscles underlying the wound should be exercised for five minutes, the limb being raised. Meanwhile the patient should keep his bed if the lesion is in the lower extremities if in the arm he should wear it in a sling Daily massage is also advised This very simple method is said to bring about prompt cicatrisation of some obstinate wounds

April 2[illegible]th.

PRESENTATION TO LIEUTENANT-COLONEL E J. JEROME (T F)—Lieutenant Colonel Jerome was recently presented with a massive silver inscribed rose bowl as a mark of esteem on the occasion of his retiring from the 5th Devon and Cornwall Light Infantry (T F)

FACIAL PLASTIC SURGERY, LARYNGOLOGY, AND STOMATOLOGY, IN FRENCH MILITARY HOSPITALS

Impressions de Voyage

BY J DUNDAS GRANT, M A, M D EDIN, F R C S ENG,

AURIST AND LARYNGOLOGIST TO KING GEORGE HOSPITAL, LORD KNUTSFORD'S SPECIAL HOSPITAL FOR OFFICERS ETC LATE MAJOR R.A.M C , POST-OFFICE RIFLES VOLUNTEERS

HAVING recently had occasion to go to Paris and Bordeaux I was afforded the opportunity, by the courtesy of some of my medical friends, of visiting certain of the military hospitals I wished mainly to acquaint myself with the results of wounds and other influences of warfare on the throat, nose, and ear At the Hospital of the Val de Grâce my friend Dr Luc kindly introduced me to the "service" of M Morestin for the treatment of wounds of the nose and face in general. This was to me so striking that I described it to several of my surgical friends on my return, and my superficial report seemed to them so interesting and in some ways so new that I venture to draw attention to it in these few lines I have no doubt that the same kind of work may be carried out in our home military hospitals, but I scarcely think that any approach to such an accumulation of material of the kind at any one place could be found there Apparently the bulk of such cases are drafted into this "special" department from a very extensive part of France In any case there were wards full of soldiers with ghastly disfigurements of the face resulting from rifle or shrapnel bullets or the fragments of shells or grenades These seem to have been more frequent since the fighting has been mainly carried on in the trenches, where naturally the head and face are the parts of the body most likely to be exposed

Every possible disfigurement was seen in multiple, but some of the most characteristic were those involving a driving in of the bridge of the nose, leaving the tip turned up "en lorgnon," and complete occlusion of the deeper nasal passages The associated lacerations produced with this an aspect of the utmost repulsiveness In these cases M Morestin adopted a method of operating in stages, which seemed to me to present some original features The first step is the detachment of the remainder of the nose from above downwards by a transverse horseshoe incision, extending nearly to the naso labial folds on each side, forming a flap attached below and containing the tip of the nose and anterior nares This leaves raw surfaces round a somewhat piriform orifice inside which the remains of the septum and nasal contents may be traced in a mass of débris and cicatricial tissue The passages of the nose are cleared and the open cavity stuffed with gauze to prevent readhesion In a few days the gauze is replaced by indiarubber tubes or bands with leaden weights attached so as to keep the flap down. Another step is to implant in the forehead a portion of cartilage from a false rib, and when this has taken root a new nose is formed in the classical manner by means of a flap from the forehead in which is included the piece of cartilage Patients with this operation in all its various stages were to be seen in these wards or walking about in the grounds Naturally the plastic surgery of the face in every form is carried out, but the cases I have referred to seemed to be of special interest

At Talence, near Bordeaux, there is a large hospital which forms a centre to which "special" cases are sent Here nearly one third of the beds are apportioned to the department of oto rhino laryngology for the 18th Region, under Dr E J Moure, the specialist who is so well known as the adviser of the King of Spain His work, of course, overflows far beyond the ordinary routine of civil practice, and includes a large amount of plastic surgery as well as the removal of portions of projectiles or the treatment of their effects He makes frequent use of the extra access afforded by surgical detachment and elevation of the ala nasi for the clearance of passages through the nose and the replacement of distorted alæ A specially interesting part of his work is the treatment of traumatic stenoses of the larynx by the operation of laryngostomy This is more readily carried out in the adult than in the child, and has been found of great value The plastic surgery of the face is also illustrated at Talence by a large number of cases under the care of Dr Dubreuilh

Among the most striking types of cases to be seen here are those of extensive destruction of the lower jaw In these we have the disfigurement accompanied by masticatory, articulatory, and salivary trouble, the sufferers unable to take solid food, incapable of intelligible utterance, dribbling and disfigured, present a most woeful appearance The extraordinary feature is that in spite of all they seem full of the patience, cheerfulness, and buoyancy in the midst of their trouble, which is characteristic of the French soldier The cheering side of this depressing picture to the medical visitor is the remarkable resourcefulness and keenness of the dental surgeons in the "Service de Stomatologie I am informed that the science and practice of dentistry are practised with exceptional ardour in the south of France At all events the Service of Stomatology is a scene of the greatest activity Most cases of fractured jaw are X rayed, photographed, modelled in plaster, drawn and painted by workers in military uniform, who seem to give of their best, with all their hearts, in return for their exemption from the sterner work of the field The main idea is, of course, to patch up the mandible, but in such a way as to ensure coaptation with the maxilla and secure the "bite" There is nothing the military stomatologist seems to resent more than union attempted by means of a wire suture A cast is taken of the upper jaw and then of the lower one as a whole or often in parts Metal collars are adapted round the teeth and by their means screw apparatuses are attached for pressing the fragments asunder if they override, or elastics for drawing an outwardly displaced fragment in towards the middle line Inclined planes ("*buttoirs*") formed of gilded metal are often used with the same object The ultimate adaptation of a prothesis with artificial teeth is the main end from the physiological point of view and no doubt it is often attained The benefit from the æsthetic aspect is also un questionable Our own dental surgeons are not at all likely to be behindhand in this class of work, but the hasty glance of the stomatological activity exercised at Talence impressed me with the importance of the dentist's work and of the lofty position it should hold in our scheme of care for the wounded, which I had not hitherto realised It is only to be desired that every encouragement should be given to our stomatological colleagues on amyl nitrate or paracentesis of the anterior chamber Doyne had shown that extraction of the lens was followed by immense improvement in vision due, it was considered, to the fact that the patient was always in a condition of semi-daylight owing to the cataract, so that the retina did not receive sufficient stimulation Mr Mayou, while not denying this, thought that the lowering of the intraocular tension, with the consequent flushing of retinal vessels, and the filtration of fluid through the scar might be an additional factor, possibly the most important one, in the good result He (Mr Mayou) thought trephining would result in the retinal vessels being flushed with blood, and that the subsequent leakage might lead to a more rapid excretion of fluid from the eye and drain away any toxic products which might be causing local vascular sclerosis The patient was a female, aged 17, who for two years had complained of night-blindness Grandfather, father, one paternal aunt, and one brother were all affected with the same disease The four sisters of the patient were not night-blind She showed marked pigmentation of the periphery, the discs being slightly grey in colour and the vessels of practically normal size The lenses were clear When first examined the fields were contracted to a 10° circle on both sides On Nov 13th last and again on Dec 1st paracentesis of the left eye was performed, and on each occasion there was distinct improvement in the fields On Dec 8th trephining was done under general anæsthesia On removing the disc of sclera there was a very free prolapse of iris, and it was slightly caught in the wound, recovery was otherwise uneventful A week later the field on this side had practically reverted to normal, and she could walk about freely in a darkened room Improvement was maintained to the present date On covering the unoperated eye she could see well at night time, but if both eyes were open she was still somewhat night-blind. He could not advance any explanation of this The improvement could not be expected to last very long, but it might continue for a length of time which justified the operation in selected cases

Mr F A **JULER** read notes of a case of

Papilloma Removed from the Upper Canaliculus

The tumour came away after slitting the canaliculus, quite easily there was no apparent pedicle It measured 10 by 4 5 mm, and in structure was a papilloma with stratified epithelium

Dr **GEORGE MACKAY** (Edinburgh) read a short note on a case of

Lymphangioma of the Orbit with Hæmorrhages

The patient was seen first in 1906 being then 15 months old Paracentesis and, later, excision so far as practicable having failed to eradicate the growth from the apex of the orbit, X ray treatment, given by Dr Hope Fowler, had been employed, and with much benefit Owing to the irregularity in the patient's attendances proptosis had been allowed to recur at intervals of one to three years, but had always yielded to further X ray applications The cure now appeared to be complete and vision and movements were unimpaired.

Choroid and Retina of the Fruit-Bat

Mr **GEORGE COATS** demonstrated a peculiarity of structure in the choroid of the fruit-bat which was first observed by Lindsay Johnson. Instead of being smooth the surface is covered with innumerable conical prominences, each containing a central vessel which projects from the apex in the form of a long capillary loop The outer surface of the retina has a similar serrated sectional outline The condition is not found in any of the insectivorous bats, whose eyes in other respects also are inferior in development It had been suggested that the structure was a device for the nourishment of the retina, in which central retinal vessels are absent in the bat But many animals—e g, the elephant and rhinoceros—which have a much thicker and more extensive retina have also no or only rudimentary central vessels, yet their retinæ obtain sufficient nourishment from a flat choroid without the sacrifice of form vision which the arrangement in the fruit bat necessarily entails According to another hypothesis the structure is an accommodative mechanism, images of distant objects falling on the most anterior plane of the serrations, of near objects on the most posterior Evidence was adduced to show that the range of accommodation so obtained could not be great, and that, inasmuch as the formation of a clear image was impossible, it could not be very useful The most probable explanation was that the condition was a device to enable the eye to make the best possible use of low illuminations Evidently the serrated contour of the retina must greatly increase the superficies of the sensitive film and augment the number of visual elements concentrated within a given area. In other respects also—its relatively large size and the structure of the retina—the eye of the fruit-bat is characteristically adapted to a nocturnal habit

Parasites in Eyelid and Anterior Chamber in Animals

Mr **COATS** also demonstrated an Encysted Nematode Parasite in the Eyelid of the Mouse Professor A E Shipley considered it to be the Ollulanus tricuspis, the adult form of which occurs in the alimentary canal of the cat

Lieutenant-Colonel W G **PRIDMORE**, I M S, and Mr **COATS** demonstrated a Filaria from the Anterior Chamber of the Horse, probably an immature male of *Filaria equina*

Discussion on Ophthalmic Injuries in Warfare

Mr **WALTER H H JESSOP**, in opening the discussion on this subject, dealt chiefly with the cases of injury in the present war seen by him at St Bartholomew's and No 1 Base Hospitals He said that the steel or cupro-nickel mantle of the bullet was often chipped, and a fragment might perforate the cornea or embed itself in its substance The initial high velocity of the bullet might be lost by ricocheting from a stone, and he had found that wounds so produced were more serious than direct ones As most of the fighting was in trenches there was a greater proportion than usual of head and face injuries, as they were the parts most exposed to the enemy There had been a few instances of spent bullets entering the orbit and remaining there without bursting the eyeball, they were probably ricochet Such cases often showed intraocular hæmorrhages, choroido-retinal changes, and detachment of retina, generally complete The most distressing ocular injuries, usually caused by enfilading fire, were those in which the bullet passed transversely through both orbits There must already have been at least 50 such cases If it was found that a wound had been made in the orbital roof the brain substance would fill it up, and as sepsis could not be prevented it was better to leave well alone When the orbit and eyeball were much damaged it was better to foment the wound and keep it as clean as possible with sodium chloride solution delaying removal of the eyeball until the conditions were less inflamed, always having in mind the risk of sympathetic ophthalmitis if the other eye were a good one In the case of both eyes being destroyed, it was better to wait until the danger of sepsis was over, or it was much reduced, before removing the destroyed eyeballs, owing to the fear of meningitis He described an operation devised by Mr W T Lister to avoid the opening of the nerve sheath Eyelid injuries he found to be very common, and almost always accompanied by injuries of the eyeball Usually the lids became very œdematous, hence sutures should not be inserted into them Conjunctivitis did not seem to have been prevalent in this war In the Franco-German War 55 per cent of cases of eyeball injury developed sympathetic ophthalmitis, in the American Civil War the percentage was 16 14 In the present war he had not seen or heard of a single case of the kind, which he attributed to the great care exercised in diagnosis and treatment, and especially the early enucleation of a ruptured globe He had only seen one case of bullet wound implicating ocular nerves, and that he described, it was a ricochet bullet The bullet and shrapnel wounds of the skull vault were generally depressed, and there was a great frequency of papillœdema in such cases, the appearances were those due to pressure Papillœdema was probably present in all cases of vault injuries with increased intracranial pressure, it was not usually seen when this pressure remained normal Fractures of the skull near the occipital lobes were often accompanied by hemianopsia At the beginning of the war there were many cases of complete blindness following severe explosions, but sight returned at different periods up to a week The condition in these cases was always bilateral Some cases were deaf In rarer cases the patient was dumb Three of the men had extreme blepharospasm so that they could not open their eyes for days The initial shock in these cases

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM

ANNUAL CONGRESS

THE annual Congress of the Ophthalmological Society of the United Kingdom was held on Thursday, Friday, and Saturday, April 22nd to 24th, under the presidency of Mr F RICHARDSON CROSS, of Bristol The discussions took place at the headquarters of the Royal Society of Medicine, and the clinical meeting at the Royal London Ophthalmic Hospital, City road There were two set discussions, one upon Ophthalmic Injuries in Warfare, introduced by Mr W H H JESSOP, and one on Detachment of the Retinæ, introduced by Mr M S MAYOU Some of the other contributions were of considerable interest

Mr CHARLES WRAY contributed a paper on

The Diagnosis and Treatment of Bony Tumours of the Orbit

With regard to their removal, he contended that the figures of Herschfeld placed the subject in its true perspective They showed that the mortality in cases of sinus growths—frontal, ethmoidal, and sphenoidal—was 48 2, 80, and 100 per cent respectively, whilst the post-operative mortality was 13 6, 12 7, and 33 per cent The two main methods of diagnosis were by palpation and the use of Roentgen rays As examination by the fingers was too limited, he advised the use of a thin flexible spatula 10 mm wide and 2 mm thick at the ends This pressed on the skin under the supraorbital notch, passed 15 mm under the lid, and *viâ* the fornix 33 mm —i e , within 12 or 13 mm of the sphenoidal fissure The measurements at the lower orbital margin were 12 and 16 mm respectively, while at the inner and outer canthus the distance reached was 15 and 21, and 11 and 22 mm. , and as the usual distance from the margin of the orbit to the rectal spine was 45 mm it was possible thus to investigate half the outer wall of the orbit. In the living subject it was desirable to administer morphia for an hour and deep injections of novocaine ten minutes before beginning the examination With regard to the operation, he laid stress on the importance of dissecting up the superjacent membrane if present, and the periosteum, so as to shut off as efficiently as possible the field of operation from the contents of the orbit Having tested the hardness of the growth, an attempt should be made to test the strength of the attachment to the bone, as slight leverage might snap the pedicle If this did not occur and the tumour was cancellous it should be removed piecemeal, so as to discover its relation to the orbital wall. If originating from a subjacent sinus, and especially if hour glass shaped, the bone should be cut away so as to allow of easy removal in the safest direction. Two important landmarks were the inner canthus (over the anterior extremity of the middle turbinated) and the anterior ethmoidal foramen (giving the level of the cribriform plate) Frontal sinus cases were the most frequent, and usually presented at the upper and inner part of the orbit No operation should be undertaken in the presence of material alteration in the roof of the orbit as revealed by X rays Ivory exostoses could not be removed piecemeal As in the cancellous variety, gentle leverage was in order, and in the event of failure sufficient of the orbital wall should be cut away to permit of removal in the safest direction A clue to the size and location of the growth was obtained by radiography and the use of a strong needle

Mr W D HARMER read a paper on

The Intranasal Treatment of Dacryocystitis

As nasal inflammations and abnormalities rarely cause dacryocystitis, treatment of such conditions was generally disappointing Intranasal operations on the tear sac or duct became popular in 1912 after the operations of West, Polyak, and Yankauer A modified West operation had been preferred Of 14 cases treated 6 have been cured, 3 improved, 4 not improved and not traced Operations were easy to perform and could be repeated if necessary Dacryocystotomy was probably the best treatment for dacryocystitis

Captain A W ORMOND read a paper on

Injuries to the Eye in Warfare

He recounted three cases of traumatic amblyopia following the explosion of shells The first was of a soldier who was in the retreat from Mons He recovered entirely after complete rest and "feeding up" A second case was associated with an error of refraction which had led to the idea that recovery had not taken place , while the third had not yet regained his former sight, though wounded more than three months ago It was pointed out how difficult these cases were to diagnose, and how important it was to take the psychology of the men into consideration. He described the frequency of "explosion injuries" peculiar to the war, the result of hand grenades, shrapnel, or high velocity shells Numerous cases had occurred in which, as the result of a general explosion, small fragments of metal or dirt had been forced through the tunics of the eye These had sometimes been overlooked, and later on, the man having complained of pain and inflammation, iritis had been correctly diagnosed, but the possibility of a foreign body being in the eye had not been realised, and sympathetic trouble might have occurred He related two cases in which the speedy removal of the eye prevented sympathetic trouble supervening With regard to the vexed question of removing an eye containing a foreign body, he recommended that no general dogmatic statement should be made on this debatable point, as each case must be separately considered He deprecated relying solely on the findings of X ray examination, because in several cases the foreign body was not discovered until a second or third radiogram had been taken, and sometimes not even then. The history, the nature of the inflammation if any, and the amount of vision should be taken into consideration when making a decision Short notes were given of 28 blinded soldiers, most of whom were now at St. Dunstan's, Regent's Park Thirteen of them have no perception of light at all, and the sight of those with vision ranged from mere perception of light to ability to count fingers in one part of their field Eighteen were the victims of bullet wounds, which for the most part traversed the front part of the head from side to side , 4 were wounded by shrapnel, 1 by a hand grenade, and the others by explosion, the exact nature of which the men did not know One, however, was due to a bullet hitting the magazine of the man's own rifle, which exploded in his face Captain Ormond said that several of the men when looked at appeared absolutely fit, often with both eyes intact, the scars of entrance and exit wounds being almost impossible to locate

Mr CYRIL H WALKER read a paper describing

Cure of Spontaneous Detachment of Retina by Multiple Scleral Puncture

The patient, aged 39, had sudden loss of sight in part of the right field in September, 1901. Two days after the occurrence there was a large detachment above the summit of which was estimated as +12 D He had 4 5 of myopia. He was ordered complete rest in bed for a week, and then was allowed up for an hour a day The detachment had now swung round to the lower part of the eye, with corresponding change in the field , vision had improved A further fortnight of partial rest again showed improvement, and he was allowed out , but the sight rapidly got worse and the detachment increased Improvement followed more rest in bed, but it was only temporary , in December the vision had fallen to 6/60 He was ordered to bed again, and five scleral punctures with a discission needle were made 10 mm from the lower border of the cornea The retina was pierced at each puncture, and the needle was rotated 90° after the last puncture to let out some of the subretinal fluid under the conjunctiva On Dec 21st the sight was immensely improved, and he resumed full work on March 4th, 1902 with vision 6/6 with glasses and a normal field The condition had been maintained ever since, and the only sign of detachment was the presence of a little pigment below in the choroid

Mr M S MAYOU read a paper on a case of

Retinitis Pigmentosa treated by Trephining,

the improvement following which had been maintained for four and a half months in the hope that some light might be thrown on the etiology of a little understood disease In this condition anything which improved the retinal circulation would temporarily benefit vision—such as

2nd Highland Field Ambulance Benjamin James Alcock to be Lieutenant

2nd London (City of London) Field Ambulance Arthur Hardwicke Platt to be Lieutenant

2nd Northumbrian Field Ambulance John McDonald Nicoll (late Major, 7th Battalion, The Durham Light Infantry), to be Major (temporary)

3rd Welsh Field Ambulance John Evans (late Captain, 6th Battalion The Royal Welsh Fusiliers) to be Major (temporary) John William Dale to be Lieutenant

1st Eastern General Hospital Lieutenant Ffrangcon Roberts, from 1st East Anglian Field Ambulance, to be Lieutenant

4th London General Hospital George Arthur Ewart to be Captain, whose services will be available on mobilisation Captain William Hunter is seconded.

1st Northern General Hospital Stuart McDonald (late Captain, Unattached List for the Territorial Force), to be Captain whose services will be available on mobilisation

1st Scottish General Hospital Major Henry McL W Gray is seconded Captain Middleton Connon, from Sanitary Service to be Captain, whose services will be available on mobilisation

1st Southern General Hospital Bertram Arthur Lloyd to be Captain whose services will be available on mobilisation

3rd Western General Hospital To be Lieutenants Lieutenant Ivor J Davies from 2nd Welsh Field Ambulance, and Thomas Rufus Bowen

2nd London Sanitary Company To be Lieutenants Herbert Beeney and Frederick John James Ney

East Anglian Casualty Clearing Station Frederick William Lewis to be Lieutenant

Welsh Border Mounted Brigade Field Ambulance John Arthur Eyton-Jones (late Surgeon Lieutenant 1st Volunteer Battalion Royal Welsh Fusiliers) to be Captain (temporary)

2nd East Lancashire Field Ambulance William Clegg Newton to be Lieutenant

2nd London Casualty Clearing Station Athelstan Jasper Blaxland to be Captain (temporary)

1st Southern General Hospital Captain Frank D Marsh is seconded.

2nd Southern General Hospital Major James Swain is seconded

3rd East Lancashire Field Ambulance William Calverley to be Lieutenant

1st Northern General Hospital Major Robert A. Bolam to be temporary Lieutenant-Colonel

2nd Northern General Hospital Major Sir Berkeley G A Moynihan is seconded

2nd London (City of London) General Hospital —The undermentioned officers are seconded Major Sir Frederick S Eve, Captain Sir William A. Lane, Bart, Captain Sir Bertrand E Dawson K.C V O, M.D

3rd London General Hospital Major Sir John R Bradford, K.C M G C.B is seconded Ernest Nevile Keys Wells to be Captain, whose services will be available on mobilisation.

2nd North Midland Field Ambulance Major John C S Burkitt from Attached to Units other than Medical Units, to be Major (temporary)

1st Northern General Hospital Captain George Hall to be Major, and to be seconded

3rd Northern General Hospital James Clark to be Captain whose services will be available on mobilisation

2nd Western General Hospital Charles Paget Lapage (late Captain, Unattached List for the Territorial Force), to be Captain

Northumbrian Casualty Clearing Station William Albert Wetwan (late Major, 5th Battalion Alexandra, Princess of Wales s Own (Yorkshire Regiment)) to be Major (temporary)

The undermentioned to be Lieutenants Robert Wilkie Smith, Frederick Septimus Walker, Fred Phillips, and Stanley McCoull

Attached to Units other than Medical Units —To be Majors Surgeon Captain George Symers Mill from the 4th Battalion The King's Own (Yorkshire Light Infantry) Captain Henry W Williams and Captain John O Summerhayes To be Captains Richard Timmis Turner (late Captain 7th Battalion The Cheshire Regiment) Lieutenant Horsley Drummond and Captain Arthur L Yates (from the 4th Northern General Hospital) To be Lieutenants John Macquarrie Lieutenant Alistair Robertson Grant (from 2nd Highland Field Ambulance) Lieutenant Maurice U Wilson (from the 5th London Field Ambulance), and Edward Stanley Johnson

TERRITORIAL FORCE RESERVE

Royal Army Medical Corps

Lieutenant Colonel Arthur Lloyd Jones (late 3rd Welsh Field Ambulance) to be Lieutenant-Colonel

Surgeon General Robert W S Lyons Indian Medical Service has been appointed an Honorary Physician to the King vice Brigade Surgeon Lieutenant Colonel (Honorary Colonel) D D Cunningham C I E, deceased

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last Census, 8809 births and 6063 deaths were registered during the week ended Saturday, April 24th The annual rate of mortality in these towns, which had been 19 8, 19 9, and 19·0 per 1000 in the three preceding weeks further declined in the week under notice to 17·4 per 1000 of their aggregate population, estimated at 18,134,239 persons at the middle of last year During the 13 weeks of last quarter the mean annual death rate in these towns averaged 19 6, against a corresponding rate of 20 6 per 1000 in London Among the several towns the death-rate last week ranged from 6 8 in Barnsley, 7·0 in Darlington, 7 8 in Wallasey, 8·6 in Ilford, and 9 5 in Ealing, to 23 9 in Middlesbrough, 24·0 in Northampton, 24 5 in Hastings, 25 2 in Sunderland, and 28 1 in Dudley

The 6063 deaths from all causes were 555 fewer than in the previous week, and included 689 which were referred to the principal epidemic diseases, against numbers declining from 826 to 736 in the three preceding weeks Of these 689 deaths, 389 resulted from measles, 149 from whooping cough, 65 from infantile diarrhœal diseases, 49 from diphtheria, 29 from scarlet fever, and 8 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 2·0, against 2 1 per 1000 in the previous week. The deaths attributed to measles, which had been 495, 452 and 426 in the three preceding weeks, further fell to 389 last week and caused the highest annual death rates of 3·4 in Sheffield, 4 4 in Stockton-on Tees 4 5 in Middlesbrough, 4 9 in West Hartlepool, 5 3 in West Bromwich, 6 6 in Coventry, 8 9 in Walsall, and 9 2 in Northampton The deaths referred to whooping-cough, which had been 157 167 and 151 in the three preceding weeks fell to 149 last week, and included 52 in London, 13 in Liverpool, 9 in Leeds 6 in Wigan, 5 in Hull, and 4 each in Stoke-on Trent and Bradford The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 77, 67, and 63 in the three preceding weeks, were 65 last week, of which 18 occurred in London, and 4 each in Liverpool and Manchester The deaths attributed to diphtheria, which had been 69 49 and 55 in the three preceding weeks fell to 49 last week, 15 deaths were recorded in London, 4 in Birmingham, and 3 each in West Ham, Northampton, Liverpool, and Leeds The deaths referred to scarlet fever, which had been 16, 25, and 28 in the three preceding weeks, were 29 last week, and included 13 in London, and 2 each in Leyton, Liverpool and Leeds The fatal cases of enteric fever, which had been 12 7, and 11 in the three preceding weeks, fell to 8 last week, of which 2 occurred in London

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily declined from 5036 to 2422 in the 21 preceding weeks, had further decreased to 2369 on Saturday last, 259 new cases were admitted during the week, against 253, 275, and 263 in the three preceding weeks These hospitals also contained on Saturday last 1251 cases of diphtheria, 377 of measles, 64 of enteric fever and 14 of whooping-cough, but not one of small pox. The 1619 deaths from all causes in London were 141 fewer than in the previous week, and corresponded to an annual death rate of 18 7 per 1000 The deaths referred to diseases of the respiratory system, which had been 475, 466 and 469 in the three preceding weeks, fell to 392 in the week under notice, but were 134 in excess of the number registered in the corresponding week of last year The deaths from influenza numbered 27, against 45 46, and 39 in the three preceding weeks

Of the 6063 deaths from all causes in the 96 towns 199 resulted from various forms of violence and 437 were the subject of coroners' inquests, while 1723 occurred in public institutions. The causes of 46, or 0·8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Leeds, Bristol, West Ham Bradford Hull, Newcastle-on Tyne and in 62 other smaller towns Of the 46 uncertified causes 9 were registered in Birmingham, 3 each in Stoke-on Trent Dudley and South Shields and 2 each in London, Lincoln, Liverpool, and Southport

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2 345,500 persons at the middle of this year, 1303 births and 938 deaths were registered during the week ended Saturday, April 17th The annual rate of mortality in these towns which had been 21 1, 22 1, and 20 8 per 1000 in the three preceding weeks, rose to 20·9 per 1000 in the week under notice During the 13 weeks of last quarter the mean annual death rate in these towns averaged was loss of consciousness, which, passing off, left loss of sight, deafness, or even loss of speech, all temporary

Mr W T LISTER said the outstanding features of the ophthalmic injuries in the present war were their severity and the impossibility, in most cases, of employing conservative surgery Still, there was a great deal of work to be done He grouped the cases into the following classes contusions, wounds, cases with foreign body in the eye, functional cases, and head cases These he considered seriatim In concussion cases, if the bullet did not go through the orbit the fundus showed no concussion changes Ruptures of the choroid were fairly common, and they might be starlike or arranged in definite groups The rest of the retina showed some pallor due to *commotio retinæ* Cases of penetration of the eye by small foreign bodies formed a very unsatisfactory group to deal with Many of the particles did not give a sensible X ray shadow, and even if they did many of the fragments were non magnetic Two factors increased the poor outlook in operation (1) the frequent presence of more foreign bodies than had been diagnosed, (2) the friability of the foreign bodies, so that they broke off when caught in the forceps It was difficult to know what to do in the case of a foreign body in the eye when the sight remained useful He believed that even if an eye contained a foreign body, if there were no prolapse or entanglement of the uvea or lens capsule, the risk of sympathetic ophthalmitis was *nil* Though the eye would probably degenerate, useful vision might persist for a considerable time If signs of irritation did not abate, he would remove the eye Foreign bodies in the cornea were often very troublesome to remove When the foreign body was deeply embedded, he found a Beer's knife most useful Mr Lister went on to discuss in some detail functional cases, and quoted some striking instances In head injuries, papillœdema occurred in slightly over 50 per cent of the cases, but two-thirds of these had merely blurring or slight swelling The greatest swelling occurred in association with cerebellar abscess He did not attach much diagnostic importance to hæmorrhages or exudations, and the presence of papillœdema did not point to the immediate necessity of operation, it was increasing swelling which was the significant factor He regarded cases of occipital injury as of very great interest, as a study of them might cast important light on the cortical representation of the fundus The facts arrived at by Dr Gordon Holmes and himself, from the examination of a number of cases, were (1) when the lesion occurred over the occipital cortex of only one side, the result was either hemianopsia, or homonymous quadrantic defect on the opposite side, (2) when the bullet passed through both occipital lobes, there was at first complete blindness, but in several cases this gradually cleared centripetally after an interval varying from hours to days, leaving a central scotoma Mr Lister regretted that his observations were not fuller, but reminded his hearers that cases were after a short time sent over to England

The discussion was continued by Mr TREACHER COLLINS, Mr P H ADAMS, Mr G H POOLEY (Sheffield) Mr L V CARGILL Mr MACKAY, Mr R R CRUISE, Mr F THOMAS, Mr A L WHITEHEAD (Leeds), Mr PRIESTLEY SMITH (Birmingham), Mr M M TOWNSEND, Colonel ELLIOTT, Mr J GRAY CLEGG, Professor LANDOLT, and the PRESIDENT

At this sitting the Nettleship medal and prize were presented to Mr Treacher Collins for his valuable work in the specialty *(To be continued)*

ROYAL ABERDEEN HOSPITAL FOR SICK CHILDREN —The thirty eighth annual report (1914) states that 2945 cases were treated during the year, 888 as in patients and 2057 as out-patients Of these, 687 were discharged as cured 111 died, and 45 were still in the wards at the close of the year The remainder were removed as unfit, &c The expenditure exceeded the income by £529 12*s* 8½*d* The sum of £980 19*s* 5*d* had been received in legacies during the year The income for the year is slightly augmented, the city collections showing an increase of £41, the collection from the county parishes being increased by £253 17*s* 11*d* as compared with 1913 The building fund for the new hospital had increased during the year by £1773 2*s* 4*d* The total amount to the credit of the fund was now £12,498 1*s* 3*d* This sum, together with what was promised and payable, £8313 10*s*, was still far short of the estimated cost of the new hospital.

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned have been granted temporary commissions as Surgeons —Dallas Scott Falconer, Walter Ethard Goss, William Sloane Lynd, and John Scott Kennedy

The following appointments have been notified —Fleet Surgeon R S Bernard to the *Victory* Staff Surgeon W P Hingston to the *Vivid*, additional Surgeons H E R Stephens to the *Lion*, J A. Russell Cargill (temporary) to the *Victory*, additional for R N Division Crystal Palace, R A Rankine to the *Pembroke*, and K. H. Hole to the *Thames* Temporary Surgeons T D Power to the *Zealandia*, E W Todd to the *St George*, and N N Wade to the *Ganges*, additional, for Shotley, R N Sick Quarters

ROYAL ARMY MEDICAL CORPS

The undermentioned to be temporary Captains —Dated April 1st Thomas Henry Rickard Crowle and Gordon Taylor

The undermentioned to be temporary Lieutenants Dated Oct 24th, 1914 Alfred John Andrew Dated Feb 7th Harold Victor Lamb Dated March 2nd Arthur John Wilson Compton Dated March 26th Newman Smith, John Bowman Hunter, and Arnold Renshaw Dated March 28th Gwilym Rhys Pennant, Thomas William David, and Guy William Parry Dated March 29th George William FitzHenry and Meilor Bridgman Dated March 30th Percy Wilkes Leopold Camps Dated April 1st Ian Mount Grant, John Oscar Thomas, Benjamin Theodore Saunders Guy Berners Nicholson, Arthur Russel Rendle, George Donaldson Fairley, Thomas Baxter Carlyon, Edward Maurice Hime, William Henry Sheffield, Duncan Wood, Frederick William Woods, John Keay, Kenneth Harrison Alloa Kellie, William Gilbertson, Ernest Clarkson Bourdas, Ernest Percy Satchell, Henry St Arnaud Agate, Howell Wood Barnes, John Henry Joseph Davys, John Paton, John Moffat Logie, James Norman Wheeler, Karl Frederick Sonntag, Hans Anthony Conrad Swertz, John Bell Walker Harold John de Brent, Arthur Dashwood Howard, Percy Kitchen Philip Heywood Hadfield, John Craven Glen, David Gillies, Arthur Emery, James Browning Alexander, Reginald Williams Charles Edward Bashall, Charles Allen Robinson, John Patrick Howe, Herbert Henry Folker, Leslie Herbert Walsh, Frank Bryan, Charles Calthorp de Burgh Daly, Benjamin Hilton Leigh, Sidney Campbell Dyke, William Newton Parker, Thomas William Kelly, William Benjamin Heywood, Robert Alexander Flynn, William Beck, Eric Reginald Delme Maconochie, Charles John Gibson, Edward Ferdinand Greene, Ernest Saxton, Sidney Herbert Hall, Frederick Guy Bullmore, Hubert Redmayne Sedgwick, Ernest Allan, John Donald Gunn, David Charteris Graham, Robert Linton Ritchie, Emanuel Mary Joseph O'Farrell, William Charles Watson Glenny, James Alexander Gentle John Marchant Fry, John Cecil Rix, George Warwick Deeping, William Hutchison, and John Wylie Dated April 2nd Robert McCheyne Paterson, Walter Haward, Bernard Score Browne, Charles Butler, Robert Moore, Andrew Ferguson Horn Robert Denman, John Desmond Gimlette, Ernest Richard Stone Charles Ewart Dashwood, William Douglas Wilkins and William Harvey Dated April 3rd Harold Bourne Taylor, Henry Brooke Shepherd William Bertram Lawrence James Craig, Andrew Hardie MacKenzie, Philip Augustine McCarthy, William Arnison Slater, and Harry Grey Dated April 5th Edwin William Sidney Martin Dated April 6th Donald Fisher, William John Francis Symons, Richard Albert Banbury, John Connell, James Benjamin Hoghton Davson, Thomas Johnston, Ambrose Pode Yonge William John Hill Arthur George Southcombe, Wilfred Vedal Robinson, John Henry Sheldon, and Evan John Goronwy Jones

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

The undermentioned to be Lieutenants (on probation) — Frederick Ernest Feilden and Neville Hood Linzee, ex Cadet of the Officers Training Corps

TERRITORIAL FORCE

Army Medical Services

Lieutenant-Colonel Ernest O Wright, from Deputy Assistant Director of Medical Services Home Counties Division, to be Assistant Director of Medical Services, West Riding Division, with the rank of Colonel

Royal Army Medical Corps

London Mounted Brigade Field Ambulance Private Ronald Douglas Stuart Mar, Lord Cardross (late Lieutenant, Scots Guards), to be Transport Officer, with the honorary rank of Lieutenant

1st London (City of London) Field Ambulance Captain Andrew Elliot to be temporary Major Lieutenant Arthur D J B Williams to be Captain, and to remain seconded

Correspondence.

"Audi alteram partem."

STOMACH v HEART IN RELATION TO PRÆCORDIAL PAIN AND SUDDEN DEATH

To the Editor of THE LANCET

SIR,—In his ingenious and elaborate exposition of the symptoms exhibited in the patient, the subject of his letter to THE LANCET of April 3rd, Dr H. Walter Verdon suggests the central nervous system as primarily responsible for them, and Dr C Edgar Lea, in describing his case in your issue of April 10th, whilst recognising the well marked physical causes of the suffering, is still of opinion that there were hypersensitive nervous centres essentially concerned in the phenomena I confess I am personally very sceptical as to segmentary neurosis being a causal factor of importance in angina pectoris, and I had thought that the purely neurosis view of its pathology had long been abandoned There is, of course, no doubt as to the existence and in some degree the diagnostic value of localised "algesia," or, as I should prefer to say, surface pains, and points of tenderness in angina pectoris, as in association with most forms of visceral suffering, and a nerve centre may become hypersensitive from repeated excitation. The presence, however, in Dr Verdon's case of commencing ossification, which must, I presume, stand for a marked degree of atheromatous rigidity, in the course of the coronary artery is, in my opinion, a very important factor in the pathology and issue of the interesting case which he describes The symptom of pain over a præcordial area coming on during marked exertion, especially after a meal, is very common in aortic disease likely to eventuate in angina pectoris The fact of its arrest on the cessation of effort strongly points to its being a pressure symptom in a tender vessel, as has been pointed out by Sir Clifford Allbutt. Very often the pain returns with the resumption of effort, and that it does not always do so is, I think, capable although difficult of explanation

I am, Sir, yours faithfully,

R DOUGLAS POWELL.

Portland place W April 25th 1915

TREATMENT OF "INCRUSTED CYSTITIS" BY SUPRAPUBIC DRAIN AND INTRAVESICAL INJECTION OF LACTIC BACILLUS

To the Editor of THE LANCET

SIR,—My attention has been called to an address given to the American Association of Genito urinary Surgeons at Stockbridge, Mass, on May 16th, 1914, by Dr John R Caulk, of Washington University Hospital, published in January of this year,[1] in which he says, in bringing the malady before the notice of the association, his object is 'to emphasize its seeming malignancy if not properly treated, to outline some of its clinical and pathological features and above all to present a treatment, which in my hands has worked not only satisfactorily, but like magic The treatment consists of intravesical injection of lactic bacilli and suprapubic drainage, and in recommending the treatment he affirms "As far as I have been able to determine, this procedure has never been previously used in incrusted cystitis"

The question of priority in adopting any particular treatment is of little importance as contrasted with a proper estimate of its real value I am glad that Dr Caulk has emphasised the usefulness of the lactic bacillus and drainage, in the treatment of cystitis, when there are phosphatic deposits in the bladder, a treatment I have used for more than a dozen years and found most valuable In an article in THE LANCET,[2] in referring to the treatment of cystitis due to organisms which decompose urea, those which cause ammoniacal urine and the deposit of alkaline phosphates, I wrote —

> When the urine is alkaline after irrigating an instillation of pure lactic bacillus cultures in milk whey or the filtrate of saurine may be employed with great advantage By setting up an acid fermentation the urea-decomposing organisms are weakened or destroyed and the phosphates dissolved

And with regard to suprapubic drainage—

> This drainage must be supplemented by careful irrigation, and if the urine is alkaline, or contains alkaline phosphates after irrigating, an instillation of lactic bacillus cultures should be given Milk whey containing pure lactic bacillus not only destroys the septic organisms in the bladder but also dissolves phosphatic crusts adhering to the bladder or the wound. The filtrate of saurine does admirably and may be used with advantage in all purulent conditions A suppurating sac or a granulating surface thoroughly washed regularly with it cleans up rapidly, it acts more satisfactorily than any chemical antiseptic, and the lactic acid bacillus not being a pathogenic organism does no harm In some cases quite remarkable results have been obtained The drainage employed is by syphoning the urine into a suitable vessel so as to permit the patient to go about with freedom The method used for the last nine years is easily carried out and has been very successful

It may be interesting for your readers to know that long before Metchnikoff discovered the value of the Bulgarian bacillus as a destroyer of smaller and less active organisms, in some parts of the Highlands of Scotland butter milk was a common ingredient of poultices used for the cleansing of putrid sores I first saw it used by a gamekeeper in the Island of Mull in 1893, and when he told me that the addition of butter milk cleaned the sore immediately I was very sceptical, but when I saw the result a couple of days later I was more than surprised Later in the same year an opportunity offered itself of testing the effect of poultices containing butter milk, and the result satisfied me that there was something good in the treatment, as a sloughing surface, which was very putrid, soon cleared up and the local irritation consequent on the septic absorption disappeared. Since then I have often used lactic bacilli cultures to destroy septic organisms At a time when bacteriological research was in its infancy the simple filtrate of butter-milk, the whey, was used, but later pure cultures were made by inoculating sterilised solutions of sugar of milk with Bulgarian bacilli. Without or with a suprapubic opening I have used constantly this treatment of cystitis with most satisfactory results, and Dr David Watson has employed a similar treatment for gonorrhœa in women[3] In his admirable book on gonorrhœa he gives details

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[1] The American Journal of Urology Venereal and Sexual Diseases vol xi p 1

[2] Newman: Cystitis, its Causes and its Treatment, THE LANCET, Feb 2 th and March 2nd 1912.

[3] David Watson Gonorrhœa and its Consequences, 191 p. 255.

22 4, against 19 6 per 1000 in the large English towns Among the several towns the death rate in the week under review ranged from 6 1 in Falkirk, 11 3 in Motherwell, and 14 7 in Perth, to 22 1 in Glasgow, 23 4 in Greenock, and 24 3 in Edinburgh

The 938 deaths from all causes were 4 in excess of the number in the previous week, and included 133 which were referred to the principal epidemic diseases, against 181 and 154 in the two preceding weeks Of these 133 deaths, 90 resulted from whooping cough, 19 from measles, 10 from infantile diarrhœal diseases, and 7 each from scarlet fever and diphtheria, but not one from enteric fever or from small pox The annual death rate from these diseases was equal to 3 0, against 2 1 per 1000 in the large English towns The deaths attributed to whooping cough, which had been 81, 104, and 75 in the three preceding weeks, rose to 90 and included 47 in Glasgow, 16 in Edinburgh, 13 in Dundee, 4 in Greenock and 3 in Aberdeen The deaths referred to measles, which had been 21, 45, and 41 in the three preceding weeks, fell to 19, and comprised 16 in Glasgow, 2 in Aberdeen, and 1 in Clydebank The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had increased from 5 to 18 in the five preceding weeks, fell to 10, of which 7 were registered in Glasgow The deaths attributed to scarlet fever, which had been 12, 11, and 6 in the three preceding weeks, were 7 in the week under notice, and included 3 in Glasgow The fatal cases of diphtheria, which had been 7, 6, and 11 in the three preceding weeks, fell to 7, of which 5 occurred in Glasgow

The deaths referred to diseases of the respiratory system, which had been 186, 162, and 182 in the three preceding weeks, slightly fell to 178 in the week under notice, but were 58 in excess of the number recorded in the corresponding week of last year The deaths attributed to violence numbered 21, against 21 and 32 in the two preceding weeks

In the 16 largest Scotch towns 1314 births and 834 deaths were registered during the week ended Saturday, April 24th The annual rate of mortality in these towns, which had been 22 1, 20 8, and 20 9 per 1000 in the three preceding weeks, declined to 18 5 per 1000 in the week under notice The rate in the several towns ranged from 10 2 in Kirkcaldy, 10 8 in Hamilton, and 11 7 in Clydebank, to 21 2 in Kilmarnock, 22 5 in Coatbridge, and 30 4 in Falkirk.

The 834 deaths from all causes were 104 fewer than in the previous week, and included 128 which were referred to the principal epidemic diseases, against numbers declining from 181 to 133 in the three preceding weeks Of these 128 deaths, 75 resulted from whooping-cough, 26 from measles, 12 from infantile diarrhœal diseases, 7 from scarlet fever, 6 from diphtheria, and 2 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 2 8, against 2 0 per 1000 in the large English towns The deaths attributed to whooping cough, which had been 104, 75, and 90 in the three preceding weeks, fell to 75 last week, and included 44 in Glasgow, 13 in Dundee, and 7 in Edinburgh The deaths referred to measles, which had been 45, 41, and 19 in the three preceding weeks, rose to 26 last week, of which 20 occurred in Glasgow and 2 in Dundee The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 10, 18, and 10 in the three preceding weeks, rose to 12 last week, and included 6 in Glasgow and 2 in Aberdeen The deaths attributed to scarlet fever, which had been 11, 6, and 7 in the three preceding weeks, were again 7 last week, of which 5 occurred in Glasgow The deaths referred to diphtheria, which had been 6, 11, and 7 in the three preceding weeks, were 6 last week, and included 2 in Aberdeen The 2 fatal cases of enteric fever were recorded in Glasgow

The deaths referred to diseases of the respiratory system, which had been 162, 182, and 178 in the three preceding weeks, further fell to 145 in the week under notice, but were 15 in excess of the number in the corresponding week of last year The deaths attributed to violence numbered 30, against 32 and 21 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland, with an aggregate population estimated at 1,212,380 persons at the middle of this year, 692 births and 521 deaths were registered during the week ended Saturday, April 24th The annual rate of mortality in these towns, which had been 22·9, 23 8, and 22 1 per 1000 in the three preceding weeks, rose to 22 4 per 1000 in the week under notice During the 13 weeks of last quarter the mean annual death rate in these towns averaged 25·4, against corresponding rates of 19 6 and 22·4 per 1000 in the English and Scotch towns respectively The death rate last week was equal to 26 1 in Dublin (against 18 7 in London and 20 1 in Glasgow), 20 3 in Belfast, 23 1 in Cork, 22 8 in Londonderry, 16 2 in Limerick, and 15 2 in Waterford, while in the 21 smaller towns the mean death rate was 20 9 per 1000

The 521 deaths from all causes were 6 in excess of the number in the previous week, and included 41 which were referred to the principal epidemic diseases, against 40 and 30 in the two preceding weeks Of these 41 deaths, 20 resulted from whooping-cough, 13 from measles, 5 from infantile diarrhœal diseases, 2 from scarlet fever, and 1 from diphtheria, but not one from enteric fever or from small pox. The mean annual death rate from these diseases was equal to 1 8, against corresponding rates of 2·0 and 2 8 per 1000 in the English and Scotch towns respectively The deaths attributed to whooping-cough, which had been 13, 15, and 11 in the three preceding weeks, rose to 20 last week, and comprised 11 in Dublin, 7 in Belfast, and 2 in Londonderry The deaths referred to measles, which had been 7, 16, and 5 in the three preceding weeks rose to 13 last week, of which 6 occurred in Dublin, 5 in Portadown, and 2 in Belfast The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 11, 3, and 5 in the three preceding weeks, were again 5 last week, and included 2 each in Dublin and Belfast The fatal cases of scarlet fever were recorded in Dublin and Waterford respectively, and that of diphtheria in Dublin

The deaths referred to diseases of the respiratory system, which had been 121, 158, and 119 in the three preceding weeks, further declined to 104 in the week under notice Of the 521 deaths from all causes, 148, or 28 per cent, occurred in public institutions, and 8 resulted from various forms of violence The causes of 14, or 2 7 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the large English towns the proportion of uncertified causes did not exceed 0 8 per cent

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE progress of this Fund continues, but the outgoings for which preparation has to be made are now considerable The Executive Committee, which is very sensible of the great generosity shown by the subscribers, wishes to point out that the work of relief undertaken by the Fund may be of long duration

THE WEEK'S SUBSCRIPTIONS

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, are as follows —

	£	s	d
Association of Physicians of Great Britain and Ireland (per Dr Hale White Hon. Treasurer)	105	0	0
Nelson New Zealand District Doctors Chemists and Dentists	48	10	0
Societies of Medicine in Italy and Medical Men (per Professor Jacobs)	56	7	3
Dr Barrs Leeds collected by—			
Dr T B Hellier	5	5	0
Dr Bowden	2	2	0
Mr Sydney Rumboll	3	3	0
Dr Frank B Easton	3	3	0
Dr R M Courtauld	2	2	0
South Indian Branch B M A.	50	0	0
Southern Branch B M A. (per Dr Jas Green Hon Sec.) (fifth donation — total £56 1s 6d)—			
Dr A. Thomas	0	10	6
Dr Henry S Taylor	1	1	0
Lt-Col. J C H Peacocke	0	10	6
Dr Francis E Carey	5	0	0
Dr S Gaster	2	2	0
Bournemouth Division B M A. (per Dr E C Bond Hon Sec.) (third donation total £121 2s 6d)—			
Dr James Appleyard	1	1	0
Dr J E Esslemont	1	1	0
Dr h Mayo Gibbins	1	1	0
Dr Mary Jeremy ...	1	1	0
Dr W H L Marriner	3	3	0
Dr F Scorer	1	1	0
Surgeon General W F Stevenson C B ...	1	1	0
Dr A. Heygate Vernon	2	2	0
North of England Branch of Belgian Doctors and Pharmacists Relief Fund (per Dr James Don and Mr A. S Percival, Hon Secs) (eighth donation—total £340 10s)—			
Dr E L Prowde	1	1	0
Dr Jas Smith	1	1	0
Dr J W Williams	2	2	0
Dr J Brydon ...	2	2	0
Dr B Chisholm ..	1	1	0
Leeds College of Pharmacy (per Mr F P Sargeant)	2	2	0
Mr W Reeson	1	1	0
Messrs Henry Sykes and Son ..	2	2	0
Mr E Hands	0	10	6
Buckrose Pharmacists Association (per Mr P Hawkins)	1	0	0
Mr A. H Cupit ..	1	1	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd.

excited, but I would be glad if you will allow me, with all respect, to criticise Mr Lane's conclusions and to advance my own more favourable findings

Mr Lane states that while he found the results from the use of the substitutes "fairly satisfactory" their "toxic effect is much more intense," and he sounds a note of warning as to their employment Both of the cases which Mr Lane cites in support of the intense toxicity theory are capable of a somewhat different construction. Thus in Case 1 a course of intramuscular injections of mercury had to be interrupted owing to the onset of symptoms of mercurialism, and the dermatitis, although it followed an intravenous injection of novarsenobenzol (Billon) administered three weeks after the last mercurial injection, may have been partly or entirely a mercurial dermatitis I have had under my care three cases of intense general dermatitis due to idiosyncrasy to mercury Apart from this possibility, the evidence already provided of the patient's tendency to drug intolerance would indicate the need for caution and would suggest a small initial dose

In Case 2 a second injection of kharsivan was given eight days after the first injection For either salvarsan or kharsivan this is too short an interval if full doses are employed Mr Lane, unfortunately, omits to mention the dosage

In criticising kharsivan we must not forget that it is comparable only to salvarsan and not to neosalvarsan. Both kharsivan and salvarsan are more toxic and at the same time more efficacious than neosalvarsan The experience of my assistants and myself with kharsivan, which now covers 180 injections, leads me to conclude that its immediate and remote effects differ in no way from salvarsan We have found that it is subject to exactly the same limitations and risks but that it is equally beneficial in promoting the healing of syphilitic lesions We have not been without our troubles in this series of cases, but we have no reason to blame the drug but only our methods Two patients were seriously ill Both of these were pregnant women who received the excessive dose of 0 6 grm Personally I never use 0 6 grm *either of* salvarsan or kharsivan. To do so in pregnant women is to invite complications Nevertheless, in 43 out of the 180 kharsivan injections doses of 0 6 grm were used All of these 43 injections were given to women, and it was only amongst them that any troublesome reactions were experienced In no case was dermatitis encountered, but more or less gastro intestinal irritation was evident in 24 cases Complaint only of headache was made in 4, of feeling sick in 3, vomiting was present in 19 and diarrhœa in 6 A temperature of 100°F or over was found in 6 instances There is here, I think, sufficient evidence to warrant the conclusion that a dose of 0 6 grm is inadvisable, and those of us who have been *using* this quantity have at last been induced to abandon it Thrombosis we have not met with since the early days of salvarsan treatment, but when kharsivan is allowed to infiltrate the tissues a cellulitis, as in the case of salvarsan, is to be expected

That salvarsan is not less toxic *than* kharsivan in similar dosage is proved by our records, but space will not permit any elaboration *on this* point Neosalvarsan in corresponding dosage is much less prone to excite irritation, but how neokharsivan will compare with neosalvarsan I am as yet unable to say, having used only 12 tubes of this preparation I would like to advise, however, that the instructions accompanying the vial should be carefully read and rigidly adhered to

With regard to Mr Lane's plea for preventive measures calculated to control the spread of venereal diseases at the termination of the war, it is to be hoped that the Army Medical Department will endeavour, for the sake of military efficiency as well as for the public well being, to supply effective treatment for their venereal cases

I am, Sir, yours faithfully,

Glasgow DAVID WATSON, M.B, C M Glasg

THE MENTAL TREATMENT BILL

To the Editor of THE LANCET

SIR,—Now that a Bill is being promoted to make it possible for us to treat without certification soldiers and sailors suffering from serious mental disorder due to shock, this is surely an opportunity for extending similar benefits to civilians in special instances There are many cases of mental disease in which recovery occurs comparatively quickly under systematic residential treatment, and this possibility is evidently admitted by the authorities, the whole point of the new Bill being the avoidance of the stigma of certification Yet many persons have to be certified for conditions likely to recover within a few months because the law at present does not permit of their being taken into nursing homes or doctors' houses otherwise

Is there any sound reason why it should not be made possible to treat such cases without certification for a period of six months, provided that certain safeguards are erected? And for this it should be sufficient for the Government to appoint several experienced alienists as special consultants for this purpose, giving them power to issue a permissory certificate to any medical man who has the care of an individual bordering on insanity, yet in whose case there is a reasonable possibility that recovery may occur soon with residential treatment Such a certificate would be one *concerning* treatment only, and not affecting the status of the patient as a person of sound mind Obviously certain conditions should be excluded from the operations of such a Bill under any circumstances, particularly general paralysis, cases of advanced dementia, and all cases exhibiting evident homicidal or suicidal tendencies

I am, Sir, yours faithfully,

EDWIN L ASH, M.D Lond.

Harley-street W, April 26th 1915

THE SCOTOMA OF MIGRAINE

To the Editor of THE LANCET

SIR,—With regard to Dr F W Edridge Green's article on the above subject in your issue of April 24th, though I do not quite follow all his arguments, nor can I produce in myself the phenomena he describes which can be noticed on awaking in the morning and looking at a white ceiling, I feel certain that he is right in attributing the scotoma to disturbance "of the circulation of the eye" I think this is shown very clearly by the following case.

A student of Guy's Hospital some 20 years ago had ocular migraine, which took the form of complete blindness of one eye, and came on very rapidly I had the opportunity on several occasions of examining the eye when the attack was on As far as I remember the pupil was always dilated, the ophthalmoscopic appearances were most marked and always the same The eye could not see of a method of preparing soft tablets and bougies, which are very convenient for his purpose, but I have always preferred freshly made cultures in a fluid medium as most suitable for urological work.

I have been unable to discover whether it is the lactic bacilli or their products that produce the effect. Chemically pure lactic acid dissolves phosphates, but it does not destroy septic organisms to anything like the same extent as freshly prepared cultures of lactic bacilli. I am inclined to believe that the lactic bacilli devour or break up the pyogenic organisms or their products neutralise the toxins of the less virile organisms. There is a bacterial contest takes place in which the lactic bacillus is always the victor. Recently I have used this treatment for the cystitis remaining after nephrectomy for tuberculous kidney. It certainly facilitates recovery in a remarkable way, but, of course, very special care must be taken to have the cultures pure.—I am, Sir, yours faithfully,

Glasgow, April 20th, 1915. DAVID NEWMAN.

THE MANUFACTURE OF SALVARSAN PRODUCTS IN ENGLAND AND FRANCE.

To the Editor of THE LANCET.

SIR,—In THE LANCET of April 3rd I described two cases of acute arsenical poisoning following injections of novarsenobenzol (Billon) and kharsivan (B. W. & Co.) respectively, and I shall be glad if you will allow me to supplement my previous letter by a brief description of two further cases following the use of one of the substitutes for salvarsan, one of which unfortunately proved fatal.

CASE 3.—A perfectly healthy youth, aged 19, was admitted to the Lock Hospital on Feb. 24th, suffering from a syphilitic sore and an early maculo-papular syphilide. On March 2nd he was given an intravenous injection of kharsivan 0·6 grm., which was not followed by any noticeable reaction. On March 11th a second injection of similar strength was administered, and on March 14th he developed intense and universal erythema, accompanied by extreme languor and irritation of the oral, naso-pharyngeal, and conjunctival mucous membranes, swelling of the eyelids, and photophobia. Subsequently there ensued a profuse exfoliative dermatitis, bronchitis, and broncho-pneumonia, to which condition he succumbed on April 12th.

CASE 4.—A strong, healthy man, suffering from early syphilis, received an injection of neosalvarsan (0·9 grm.) on Jan. 13th; on Jan. 18th he was given an injection of novarsenobenzol (0·9 grm.), and on Jan. 26th one of kharsivan (0·6 grm.). This treatment was followed by injections of "gray oil," and on Feb. 20th he was discharged free from symptoms. On March 6th he presented himself, suffering from an acute vesicular dermatitis, which, commencing in the pubic region, spread rapidly over the trunk, limbs, and face; this was followed by profuse desquamation, which is now subsiding (April 20th).

Thus, with the two cases mentioned in a previous communication, I have met with four cases of arsenical poisoning, since the beginning of the present year, following the employment of salvarsan substitutes, and in one of these cases I fear that this treatment must be held responsible for a fatal issue. In your issue of April 10th there appears a communication from the National Medical Research Committee on the manufacture of salvarsan products in England and France, from which it might be imagined that we are now perfectly independent of the German preparation. "The committee have caused experimental assurance to be obtained that both the French and English preparations are equivalent to the German in therapeutic effect. This has been done by a comparison of their relative potencies in curing experimental trypanosomiasis in mice, and experimental spirochæte infections in rabbits." These experimental researches on mice and rabbits may be perfectly satisfactory to the committee, but they are not in the least degree convincing to some who, like myself, are concerned in the treatment of the human subject. In an article in the *British Medical Journal* of April 17th my colleague, Mr. McDonagh, writes: "I am firmly of the opinion, from the several very toxic effects I have seen follow the use of the new products, that the successful manufacture has not been solved, and that the medical profession would be well advised to await the reports of clinicians before using the products, even if they have been passed by scientific workers and submitted to the strictest laboratory controls."

The report alluded to goes on to state: "The committee are confident that as far as the strictest laboratory controls can ensure it the profession and the public are now receiving from English and French sources compounds fully up to the standard of the best German samples previously sold." The confidence of this committee is not shared by Mr. McDonagh or by myself, both of whom have been employing these so-called "German samples" somewhat extensively for the past five years.

Whilst fully recognising the praiseworthy efforts of Messrs. Burroughs Wellcome and Co. to render this country independent of the German product, I do not consider that their efforts so far have been crowned with complete success, though I trust that in course of time they will succeed in manufacturing a substance as free from toxic effects as the preparation elaborated by Ehrlich after years of strenuous labour and after repeated disappointments.

It is within my knowledge that application has recently been made by a well-known firm to import salvarsan and neosalvarsan through a neutral country, but this application has been bluntly refused by the Board of Trade on the ground that the French firm of Poulenc Frères and the English firm Burroughs Wellcome and Co. will shortly be in a position to supply all reasonable requirements for the treatment of syphilis in this country by their salvarsan substitutes. My experience, however, precludes me from recommending the use of these substitutes, and in the absence of the original, I anticipate shortly being compelled to revert to the treatment of syphilis by mercury.

I am, Sir, yours faithfully,

J. ERNEST LANE,
Surgeon to the London Lock Hospital.

Queen Anne-street, Cavendish-square, W., April 23rd, 1915.

To the Editor of THE LANCET.

SIR,—Mr. Ernest Lane, in your issue of April 3rd, raises two questions of much importance at the present juncture. The first refers to the comparative value of the substitutes for salvarsan and neosalvarsan now on the English market, and the second to the need for preventive measures against the "inevitable increase in venereal disease at the termination of the war."

The illuminating article on "The Manufacture of Salvarsan Products in England and France," which you published on April 10th, will doubtless allay much of the feeling of distrust of the new brands which Mr. Lane's letter is sure to have

He was the editor of the *Journal of Mental Science* The proper scope and direction of education and the mischief and its prevention due to alcoholism, being closely associated with the subject of which he was so distinguished an exponent, were naturally among the many sociological questions with which he interested himself His lectures on matters affecting the morality and mental health of the country were always eagerly attended and were practical in their results He took a prominent part in the establishment of a council of public morals in Scotland In the question of eugenics and marriage he was also much interested, his little book "Before I Wed" containing sound and practical advice of a much needed character In 1910 he gave evidence on behalf of the British Medical Association before the Royal Commission on Divorce and Matrimonial Causes

Of the many honours which were bestowed upon Sir Thomas Clouston in the course of his life he valued none more highly than that of the freedom of Kirkwall, the capital town of his native Orkney, which he received in 1908 He was an ex President of the Medico Psychological Association and of the Edinburgh Medico Chirurgical Society, and was President of the Royal College of Physicians of Edinburgh in 1902 and 1903 The University of Aberdeen conferred upon him in 1907 the honorary distinction of LL.D, and in 1911, when the King and Queen visited Edinburgh, he was knighted In the same year the University of Edinburgh conferred upon him its honorary Doctorate of Laws During the annual meeting of the British Medical Association at Edinburgh in 1875 Dr Clouston was Vice President of the Section of Psychology and President of the same section at the meetings held at Brighton in 1886 and at Edinburgh in 1898

Dr Clouston married Harriet Segur, the daughter of William Storer, of New Haven, Connecticut, U S A, who survives him, with two sons and one daughter, the latter being the wife of Dr David Wallace, C M G, surgeon to the Edinburgh Royal Infirmary One of his sons is the well known humorous writer, Mr J Storer Clouston.

EDWIN THOMAS MOSSE TUNNICLIFFE, M.R C S, L S A.

THE death of Mr Edwin Thomas Mosse Tunnicliffe, of Biana, North Finchley, occurred suddenly on April 15th last, while playing golf. Death was due to a form of morbus cordis, Adams Stokes disease, of which he had had several previous attacks

E T M Tunnicliffe was born in 1860, and was the son of Frederick Warner Tunnicliffe, of Biana, Eccleshall, Staffs He was educated at private schools, and, making up his mind to enter the medical profession rather later than the average student, joined St Bartholomew's Hospital in 1883 He qualified L S A in 1887, and M.R C S in 1888, and almost immediately bought a small share in an old established practice at North Finchley and Whetstone The practice increased rapidly and in 1902 the firm dissolved partnership For four years Tunnicliffe worked a very large practice single handed and the early symptoms of the breakdown which followed occurred during this strenuous time In 1906 he was fortunate in obtaining a partner who much relieved the strain of work, and at the time the end came, Tunnicliffe was thinking of slowing down and gradually retiring from practice, a sadly common position

From a small beginning Tunnicliffe built up one of the largest practices in his district All who met him in consultation, and they were many, recognised at once that they were dealing with a man well trained in the principles of medicine and surgery, scrupulous in his regard for medical ethics, and thoroughly capable of estimating the relative value of clinical fact The respect in which he was held by his patients was testified to by the number of people attending his funeral and by the very many tokens of condolence sent He leaves a widow, a son who is just completing his training at Sandhurst, and a daughter, to whom in their bereavement the sympathy of the medical profession will go out

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THE LATE DR J H BENDLE—We published last week a short note of the death of Dr J H Bendle the county oculist for Somerset We have since received from Dr W G Parker the following appreciation of the late Dr Bendle's work —"Dr Bendle was my colleague in the school medical service in Somerset for over six years His death is a great personal loss to his colleagues, to whom he was always a true friend and loyal comrade Perhaps one of his most outstanding characteristics was his loyalty to his friends, of whom he had many He was a good companion, could tell a good story and tell it well, and an evening spent with him was never dull. A supremely conscientious worker, who devoted much care to detail, he was also a sound and capable practitioner with a wide knowledge, which he brought to bear on his work In his work as school oculist, each individual case received careful thought, as well as a thorough examination, and he was never satisfied with any result but the best possible He remembered and followed up his cases for years, taking a great interest in them and keenly watching their progress He never spared himself, and spent at his work many hours which should have been free for rest and recreation Both as an official and as a man he set and lived up to a very high standard His death is a great loss to the school medical service, and his place will be a difficult one to fill satisfactorily"

DEATH OF DR JOSEPH HARWOOD WILSON, OF STANDISH, LANCS—Dr J H Wilson died on *April 8th*, at the age of 49, after only a few days' illness He received his early education at Wigan Grammar School, afterwards proceeding to Eastbourne College, Owens College, and Durham University, where he graduated in 1887 He first entered upon practice at Hull, and went to Standish about 23 years ago Here he was appointed medical officer of health to the urban district council and to the Standish district of the Wigan Union He also became surgeon to the Lancashire and Cheshire Miners' Permanent Relief Society and surgeon to the Standish Branch of the British Red Cross Society, being in charge of the Woodlands No 3 Hospital. He leaves a widow

THE LATE MR FRANCIS JOHN AUGUSTUS BALDWIN—An inquest was held at Padstow, Cornwall, on April 22nd on the body of Mr F J A. Baldwin, which was recovered from the sea the day previous Mr Baldwin was a passenger on the *Falaba*, which was torpedoed by a German submarine on March 28th in St George's Channel The jury returned a verdict of "Found drowned," and expressed indignation at the inhuman conduct of the crew of the submarine in sinking the *Falaba* Mr Baldwin, who was 55 years of age, was in the Colonial Medical Service at *Nigeria*, West Africa. He was also a justice of the peace and deputy coroner

THE LATE BENJAMIN D C BELL, L R C P, L R.C S Edin, J P—The death of Mr Benjamin Bell took place at his residence in Kirkwall, Orkney, on April 7th, at the age of 55 He was a native of Shetland, and was educated in Edinburgh where he qualified L R C P, L R.C S in 1884, in which year he commenced practice in Orkney He was medical officer of the Borough of Kirkwall, and held a number of other public appointments He leaves a widow, a daughter of Sir Alexander Christison, Bart.

the light from the ophthalmoscope mirror The retinal veins were so engorged that they looked almost bursting, the arteries—perhaps only by contrast—were thin

On every occasion I watched the eye whilst the attack lasted, and was always able to say "You are beginning to see again," which meant that the veins were beginning to empty and gaining their natural size, which they succeeded in doing in the course of a few minutes, with complete return of sight When this gentleman left the hospital he went into practice in a healthy seaside town, where he never had another attack As far as I remember, but am not certain about it, he suffered from some form of heart trouble

One of my colleagues at Guy's, long since dead, suffered in exactly the same way He had conical cornea in one eye, and that eye was very little use to him His first attack of migraine came on when he was in the street, fortunately not far from home He went almost suddenly blind in his good eye and had to get someone to take him home He was naturally very much alarmed, and it was at the beginning of his career Whilst he was telling his wife that he feared all was over with him his sight began to return and was soon entirely restored He consulted me about it and I told him it was migraine, and I thought due to something wrong with circulation, that he knew the worst of it and need not trouble himself about it He had other attacks, but I never had an opportunity of examining his eye during one, at other times the eye was normal except for a low degree of myopic astigmatism He had cardiac trouble of which he eventually died I do not know the nature of it

I am, Sir, yours faithfully,

Brook street, W, April 25th, 1915 CHARLES HIGGENS

OUR LIMBLESS SAILORS AND SOLDIERS

To the Editor of THE LANCET

SIR,—A great number of sailors and soldiers serving at the war have already been disabled by loss of limbs, and there will be many more before the war is ended These men are now being discharged from hospitals and returning to their homes or friends with their wounds recently healed, and without adequate arrangements being made for their future care, comfort, or prospects The country owes it to these gallant men that proper provision should be made for them, that they should be cared for until they have fully recovered their strength and nerve and learned how to use their new limbs, so as to become capable of taking up employment again in the form best suited to each This cannot be done in existing hospitals

A committee has been formed recently with the gracious approval of Her Majesty the Queen, and with the sanction of the Directors General of the Navy and Army Medical Services, and steps will be taken immediately to establish one or more convalescent auxiliary hospitals (including an officers' branch) where these poor fellows may be concentrated and where they can get fitted and accustomed to their artificial limbs under the best conditions, with the generous advice of several eminent orthopædic surgeons Application is being made to the Prince of Wales's Fund for a grant We feel sure that an ever generous public will also readily respond to our appeal All communications and donations should be addressed to C H. Kenderdine, St Stephen's House, Westminster, S W (marked "Auxiliary Hospital") —Yours obediently,

KATHLEEN FALMOUTH,
M E GWYNNE HOLFORD

April 29th, 1915

Obituary.

SIR THOMAS SMITH CLOUSTON, KT, M.D EDIN, LL D EDIN & ABERD, F R.C.P EDIN,

CONSULTING PHYSICIAN FORMERLY MEDICAL SUPERINTENDENT TO THE ROYAL ASYLUM, MORNINGSIDE, EDINBURGH.

THE death of Sir Thomas Smith Clouston, which took place suddenly at his residence in Edinburgh on April 19th in his seventy fourth year, has deprived the profession of one of its leading alienists For nearly half a century he devoted himself entirely to the study of mental diseases Born in Orkney, where his father lived, he received his early education at the West End Academy, Aberdeen, and afterwards entered the University of Edinburgh, where he had a brilliant career as a student He qualified in 1860 as L R C.P Edin. (of which College he became a Fellow in 1873), and in the following year graduated M D at the University, where he was the thesis gold medallist, and this, together with the winning of the Fothergill gold medal in 1870, foreshadowed the distinguished future before him It is noteworthy that two of his fellow graduates were James Bell Pettigrew, the eminent anatomist, and John Anderson, the naturalist

Immediately after qualifying he was appointed assistant physician under Dr Skae at the Morningside Asylum, his two colleagues being the late Sir John Sibbold and Dr David Yellowlees This position he held for three years, and in 1863 was appointed superintendent of the Cumberland and Westmorland Asylum at Carlisle He held this post for ten years, made his mark in it both as observer and administrator, and left to accept the position of physician superintendent to the Royal Asylum, Edinburgh, where for 35 years he laboured assiduously to render the asylum a model institution for the treatment of mental diseases and a training school for alienist superintendents of other institutions throughout the world Almost immediately after his appointment he set to work to renovate and reconstruct the institution, and the success of his labours was seen in the opening of Craig House Some idea of the magnitude of the work of reconstruction may be realised by the fact that during the 35 years of his office the sum of £180,000 had been expended by the directors of the institution which has achieved great financial prosperity during that period

The lectures on lunacy and cognate subjects which he delivered to the students at the Royal Edinburgh Asylum were marked by a clearness of thought and lucidity of expression which at once placed him in the forefront of teachers in mental diseases, and in 1879, six years after his appointment, he became the first lecturer in mental diseases in the University of Edinburgh Four years later—namely, in 1883—the first edition of his lectures was published under the title of "Clinical Lectures on Mental Diseases," and the book, which has gone through six editions (the last was published in 1904) has done more perhaps than any other work on the treatment of mental diseases in spreading throughout the world enlightened methods of treatment and wise conceptions of the nature of mental aberration Among his other notable works are the "Neuroses of Development," published in 1891, the "Hygiene of the Mind," which has seen five editions, and "Unsoundness of Mind, which was published some three years ago purpose was improbable, since it would be employing a valuable constituent of explosives. Nor could the suggestion that the gas was carbon monoxide be accepted, since this gas is, of course, colourless, while it is slightly lighter than air. To the chemist the evidence was at once considerably in favour of chlorine having been used in some form or other. This gas is very cheap, and is easily liquefied and preserved in metal cylinders. It is heavy and is yellowish or yellowish green in colour. It may readily be generated from bleaching powder used in the portable form of cubes. Chlorine is a strongly asphyxiating gas, which takes a long time to mix with air, being two and a half times as heavy.

It is fortunate that the methods of prevention are similar in each case. All these gases are soluble in water and are of an acid nature. A wet cloth (preferably with some carbonate of soda) should be placed over the mouth, and breathing should take place through the mouth, returning expired air through the nose. This procedure will practically defeat the diabolical design, which to some extent loses its terrors with its mystery. The gas can only be used comparatively locally.

SCOTTISH MILITARY HOSPITAL AT BANGOUR.—Negotiations have been completed for the taking over of Bangour Village by the War Office for the purpose of a great military hospital. It is at Bangour that the Edinburgh District Asylum is situated, an institution that comes next to Woodilee and Hartwood in point of size among Scottish asylums and is one of the most up-to-date mental treatment centres in the United Kingdom. The transfer of the ordinary inmates to other asylums all over Scotland has already commenced, and it is expected that the village will be ready for occupation as a hospital for sick and wounded soldiers in six weeks time. While the conversion of other public institutions into military hospitals is not uncommon, as, for example, Craigleith Hospital, this is the first instance in Scotland in which an asylum has been so utilised. The step which has now been taken, however, is merely in development of a scheme which has been in progress in England for several months. In regard to Bangour, the first step taken was when the military authorities approached the General Board of Control for Scotland at the end of March "with the object of obtaining the use of an asylum in the vicinity of Edinburgh capable of providing accommodation for upwards of 1000 sick and wounded soldiers." On considering the matter the Board of Control came to the conclusion that the Edinburgh District Asylum was the only institution that fulfilled the War Office requirements and they accordingly advanced the proposition to the District Board of Control that the asylum be handed over. Simultaneously the Scottish Board of Control addressed a letter to the other district boards throughout Scotland inviting their coöperation in the work of transferring the patients which must follow the conversion of such an institution into a military hospital. The response of the Edinburgh District Board was one of prompt and hearty concurrence and the ready way in which the other local authorities fell in with the general body's appeal disposed of any misgivings as to the alternative housing of the patients. From all parts of the country offers have been made to receive a certain number of patients which in the aggregate more than covers the total number (890) at present accommodated at Bangour. At the Royal Asylum at Morningside 50 cases of sick people have already been received, whose removal further afield might have been undesirable. Other centres to which patients will be transferred are Melrose, Rosslynlee, Haddington, Fife, Larbert, Hartwood, Hawkhead, Ayr, Dumfries, Lochgilphead, Perth, Murthly, Montrose, Dundee, Aberdeen, Elgin, Banff, and Inverness. The Royal Asylum, Morningside, will act as receiving hospital for all the cases of insanity occurring in Edinburgh during the military occupation of Bangour. Although the accommodation for insane persons at Bangour is less than 1000 beds, investigation has shown that it will be possible comfortably to acccommodate 1350 sick and wounded, for the dining rooms and sitting rooms necessary in the case of insane patients may, in the case of wounded men, be converted into wards. The military authorities after inspection have declared the hospital admirably suited to the object in view.

The War Office will take over the institution as a "going concern." The only exception will be in regard to the farm, which will continue under the control of the District Board, a certain number of patients being retained for its working. The produce will, as usual, go to supply the institution. Few structural alterations will be necessary, though naturally considerable extra equipment will be required, but the provision of this will be made by the War Office or by the District Board on their behalf. The present hospital has an operating room, a laboratory for bacteriological work, and an electrical room (with X ray apparatus), but a second operating theatre will be necessary. The full staff will be retained at present, but a staff of visiting physicians and surgeons will also be appointed, and the resident and nursing staff will be increased. The present staff numbers 200, and it may be noted that close on 50, including two doctors and several nurses, are serving at home and abroad. Bangour has greatly developed in every way since its establishment. When the first patient was received on June 1st, 1904, there was accommodation for only 200; now almost five times that number are receiving treatment. Bangour is situated in the parish of Uphall, in the county of Linlithgow and the estate in the hands of the District Board comprises 960 acres. The asylum is built on the village plan, and consists of a medical section and an industrial section. In the medical section are accommodated recent and acute cases, and those requiring special supervision or hospital treatment. This section comprises the admission ward, 120 beds; four villas, with 150 beds between them; a hospital, with 150 beds; and a sanatorium, with 20 beds. In the medical section there is also a nurses home, with accommodation for 80 nurses. Among the houses in the industrial section there is accommodation for 460 patients—200 women and 260 men. There are also buildings common to both sections of the institution, such as a recreation hall, having a seating capacity for over 700 persons. The bakery, kitchen, stores, and laundry are capable of providing for a population of at least 1500. Bread for the entire village is baked at this bakery and another source of food supply is the farm, the dairy and vegetable produce of which is considerable. The buildings are situated about 500 feet above sea level on a gentle southern slope. The air is bracing, the estate well wooded. In the opinion of the army authorities it admirably meets the soldier's requirements—rest and quietness. A railway station in the grounds constitutes an important additional convenience.

Dr John Keay, who will continue to act as medical superintendent, was appointed to the institution on its establishment.

VACANCIES FOR MEDICAL OFFICERS.—We are informed that there are vacancies for two or three more medical officers in the 3/3rd H. C. Field Ambulance. As this unit has only just been formed, qualified medical men will have the opportunity of getting a full insight into their military duties during the training of the men. As so many medical men fear that their ignorance of drill and general army routine may handicap their efficiency, this chance of gradual training may offer special inducement. Applications should be addressed to Major E. A. Houchin, R.A.M.C., Officer Commanding, 62 Claremont-road, Surbiton, Surrey.

AID FOR BLINDED SAILORS AND SOLDIERS.—St Dunstan's Blinded Soldiers and Sailors Hostel, Regent's Park, N.W., organised by Mr C. Arthur Pearson, chairman of the Blinded Sailors and Soldiers' Care Committee, is conducted with the concurrence and support of the War Office, the National Relief Fund, the Red Cross Society, and the Order of St. John, and the National Institute for the Blind. Everything suggested by the most careful thought of men and women best qualified to advise as to the needs of the blind is to be found there, for the Blinded Sailors and Soldiers Care Committee has not depended upon its own unaided efforts, but has called to its assistance experts in the treatment of the blind from all parts of the kingdom, and it is consequently in a position to offer the blinded sailor

The War.

THE CASUALTY LIST.

AMONG the names of officers appearing in the casualty lists published since our last issue are the following:—

Killed.—Second Lieutenant Hugh Bertrand Neely, of the Suffolk Regiment, a former student of Guy's Hospital and an L.D.S.

Wounded.—Major H. A. J. Gidney, I.M.S., and Captain E. Percival, R.A.M.C.

THE HONOURS LIST.

Temporary Lieutenant James Robertson Campbell Greenlees, R.A.M.C., has been appointed D.S.O. for his great gallantry and devotion to duty at Neuve Chapelle from March 10th to 14th, 1915, in attending on the wounded under very heavy fire. Lieutenant Greenlees has twice before been brought to notice for similar conduct.—Lieutenant J. G. Priestley, R.A.M.C., has been awarded the Military Cross for gallantry and devotion to duty at Neuve Chapelle on March 13th, 1915, when he continued attending to the wounded with great bravery, although himself badly wounded.

The Military Cross has been awarded to Lieutenant A. C. Hincks, R.A.M.C., for conspicuous gallantry and devotion to duty at Neuve Chapelle from March 11th to 14th, in collecting the wounded whilst under heavy fire. On the night of March 13th and 14th, whilst he was attending on a wounded man, a shell struck the ambulance wagon, killing the man and rendering Lieutenant Hincks unconscious. On recovering he at once proceeded to collect the wounded under fire, and continued doing so throughout the night.

THE WORK OF THE ROYAL ARMY MEDICAL CORPS AT THE FRONT.

Mr. Tennant, the Under Secretary for War, made a statement this week in the House of Commons with regard to the work of the Royal Army Medical Corps at the front which must prove extremely gratifying not only to that corps and to the authorities of the Army Medical Service but also to the whole medical profession. He described the health of the British troops as singularly good throughout, taking into consideration all the circumstances of the existing war, and he based his opinion upon a very clear appreciation of what has really happened. His praise was well informed; the early critics of the Royal Army Medical Corps were not. Our army has been attacked, as it was bound to be, by different epidemic diseases at different places, but the measures of control have been prompt and thorough, with the result that the mischief threatened by measles and enteric fever has been promptly circumscribed. There is not a single case of dysentery amongst our troops, said Mr. Tennant, and we agree with him that that fact is a remarkable one. Such freedom of our army from disease constitutes the most speaking tribute to the work of the Royal Army Medical Corps, but preventive medicine and sanitation are not the only fields in which their work has been extremely fine. The arrangements for the care of the wounded, for bringing them from the trenches to the clearing stations, from those stations to base hospitals, and, finally, to this country, have alike been marked by efficiency, promptitude, and humanity. We know how well deserved are Mr. Tennant's eulogies of the Royal Army Medical Corps, and we hope that his words will be widely read. Perhaps they will meet the eyes of some of those who, failing to realise the conditions of war at all, found the medical care of the wounded at the battle of Mons, for example, inadequate. The public should know more now of the way in which war is waged than it did in September. In September the public was inclined to be critical of the Royal Army Medical Corps, and we received communications stating that our wounded were not receiving the treatment that they had the right to expect. This was in the terrible days which marked the arrival of our Expeditionary Forces at the front. They were immediately compelled to retire in the face of overwhelming numbers and were subjected on many occasions to heavy slaughter. It is obvious that the battlefields upon which our wounded lay were immediately occupied by the enemy, that the places of retirement selected for dressing stations could no longer be used, and that situations designed for clearing hospitals came early within the range of attack. The recognised routine for collecting the wounded, for sorting them, and for evacuating them was thrown out of gear. Every endeavour was made to collect as many wounded as possible, and despite the personal risks incurred in the task it was attempted to give first aid to those collected and where possible to arrange for their transport to more permanent shelter. Ever since those terrible days when the medico-military service, sharing the fortunes of the army which it accompanied, had for a time to give way to superior force the care of our wounded in the field has been admirably organised and the system of the work of the Royal Army Medical Corps has been the special admiration of our Allies. We hope some of the early critics of the corps will note Mr. Tennant's words.

ASPHYXIATING GASES IN WARFARE.

There has been considerable speculation as to what were the asphyxiating gases employed by the Germans in recent engagements. The point is of some interest since the method for a time gave an undoubted advantage to the ruthless enemy. From the accounts of sufferers and medical observers it seemed clear from the outset that one of three gases had been used—chlorine, sulphur dioxide, and nitrogen tetroxide—and an official report from Mr. J. S. Haldane, F.R.S., our greatest scientific expert on the physiology of respiration in poisonous conditions, now pronounces in favour of chlorine or bromine. These are all heavy, irritating gases and cheaply produced, except bromine, whose employment can only have been mentioned as a possibility. All are coloured gases, except sulphur dioxide, which, however, may assume a yellow colour if made from sulphur sprinkled on burning wood. It would seem doubtful, however, if fire was used in the production of the gas, inasmuch as the heat of the combustion would cause the vapours to ascend rapidly at the point of production, when they would be largely diluted with air. This seemed from the first to rule out sulphur dioxide; moreover, if this gas had been used the description of the fumes as "sulphurous" would surely have been reported. No such familiar word was used. The employment of nitrogen tetroxide for the of the depôt. But as their present premises do not allow them to keep pace with the demands, they appeal for gifts of old linen, dressing gowns, shirts, socks, slippers, and rubber hot-water bottles We are informed that, encouraged by the success that attended on the Kensington War Hospital Supply Depôt its organiser, Miss Ethel McCaul, has opened a second depôt at 32, Queen Anne street Cavendish-square, under the presidency of Alderman John Fettes, J P The committee consists of Sir Thomas Barlow, Sir W Watson Cheyne, Sir Rickman Godlee, and Dr Frederick Taylor The secretary is Mr Frank Juler

MEDICAL RELIEF FOR SERBIA.—Sir Thomas Lipton's yacht is announced to make a second cruise in connexion with Serbian relief, sailing on May 1st from Southampton for Salonika and returning in about two months Dr Elsie Inglis, who organised the Scottish Women's Hospitals in Serbia and France, herself left for Kragujevatz, in Serbia on April 24th to visit the hospital, which has been at work there since December among the wounded and the typhus-stricken The staff, over 50 in number, are entirely women

WAR MAPS—We referred in THE LANCET of August 15th 1914, to Maps 1, 2, and 3 and in that of Sept 5th, 1914, to Maps 4, 5 6, and 7 of the excellent series of war maps published by Messrs Stanford, Ltd., of Long Acre London, W C There have since been published No 8, the seat of war in Eastern Europe, No 9, the seat of war in Turkey, No 10, the seat of war in Armenia, No 11, the theatre of war in Eastern Europe, and No 12 the theatre of war in Western Asia Minor The maps are legibly lettered

THE LLOYD MEMORIAL (CAXTON) SEASIDE HOME, DEAL.—A dinner will be given, under the presidency of Lord Northcliffe, at the Hotel Cecil, on June 5th, in aid of this home, which, being supported by upwards of 6000 members of the printing and allied trades, has placed at the disposal of the War Office 12 beds for the use of convalescent soldiers enlisted from those trades

Medical News.

SOCIETY OF APOTHECARIES OF LONDON—At examinations held recently the following candidates passed in the subjects indicated —

Surgery—C D. Banes (Section I) King's College Hospital B A. Bull (Sections I and II) Oxford and St. Bartholomew's Hospital R Curle (Sections I and II) Guy's Hospital L. Lee (Section I) Geneva J G Lewis (Section II) Durham H. Morrison (Section I) St. Mary's Hospital D C Ogilvie (Sections I and II) Middlesex Hospital R. Quesada-Jiménez (Sections I and II) Guy's Hospital W H Rhys-Jones (Sections I and II) Charing Cross Hospital J A. W Robinson (Sections I and II.) King's College Hospital G S Stathers (Sections I. and II) Cambridge and St. Bartholomew's Hospitals and H. E. P Yorke (Sections I and II) St Bartholomew's Hospital

Medicine—B A Bull (Sections I and II) Oxford and St Bartholomew's Hospital A. Butterfield (Section I) Durham J E. Cheesman (Sections I and II) St Mary's Hospital R. Curle (Sections I and II) Guy's Hospital H A. de Morgan (Sections I and II) Middlesex Hospital J B. Fairclough (Sections I and II) Leeds and Guy's Hospital W Fox (Section I.) Charing Cross Hospital L A. J Graham (Sections I and II) Cambridge and Guy's Hospital N Hoffmeister (Sections I and II) Middlesex Hospital L. Lee (Sections I and II) Geneva (J G Lewis Section II) Durham D C Ogilvie (Sections I and II) Middlesex Hospital J A W Robinson (Section II) and E E Samaraweera (Sections I and II) King's College Hospital and H E P Yorke (Sections I and II), St. Bartholomew's Hospital

Forensic Medicine—G T Baker Middlesex Hospital A Butterfield Durham L. Lee Geneva J Mitchell Edinburgh J E. Rusby Leeds E E Samaraweera, King's College Hospital and H E P Yorke St Bartholomew's Hospital.

Midwifery—A Z Abushady St. George's Hospital H Archer Bristol J B Fairclough Leeds and Guy's Hospital W Fox Charing Cross Hospital J L. Hamilton London Hospital H. L. Hughes St George's Hospital L. Lee Geneva J E Rusby Leeds and C P C Sargent and H E P Yorke St Bartholomew's Hospital.

The Diploma of the Society was granted to the following candidates entitling them to practise medicine, surgery and midwifery:—B A Bull R. Curle L. A J Graham R. Quesada-Jimenez, J G Lewis D C Ogilvie W H. Rhys-Jones J A. W Robinson, and H E P Yorke.

THE Radcliff Prize at Oxford has been awarded to Dr Martin William Flack, a former Radcliffe Travelling Fellow and a member of the staff of the National Health Insurance Medical Research Committee.

THE ASSURANCE MEDICAL SOCIETY—The next ordinary meeting of this society will be held at the House of the Royal Society of Medicine, 1, Wimpole-street, London, W , on Wednesday next, May 5th, at 5 30 P M , when Sir Thomas Oliver, M D , F R.C P , will read a paper on the Rôle of Traumatism in Disease calling for Compensation There will be a council meeting at 5 P M. All communications should be made to the honorary secretaries, Dr R A. Young, 57, Harley-street, W , and Dr Otto May, 65, Harley street, W

WEST LONDON MEDICO-CHIRURGICAL SOCIETY—A reception, at which many ladies were present, was held on the evening of St George's Day, April 23rd, at the *West London Hospital* and Post-Graduate College, by the President and Council to meet the members and the Belgian doctors Dr Jacobs, Président d honneur de la Société de Gynécologie de Belgique, gave an interesting address in English on Belgium, Belgian Doctors, and the Germans Colonel Sir Charles Watson, K.C M.G , C B , gave a historical account, illustrated by lantern slides, of the rise and progress of the Order of St. John of Jerusalem up to the present date Colonel T H Hendley, C I E , I M.S (retired), lectured on War in Indian Art In the various annexes were exhibited Belgian War Relics, by Mr H S Souttar, War Relics, by Mr Donald Armour, Skiagrams of Projectiles, by Dr Reginald Morton, Indian War Pictures, by Colonel Hendley, and War Relics from the Cameroons, by Mr Leonard Bidwell, R N , son of the late well known surgeon and Dean of the West London Post-Graduate College. An excellent programme of music was provided including a repertoire of Montmartre songs by M Edouard Garceau

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Mental Treatment Bill

THE Mental Treatment Bill, which Mr CECIL HARMSWORTH the Under Secretary for Home Affairs, has introduced in the House of Commons, is an important measure which has been necessitated by the war Its object, briefly stated, is "to facilitate the early treatment of mental disorder of recent origin arising from wounds, shock and other causes" Its text has now been issued A Memorandum attached to it gives a brief summary of the law and the changes which it is proposed to effect in it

The Memorandum

As the law now stands (the Memorandum states) nursing homes cannot receive for treatment patients who are suffering from nervous breakdown affecting their mental condition (Lunacy Act, 1890, section 315 (2)) Such patients can only obtain residential treatment if they are certified insane and sent to an asylum or hospital under the Lunacy Acts This applies even if the breakdown is of a temporary character and almost certainly capable of being cured As it is found that a sort of stigma attaches throughout life to a person who has once been certified as insane, there is great reluctance to have such cases certified, and the result is that persons suffering from temporary mental disorder do not receive the special treatment in a nursing home which is suitable to their condition and which is calculated to effect a speedy cure

The object of the present Bill (the Memorandum proceeds to state) is to secure the proper treatment of such cases by making the law less rigid than at present It removes the necessity for formal certification in the case of persons suffering from mental breakdown of recent origin and arising from wounds shock &c In this respect it assimilates the English law to the law which has been in force in Scotland for 50 years and which has worked satisfactorily [Lunacy (Scotland) Act 1866, section 13]

It is brought forward at the present moment in order to meet an urgent need which has arisen in the case of soldiers and sailors invalided from the front, and others whose health has broken down under the stress engendered by the war

This Bill will enable a man who in the service of his country has suffered a nervous breakdown to accept the treatment without being certified, but only for a period not exceeding six months and under conditions which will provide security against misuse

The Text of the Bill

As the provisions of the Bill are important we now quote them in full

Clause 1 power to receive persons suffering from mental disorder of recent origin arising from wounds, &c., runs as follows (1) Notwithstanding the provisions in any other Act and soldier advantages which are of the highest order, including the provision of a seaside home situated at Brighton Almost without exception those responsible for institutions for the blind are working in coöperation with it, and are helping blinded sailors and soldiers with whom they come in contact to participate in the advantages thus open to them Every inmate of the institution is taught some means of gaining a livelihood and is instructed in the Braille system of reading and writing by blind instructors, a fact which imparts a most useful initial confidence The house, which was lent by Mr Otto Kahn, stands in 15 acres of ground and thus enables poultry-farming and market-gardening—the latter under the care of Captain Pierson Webber, himself a blind expert in the craft—to be added to boot making, mat-making, basket-making, carpentering, massage, and other occupations that can be pursued by the blind

At a meeting of the board of directors of the Royal Blind Asylum and School, Edinburgh, held on April 28th, it was agreed, on the recommendation of the Blinded Sailors' and Soldiers' Care Committee, to establish in Edinburgh a training centre where blind Scottish sailors and soldiers shall be taught "to be blind," trained to read and write in Braille, and in such handicrafts as may be found suitable If necessary a residence or hostel will be established for the temporary accommodation of those receiving such training The Scottish Branch of the Red Cross Society, the various Scottish institutions and societies for the blind, and the Naval and Military authorities will be invited to co-operate in the work by reporting to the institution all blind sailors and soldiers coming under their notice, and application will be made to the National Relief (Prince of Wales) Fund and the Scottish Red Cross Society for grants to meet the expenses incurred An appeal will also be made to the public for subscriptions

The King George Hospital —The large building near Waterloo Station has made steady progress towards completion, and is now practically ready for occupation. The equipment and provision of the building for 1650 patients has been, of course, a very costly affair, and especially so as the price of a good deal of the material has risen considerably of late

The last call is for five microscopes for use in the wards, and the committee venture to ask if any members of our profession would be willing to lend them (as people have been kind enough to lend field glasses and periscopes to the troops at the front) The microscopes should have a half and a quarter inch objective Sir Frederick Treves and Mr Edmund Owen would be glad to hear of anyone who is ready to come forward with an offer, and they would do their best towards seeing that the microscopes are duly returned to their owners when the hospital is closed The office of the joint committee is at 83, Pall Mall, S W, to which correspondence on the subject may be sent.

Suspension of Indian Medical Service Examination —It has been officially announced that the open competitive examination for appointments in the Indian Medical Service will be discontinued for the duration of the war after the July examination Instead the Secretary of State for India will nominate to such appointments as may be necessary during the interim, and on the cessation of the war will make necessary appointments from qualified persons, either European or Indian, who have held temporary commissions during the war in the Indian Medical Service or Royal Army Medical Corps, or who have served with British or Indian Expeditionary forces, hospitals, or hospital ships Due announcement will be made when the ordinary examinations are to be resumed

From a Hospital in the Savoy —An English correspondent in charge of a hospital behind the southern lines of the French army has sent us a description of hospital life which shows clearly that our allies in their recent successful advances have cheerfully paid the price of war While the French casualties have been less than those of the Germans, they have none the less been large, and a number of very serious injuries occur daily "The removal of damaged tissues splinters of bone, and wayward missiles gets monotonous in the long run" writes our correspondent, 'and we welcome anything for a change I have a case of cerebro-spinal meningitis in a farm lad 15 miles away from hospital I did lumbar puncture and centrifugalised the cerebro-spinal fluid, and made a preparation, stained it, and obtained the diplococcus, and sent a message to the Prefecture at Chambéry for a supply of serum, which duly arrived (My device for a centrifugator is to tie the test-tube with sticking plaster to a spoke of my motor cycle and set the engine going In five minutes 'ca y est') I rather expected, given the proximity of so many soldiers, that the authorities would have communicated with me further, but there is a gratifying confidence that all steps with regard to the spread of disease will be taken by us upon our own initiative I am engaged in a very busy practice extending 20 miles round. It is appalling what a quantity of phthisis there is about The well to-do sturdy peasant farmers' houses are filthy, the inside walls are rough uncoated stone, with millions of little ridges and added shelves for dust collection, and totally unwashed floors When I remonstrate I am told, 'The fact is, there is no one to attend to such things' 'But,' I say, 'you might smear mud over the walls and make them smooth with a layer of limewash as the Arabs do, and you might scrub your floors now and then, for there are plenty of women' 'Oh,' they say, 'everybody works on the land, and when they have done their day's work no one has the energy to turn to indoors So there you are!' Our correspondent winds up by extolling the thrift and good sense of the French peasants in making palatable salads out of dandelions and nettles

Wounded Allies Relief Committee —Help for Montenegro —The Wounded Allies Relief Committee has decided, in consequence of the spread of typhus and typhoid fever in Montenegro, to despatch to Montenegro Dr Isabel Ormiston, an Australian lady, and a graduate of Sydney University and Chief Medical Inspector of Schools to the Government of Tasmania Dr Ormiston was in charge of the Kursaal Hospital at Ostend, until she and the English Voluntary Aid Detachment which assisted her were ordered by the Germans into Holland Since Christmas she has been working at the Queen of the Belgians' Hospital at La Panne When Dr Ormiston has reported to the committee on a suitable base, means of transport, and the most desirable type of unit, her requirements will be despatched with the minimum of delay All contributions towards the unit, which will be provided with an ample supply of disinfectants, disinfectors, and destructors, will be gratefully received by the honorary treasurer, Mr T O Roberts (manager), London County and Westminster Bank, 217, Strand, W C

The National Committee for Relief in Belgium —This committee has issued during the week a powerful appeal for assistance in money to meet the terrible emergency in Belgium, which is stated to be no less than the slow starvation of much of the population The appeal is signed by the Archbishop of Canterbury, Cardinal Vaughan, the Lord Mayor of London, the Duke of Norfolk, Lord Rosebery, and other influential persons, and the treasurer is Mr A Shirley Benn, M P

Gratuitous Treatment of Officers at Aix-les-Bains —Arrangements have been made for carrying on the treatment at the bathing establishment, which is State property, as usual It has been intimated to the director, Dr Durand Desmond, that his proposal to accord gratuitous treatment to sick and wounded officers of the Allied Armies has been officially approved This is a valuable offer in view of the large number who have contracted rheumatism in the trenches, or have been left with damaged or stiff joints as the result of wounds A certain number of the principal hotels have been reopened in order to provide accommodation for visitors and the hotel proprietors syndicate announce a special tariff varying from 5 to 10 francs a day inclusive, for convalescent officers The Casino will open shortly, and provision will be made for light musical entertainments The train service between Paris and Aix is as rapid and as comfortable as heretofore

Surgical Dressings for the Allies —The Kensington War Hospital Supply Depôt, situated at 11–12, Kensington square, has over 600 workers coöperating with the Kensington division of the Red Cross Society in the production of surgical dressings and comforts for the soldiers These workers, besides their labour, provide between them sufficient funds to meet the weekly expenses camp at Park Hall, Oswestry, had been made, and if so, who were the dentists appointed and by whom had the appointments been made —Mr H BAKER wrote in reply No appointments have been made by the War Office, but the local military authorities have full power to employ local dentists should their services be necessary

The Work of the Royal Army Medical Corps at the Front

In the course of the debate on Army Estimates in Committee of Supply,

Mr TENNANT (Under Secretary for War) said When you consider the kind of warfare which we have been waging and particularly when you consider the kind of weather in which it has been waged, the health of the troops has been remarkable All epidemic diseases, such as measles or enteric fever, have been so brought under control as to enable us to circumscribe their area and to localise them at the earliest possible moment, whilst special illnesses to which the troops were particularly prone, such as frost-bite have been so treated in the early stages that where actual prevention has not been effected, recovery in the shortest possible time has been general To this the Field Marshal Commanding in Chief has drawn attention in his latest despatch I have before now laid special emphasis upon the sanitary arrangements of the responsible officers in the Royal Army Medical Corps Again I would say that nothing could exceed the efficiency of the precautions they have taken or of the corps itself Indeed, I think the absence of disease is the greatest and most eloquent tribute in their praise To those who have knowledge of the diseases of warfare, when I mention this fact that there is not a single case of dysentery amongst our troops, it will be agreed, I think, that is one of the most significant things anyone can say It is the same with regard to the arrangements for the care of the wounded, bringing them from the scene of active operations in the field to the clearing stations down to the base hospitals, and their transit in motor ambulances or hospital trains from those base hospitals to hospital ships and to this country, the arrangements for the treatment of wounds and disease both in France and at home—all these are subjects of legitimate pride and gratification It was no uncommon feature of the battle of Neuve Chapelle that the wounded should be back at hospitals in London within 24 hours of their wounds having been received I had the pleasure of seeing a lieutenant-colonel in one of the Highland regiments who was wounded at Neuve Chapelle, whilst in the trenches between the hours of 1 30 at 2 o'clock in the afternoon He became unconscious on receipt of his wound, and he awoke to consciousness soon after 3 o'clock in comfort in a bed in the hospital 11 miles behind the firing line, and with his wounds dressed I think that is a most remarkable achievement I mention these facts, which are well known to honourable Members in all parts of the House, because I believe them to be the broad outline of the picture as we see it to-day I ask honourable Members never to forget that broad outline when they are endeavouring to fit in the details of their criticisms

In a subsequent passage the Under Secretary said Now that the rigors of winter may give place to the intensity of summer heat, we naturally are apprehensive that plagues of flies and insects may harass the troops and we have sent out in order to combat that evil entomologists of world wide reputation who are now engaged in trying to take such precautionary and preliminary steps as are possible while these creatures are in the larval stage to render the larvæ unlikely to bring forth the insects At home bacteriologists have gone all over the country and have taken in hand individual cases of cerebro spinal meningitis, which is a most dangerous disease and might prove a scourge in our ranks I hope and believe that that difficulty has been successfully overcome

Sanitary Preparations Urged

Mr WALTER LONG said that honourable Members all anticipated that the time was coming when our troops would advance over the country which was now occupied by the enemy It appeared from all accounts that the condition of that country would be awful There were now vast numbers of dead bodies, many of which were only partially buried A great many churchyards had been destroyed by shell fire and dead bodies were exposed and would be exposed, and the general conditions would he believed be as awful as they well could be It was possible, he was told to take steps which would, if not destroy at all events modify very greatly the risk of the outbreak of a very bad epidemic. Every possible provision should be made in advance so that those evils could be overcome

Colonel YATE remarked that he had just returned from France where he had an opportunity of inspecting ambulance trains. The organisation and comfort which had now been introduced into them were deserving of all credit to those engaged in their management. A great many of the railway lines in France were single lines, and consequently the ambulance trains were often side-tracked for hours in order to allow munitions and men to pass up to the front That was the only drawback, and he wished to say that the medical officers in charge of those trains were deserving of every credit for the way in which they had brought them to such perfection He was sorry that he could not join with the right honourable gentleman (Mr. Tennant) in giving so much praise to the ambulance wagons The drivers of these were not very experienced men, and often were rather rough The way they drove the wounded over cobble stones and bad roads, without thought for the feelings and sufferings of the poor men inside, brought forth pity from those who saw it It was a question that was very difficult to control The best was being done possibly, but he did hope some steps would be taken to make those drivers drive as slowly and as comfortably as possible The honourable and gallant gentleman called attention to the efficient and excellent management of the water ambulances The ambulance flotilla was now working as a complete hospital with 200 beds, and was complete in every possible way There were four barges accommodating 50 patients each, and there were doctors, a staff of nurses, an operating theatre, electric light, and all other conveniences He trusted that as time went on the War Office would be able to introduce those hospital barges in much larger numbers in all the canals in Flanders and Northern France. There was no better way of transporting the wounded from the clearing station to the hospital ships than by barges, and he hoped that method would be largely extended.

Medical Officers of the Territorial Force

Colonel GREIG raised the question of the position of medical officers of the Territorial regiments He said many of these appointments had been filled by medical men who had given up large practices in order to go on service As compared with other medical officers the Territorial medical officer seemed to be treated very badly The facts were these. His period of service when he joined, for there was no limit, was as long as the authorities liked to keep him His pay was 14*s* per diem plus certain allowances The highest possible amount he could get was 18*s* 10*d* per diem When he started his work he got an outfit allowance of £30 and a camp outfit allowance of £7 10*s*, which everyone who knew about these matters was perfectly well aware did not cover the camp outfit cost He got no gratuity at the end of his service He wanted to compare their position with that of men who had joined the Royal Army Medical Corps There were many cases of pupils who had been trained by present members of the Territorial Medical Corps, and when these Territorial medical officers met their old time pupils in camp they found their pupils in higher ranks and receiving a very much higher rate of pay. The thing was an absurdity The two sets of men were doing exactly the same work Of course, the Territorial medical officers in a large number of cases had taken the Imperial Service obligation The period of service of medical men who had accepted commissions in the Royal Army Medical Corps was 12 calendar months, or until their services would be no longer required, which presumably would be when the war had terminated The pay was 24*s*. per diem, being a flat rate with no allowances. Travelling on duty was also paid for by the Government This officer got an allowance of £30 at the time of joining the service, the same as the Territorial medical officer, but at the end of his service he got £60 It was a matter for consideration whether these two sets of men should not be put on the same footing and whether the scale of pay of the Territorial medical officers should not be raised to that of the officers of the Royal Army Medical Corps

Mr FALLE called attention to the position of majors of the Royal Army Medical Corps (Territorial) If these officers were attached to any unit but the medical unit they could not be promoted to the rank of lieutenant-colonel When he said "could not" he meant that, although it had been done, it was very unusual He knew one who had been attached to a Territorial regiment for more than 20 years, and he had gone through all the ranks up to that of major, but he had been told that he could not be promoted higher That did not seem to be fair, considering that newcomers were promptly made lieutenant-colonels and received pay superior to the men who had been over 20 years with their regiments

Mr H BAKER (Financial Secretary to the War Office) said, in the course of his reply to the debate Reference has been made to the question of the hardships of doctors to the Territorial Forces Well, they were well aware of the terms of the contract into which they entered, and they have suffered no hardship, but we should all recognise the very great sacrifices possibly greater than those any other class have made, which these medical officers have made in giving up their practices and giving their services to the State Something should be done with regard to promotions, and the question of a gratuity such as has been offered to medical officers especially enlisted after mobilisation on the outbreak of war is also under consideration and I hope will shortly be decided.

to the contrary, a person shall not be liable to any penalty for receiving to board or lodge or for taking charge of, whether for payment or not, any person suffering from mental disorder of recent origin arising from wounds, shock, disease, stress, exhaustion, or any other cause, if and so long as he complies with the conditions imposed by regulations made under this Act

(2) Regulations may be made in England by the Secretary of State with the concurrence of the Lord Chancellor, and in Ireland by the Lord Chancellor of Ireland, as to (a) the period, not exceeding six months, for which such a person may be so received, (b) the institutions, homes, or houses into which such a person may be received, (c) the statements and notices to be furnished as respects a person so received, (d) the treatment of persons so received and their visitation, removal to other care, and discharge

(3) Regulations made under this Act shall be laid before each House of Parliament as soon as may be after they are made, and if an address is presented to His Majesty by either House of Parliament within the next subsequent 21 days on which the House has sat praying that any such regulations may be annulled, His Majesty in Council may annul the regulations, and they shall be thenceforth void, but without prejudice to anything previously done thereunder before the expiration of the said period, and the regulations made under this Act shall have effect as if enacted in this Act

Clause 2 (short title, extent, and duration) reads —(1) This Act may be cited as the Mental Treatment Act, 1915 (2) This Act shall not extend to Scotland (3) This Act shall continue in force during the continuance of the present war and for a period of six months thereafter and no longer, except that, as respects persons who at the end of the said period of six months are receiving treatment under this Act, it shall continue in force so long as they continue to receive such treatment

The Position of Territorial Medical Officers

Attention should be called to the statement made in the debate on War Office Estimates by Mr H BAKER, the Financial Secretary to the War Office, in regard to the position of medical officers of the Territorial Force Reference was made in the course of the discussion to the sacrifices of these gentlemen in leaving their practices and to the less favourable conditions which were given to them as compared with those afforded to medical men who had accepted temporary commissions in the Royal Army Medical Corps Mr BAKER said that something should be done with regard to promotions, and the question of a gratuity such as had been offered to medical officers specially enlisted after mobilisation on the outbreak of war, was also under consideration He hoped that the question would shortly be decided During the debate a high tribute to the excellence of the medical service in the war was paid by Mr TENNANT, the Under Secretary for War

Treatment of Prisoners of War in Germany

Debates took place in both Houses of Parliament on Tuesday, April 27th, on the subject of the ill treatment of British prisoners of war in Germany That country, to use the words of Lord KITCHENER, has stooped to acts which will surely stain indelibly her military history and vie with the barbarous savagery of the Dervishes of the Soudan "I think it is only right and fair to say," proceeded the Secretary of State for War, "that the German hospitals should be excepted from any charges of deliberate inhumanity There have been indications of a lamentable lack of medical skill, and, in individual cases, of neglect and indifference to suffering on the part of hospital orderlies On the other hand, there are statements from prisoners who have been released as incapacitated that their experiences in hospital had not formed any ground for special complaint"

In the House of Commons Mr J M. HENDERSON who has taken a personal interest in this matter, said that his experience in regard to wounded prisoners pointed to good treatment in German hospitals He knew of four cases of soldiers who received dangerous and difficult wounds, which had taken months to heal, but they had been healed The greatest pains, assiduity, and care had been devoted to them by surgeons in German hospitals, and in each one of those cases it would have been a very easy thing to lose a limb Not one had lost a limb and all were convalescent at the present moment

The position which the debate revealed in regard to unwounded prisoners who were confined in camps in Germany was, on the contrary, very painful The PRIME MINISTER characterised it as a horrible story and one of the blackest spots on the records even of German methods of warfare

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HOUSE OF COMMONS

WEDNESDAY, APRIL 21ST

Tinctures and the Spirit Duty

Mr BRIDGEMAN asked the Chancellor of the Exchequer whether he had reconsidered the question of giving an exemption from spirit duty to hospitals using a large quantity for tinctures in surgical work, and whether there was any reason why any such exemption could not be given to hospitals without also giving it to doctors and chemists.—Mr LLOYD GEORGE replied I am considering the honourable Member's suggestion

Certification for Sickness Benefit in Ireland

Mr GINNELL asked the Chancellor of the Duchy what independent medical approval, if any, the Irish Insurance Commissioners had for the treatment of the sick which their different system of certification involved, and to what cause, except inability to get such approval, their failure was due in a matter of which both the sick and the medical profession complained —Mr ACLAND (on behalf of Mr MONTAGU) My right honourable friend fears that he is unable to add anything to the full replies already given on this subject, but he may say that the question of revising the present arrangement is under consideration, and he will be happy to inform the honourable Member of the progress of the negotiations

Medical Officers of the Territorial Force

Sir FRANCIS LOWE asked the Financial Secretary to the War Office whether a doctor joining the Territorial Forces, although he might be of superior rank, got a much lower rate of pay than a doctor who joined Kitchener's army, and if so, what was the reason for this inequality —Mr H. BAKER wrote in reply It is true that certain civilian medical practitioners commissioned as temporary lieutenants R.A M C received a consolidated rate of pay which is slightly higher than the amount of pay and allowances received by a captain of the Regular or Territorial Force R A.M.C It is sometimes necessary to give higher rates to those commissioned on emergency

THURSDAY, APRIL 22ND

Medical Officers of the Territorial Force

Mr WALTER GUINNESS asked the Financial Secretary to the War Office whether, in view of the sense of injustice caused by the increased rates of pay now given to medical men joining the Royal Army Medical Corps as lieutenants for the period of the war, all lieutenants in the Royal Army Medical Corps, Territorial Force, who were called out on mobilisation and who were now serving on 10s a day less pay than men now joining at the same rank, might at once be promoted to the rank of captain, as had recently been done in the case of all lieutenants in the Regular Royal Army Medical Corps —Mr H BAKER answered The position of these officers is now under consideration I may add that the difference in emoluments is not as suggested by the honourable Member

Mr W GUINNESS Is the honourable gentleman aware that the medical officers of the Territorial Force made great financial sacrifices and had to leave valuable practices at a moment's notice, and is he further aware that those medical officers are much older than officers of corresponding rank in the Regular Army Medical Corps, and naturally cannot look forward to a sufficient length of embodied service to qualify for a pension?—Mr H. BAKER I quite agree with the honourable gentleman that they have made great sacrifices, and the case is under consideration

Indian Medical Service.

Sir PHILIP MAGNUS asked the Under Secretary of State for India whether he was aware that a number of officers in the Indian Medical Service, now actually serving in France with the field ambulances of the Indian Expeditionary Force, were drawing unemployed pay, and whether he would take steps at an early date to discontinue the arrangement under which many officers on active service were classed as unemployed and paid at the unemployed rate —Mr CHARLES ROBERTS replied Unemployed pay is a somewhat misleading term The salary of an Indian Medical Service officer holding a specific appointment is made up of grade pay and staff pay Unemployed pay is the rate of pay allowed to a junior officer who has not yet obtained a specific appointment and is higher than the grade pay which he would otherwise receive Under Orders recently passed all Indian Medical Service officers of two years' service and a good many others will, while on active service, receive as a minimum a rate of pay somewhat in excess of unemployed pay

Sir P MAGNUS Will the honourable gentleman inquire as to why members of the Indian Medical Service are complaining very strongly of disabilities in many directions as compared with British medical officers, and will he take some steps to remedy this grievance?—Mr C ROBERTS This is a technical matter I should be very glad to look into it with the help of the honourable Member

Mr RAWLINSON Will there be an opportunity given to discuss this question any time during the next few weeks? It is rather pressing —Mr C ROBERTS I shall see

The Appointment of Dentists to Camps

Mr BRIDGEMAN asked the Financial Secretary to the War Office whether any appointments as dentists to the proposed

Epsom London County Asylum Long Grove.—Locum Tenens Medical Officer Salary 6 guineas a week, with quarters board and washing

Folkestone, Royal Victoria Hospital.—House Surgeon Board residence and laundry and salary as arranged.

Gravesend Hospital.—House Surgeon. Liberal salary with board, residence, and washing

Greenwich Union Infirmary and Workhouse.—Junior Assistant Medical Officer Salary £175 per annum, with apartments rations, and washing

Harrogate Infirmary —Resident House Surgeon. Salary £100 per annum

Hemel Hempstead Herts West Herts Hospital.—Resident Medical Officer Salary £150 per annum with rooms board and washing

Hull Royal Infirmary —House Physician unmarried Salary £105 per annum with board and apartments Also Assistant House Surgeon Salary at rate of £100 per annum with board and lodging Also Casualty House Surgeon Salary at rate of £80 with board and lodging

Indian Medical Service.—Ten Commissions

Inverness Northern Infirmary —House Surgeon Salary £150 per annum with board &c.

Island of Sanday Orkney —Medical Practitioner and Vaccinator Salary £100 per annum.

Liverpool, Brownlow Hill Institution —Resident Assistant Medical Officer Salary at rate of £300 per annum with rations &c.

Liverpool, Township of Toxteth Park Poor Law Institution and Infirmary —Assistant Resident Medical Officer Salary £200 per annum with board washing and apartments

Lochgoilhead and Kilmorich Parish.—Medical Officer and Vaccinator Salary £100 per annum.

London Fever Hospital, Liverpool road N —Assistant Resident Medical Officer Salary £250 per annum with residence and board

Manchester Children's Hospital Pendlebury —Resident Medical Officer unmarried for six months Salary at rate of £100 per annum

Manchester Children's Hospital, Gartside-street —Medical Officer Salary £180 per annum

Manchester, County Asylum Prestwich.—Assistant Medical Officer unmarried Salary £250 per annum with board, apartments attendance, and washing

Manchester Northern Hospital for Women and Children Park place Cheetham Hill road.—House Surgeon. Salary £120 per annum with apartments and board

Middlesbrough North Ormesby Hospital.—House Surgeon Salary £150 per annum with board washing and attendance.

Mount Vernon Hospital for Consumption and Diseases of the Chest Northwood Middlesex —House Physician. Salary £150 per annum with board residence and washing

New Hospital for Women Euston road N W —Female House Physician, Two House Surgeons and Obstetric Assistant. All with board residence and laundry Also Assistant Pathologist Also Resident Medical Officer at House of Recovery New Barnet, for six months Salary at rate of £60 per annum. Also Clinical Assistants for Monday and Saturday

Newport Mental Hospital, Caerleon Mon.—Temporary Assistant Medical Officer Salary 5 guineas per week with board rooms and attendance

Paddington Green Children's Hospital, W —Temporary Surgeon in Charge of Out patients

Prince of Wales's General Hospital, Tottenham, N —Honorary Dermatologist Also Deputy Laryngologist

Queen's Hospital for Children Hackney road Bethnal Green E — Temporary Assistant Physician. Salary £25 per annum. Also Temporary Surgeon for Ear Nose, and Throat Department. Salary £25 per annum

Rotherham Hospital.—Senior and Junior House Surgeons Salary £200 and £125 per annum respectively with board lodging and washing

Royal Dental Hospital of London Leicester-square W C —Assistant Dental Surgeon

Royal Free Hospital, Gray's Inn road, W C —Two Resident Medical Officers to Military Block

Royal National Orthopædic Hospital, 234 Great Portland street W —Resident Medical Officer

St Mary's Hospital for Women and Children *Plaistow E*— *Resident Medical Officer* and Assistant Resident Medical Officer Salary at rate of £110 and £90 per annum respectively with board residence and laundry

St Marylebone Infirmary Rackham-street Notting Hill W —Temporary First and Second Assistant Medical Officers unmarried Salary £225 and £200 per annum respectively with apartments rations and washing Also Third Assistant Medical Officer unmarried for six months Salary at rate of £180 per annum with apartments rations and washing

Salisbury General Infirmary —House Surgeon and Assistant House Surgeon unmarried. Salary £100 and £75 per annum respectively with apartments board lodging and washing

Samaritan Free Hospital for Women Marylebone road N W — Anæsthetist two half days weekly Salary £15 per annum

Scarborough Hospital and Dispensary —Senior and Junior House Surgeons Salary £100 and £80 per annum respectively, with board residence &c

Sheffield Ecclesall Bierlow Union —Resident Assistant Medical Officer Salary £300 per annum with board washing and apartments

Sheffield Royal Hospital.—Assistant House Surgeon and Assistant House Physician

Sheffield Royal Infirmary —House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

Shrewsbury Royal Salop Infirmary —House Physician Salary at rate of £110 per annum with board and apartments

Somerset County Council.—Assistant Tuberculosis Officer Salary £350 per annum

Somerset County Education Committee.—School Oculist and Medical Inspector Salary £350 per annum

South Shields, Ingham Infirmary and South Shields and Westoe Dispensary —Female House Surgeon Salary £120 per annum, with residence board and washing

Stoke-on Trent North Staffordshire Infirmary Hartshill — Resident Surgical Officer unmarried Salary £300 per annum Also Two House Surgeons and One House Physician unmarried Salary in each case £150 per annum, all with board residence and laundry

Swansea Education Committee — Temporary Assistant School Medical Officer Salary £300 per annum

Taunton and Somerset Hospital, Taunton —Senior House Surgeon Salary £250 per annum with board lodging and laundry

Tiverton Hospital, Devon —House Surgeon and Dispenser Salary £80 per annum and all found

Ventnor, Isle of Wight Royal National Hospital for Consumption and Diseases of the Chest on the Separate Principle. —Assistant Resident Medical Officer, unmarried Salary £150 per annum with board lodging &c

Wakefield West Riding Asylum —Locum Tenens or Assistant Medical Officer Salary as arranged with apartments board &c

Walsall and District Hospital.—Assistant House Surgeon and Anæsthetist. Salary £150 per annum with board residence and laundry

Warrington Infirmary and Dispensary —Junior House Surgeon Salary at rate of £120 per annum, with board apartments and laundry

Warrington Lord Derby War Hospital.—Chief Resident Physician and Resident Physician and Surgeon.

West Ham and Eastern General Hospital, Stratford E —House Physicians Salary £120 and £100 per annum with board, residence and washing

Whitehaven and West Cumberland Infirmary —House Surgeon Salary £150 per annum with board lodging and attendance

Wolverhampton and Staffordshire General Hospital.—Resident Medical Officer and House Surgeon for six months Salary at rate of £150 per annum with board rooms and laundry

Worcester General Infirmary —Resident Medical Officer Salary £150 per annum with board, residence and washing

Worcestershire County Council Education Committee.—Female Temporary Assistant School Medical Officer Salary £350 per annum

York Dispensary —Female Resident Medical Officer unmarried Salary £240 per annum with board lodging and attendance

The Chief Inspector of Factories Home Office London S W gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Kirkwall in the county of Orkney and at Cardenden in the county of Fife

Births, Marriages, and Deaths.

BIRTHS

Bolster.—On April 22nd at Neville House New road the wife of Fleet Surgeon Bolster R N the Hospital Ship *China* of a daughter

Owen —On April 24th at St. Mary's mansions W, the wife of Dr Sydney A. Owen of a son

Secretan —On April 24th, at Redlands-road Reading the wife of Dr Bernard Secretan of a son

Stobie.—On April 25th at Banbury road Oxford, the wife of William Stobie M.B Edin. of a daughter

MARRIAGES

Alcock—Rannie.—On April 26th at St Peter's Belsize-park, London N W Lieutenant Benjamin James Alcock M D R.A.M C to Mary Donald youngest daughter of the late Rev John Rannie M.A. of British Guiana, and Mrs Rannie of Belsize-park gardens London N W

Batchelor—Smith —On April 22nd at the Parish Church Eastbourne T Brewer Batchelor Lieutenant (*temp*) R A.M.C to Florence Hilda, widow of the late S H Smith

Radford—Scott —On April 23rd at All Saints Church Bombay Edward Alan Radford Indian Education Service, to Mary Cowper Scott M.D youngest daughter *of the late* Sir John Scott K.C M G D C.L and of Lady Scott

Watson—Speight —On April 26th at the Cathedral Church of St Nicholas Newcastle-on Tyne Temporary Surgeon Walter Geoffrey Watson R.N to Elsie, fifth daughter of Mr George Speight Belmont Park View road Bradford and of the late Mrs. Speight.

DEATHS

Barnett —On April 19th in camp near Aldershot Bertram Leeds Thomas Barnett Captain 12th Division Train A.S C and Medical Officer of Health of the County of Ely

Bradford —On April 22nd at Bradford Peverell, Dorchester Robert Mark Bradford Lieutenant-Colonel R.A.M.C (retired) aged 68 years

Brown —On April 24th at Bournemouth, Tom Morison Brown aged 42 years

Bulleid —On Wednesday April 21st at 10 Southwick-street, Hyde Park, W Edgar George Bulleid, Esq M.D President of the Harveian Society aged 54, only son of the late Dr Bulleid of 5 Connaught-street.

Burnett —On April 14th killed in action, at Shaiba, Persia, Maurice Burnett, Captain R.A.M C

Edwards —On April 23rd, at Tanybryn Mold North Wales David Edwards M.R.C S L.R.C.P J.P aged 62 years

Stratford —On April 20th at Bourne End, of blood poisoning from a wound received while on active service as Surgeon near Neuve Chapelle Lieutenant Ernest Stratford R.A.M C., M R C S, L.R C P in his 39th year

Sutcliff —On March 12th at Wittenberg Germany from typhus fever, Captain A. A. Sutcliff R.A.M C

N.B —A fee of 5s is charged for the insertion of Notices of Births, Marriages, and Deaths

TUESDAY, APRIL 27TH

Promotions in the Royal Army Medical Corps

SIR HENRY CRAIK asked the Under Secretary for War whether officers of the Special Reserve of the Royal Army Medical Corps were being treated differently from the rest of that corps as regarded temporary promotion, and, if so, upon what grounds that difference was based —Mr TENNANT replied Temporary promotion is not given in the Regular Royal Army Medical Corps In the Special Reserve Royal Army Medical Corps promotion is by time, but it is probable that some promotions otherwise than in respect of a period of service will be made

Mr T M HEALY asked the right honourable gentleman whether the lieutenants of the regular Royal Army Medical Corps had all been promoted captains, and was it the intention of the Government to promote the lieutenants of the Special Reserve Royal Army Medical Corps, who were in the Special Reserve Royal Army Medical Corps before the outbreak of the war, giving them the same seniority as they had at mobilisation —Mr TENNANT wrote in reply The lieutenants of the Regular Royal Army Medical Corps have been promoted to the rank of captain to ensure as far as possible a due proportion of that rank to the large number of temporary lieutenants now serving The position of the Special Reserve lieutenants is different It is not the intention to promote all of these, but it is probable that the promotions of some will be made

Medical Service at the Front

Mr ROBINSON asked the Under Secretary for War whether, in view of the strain imposed upon many doctors who had been at the front for several months, he would make use of the services of first-class medical men of the Royal Army Medical Corps now in this country anxious to do duty abroad, and thus relieve for a time those doctors abroad who had been toiling incessantly for months —Mr TENNANT answered I imagine that my honourable friend is referring to the temporary commissioned medical officers, and I can assure him that all those who are eligible for foreign service will take their turn at the front

Sanatorium Treatment for Soldiers

SIR HENRY CRAIK asked the Under Secretary for War whether provision would be made systematically for the sanatorium treatment of soldiers suffering from consumption or tuberculosis caused by hardships experienced on active service or developed as the result of wounds, whether he was aware that at present such provision was casual only and in some cases entirely wanting, and that offers of accommodation in consumption hospitals had been sometimes accepted and sometimes declined by the Medical Department of the War Office upon no apparent uniformity of principle, and who was responsible for this state of matters —Mr TENNANT said in reply I fully recognise the importance of this matter, to which careful attention has been given The National Health Insurance Commissioners accept the responsibility to secure the provision of accommodation in sanatoriums of all cases of tuberculosis amongst insured soldiers Instructions to this effect, and as to the procedure to be followed, have recently been issued to all commands The best method of providing sanatorium treatment for tuberculous soldiers who are not insured is not yet finally settled, but the War Office has taken up and has at its disposal beds in several sanatoriums, and full use has been made of these Only one offer of a consumption hospital has been refused This was because the War Office were advised that it was not suitable for military cases

WEDNESDAY, APRIL 28TH

Medical Consultants to the Admiralty

Commander BELLAIRS asked the Secretary to the Admiralty whether any sums of over £3000 a year were being paid to doctors and surgeons in civil life as retainers for their services, if so, in what cases and what amounts, and whether the arrangement was made prior to the war and allowed of private practice as well —Mr MACNAMARA furnished the following written answer The following consultants are paid over £3000 per annum Cheatle, G L, Esq, C B, C V O, F R C S, £5000 per annum, Cheyne, Sir W W, Bart, C B, F R C S, £5000 per annum, Johnson, Raymond, Esq, M B, F R C S, £5000 per annum, Macewen, Sir W, F R C S, £5000 per annum, Rolleston, H D, Esq, M.D, F R C S, £5000 per annum, Turner, G R, Esq, F.R C S, £5000 per annum The employment of eight consultants was approved previous to the outbreak of war The whole time of these consultants is at the disposal of the Admiralty, and they are under similar regulations with regard to private practice as all other medical officers serving—viz, private practice is not forbidden, but must not in any way interfere with the performance of an officer's naval duties

Spotted Fever in Middlesex

SIR J D REES asked the Parliamentary Secretary to the Local Government Board whether any cases of spotted fever had occurred in Middlesex, and, if so, whether special attention had been called, in the localities affected to the circular on this subject issued by the Board —Mr HERBERT LEWIS wrote in reply Some cases have occurred, and one of the Board's medical inspectors was instructed to confer with officers of the county council and district councils

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication.*

FISHER, A. G T L R C P Lond M.R.C S has been appointed Senior Resident Officer at the Bristol General Hospital

GREEN, REGINALD M D B S D Hy D P H Durh has been appointed Deputy Medical Officer of Health for the East Gloucestershire Combined District

O DONNELL, T has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Northleach District of the county of Gloucester

PROCTER, G W M.B Durh L.R C P Lond. M.R C S has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Garston District of Liverpool.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

ABERGAVENNY MONMOUTH COUNTY ASYLUM.—Temporary Assistant Medical Officer Salary £7 7s per week with board apartments, and attendance

ANGLO SERBIAN HOSPITAL, Urnjatchka Benja Serbia.—Surgeon

BIRKENHEAD BOROUGH HOSPITAL.—Female Senior and Junior House Surgeons Salary £180 and £150 per annum respectively, with board and laundry

BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer, unmarried. Salary £250 per annum with apartments attendance. &c

BOLTON INFIRMARY AND DISPENSARY —Third House Surgeon Salary £170 per annum with apartments board and attendance

BOURNEMOUTH ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House Surgeon for six months Salary £100 per annum, with board, lodging washing &c

BRENTWOOD ASYLUM Brentwood, Essex.—Locum Tenens Assistant Medical Officer Salary £6 6s per week with board, attendance, lodging and washing

BRISTOL, BEAUFORT WAR HOSPITAL —Chief Resident Surgeon. Also Resident Physician and Surgeon.

BRISTOL GENERAL HOSPITAL.—Second House Physician House Surgeon Casualty House Surgeon and Resident Obstetric Officer all for six months Salary at rate of £150 per annum with board residence &c

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN —Junior Resident Officer Salary £100 per annum, with board rooms attendance and laundry

BRISTOL ROYAL INFIRMARY —Three House Surgeons Two House Physicians and One Obstetric and Ophthalmic House Surgeon Salary at rate of £120 per annum with board, apartments and laundry

BURNLEY VICTORIA HOSPITAL.—House Surgeon. Salary £135 per annum, with residence, board and washing

BURY INFIRMARY —Senior and Junior House Surgeons Salary £175 and £150 per annum respectively, with board residence and washing

BUXTON DERBYSHIRE, DEVONSHIRE HOSPITAL.—Assistant House Physician for six months Salary £100 per annum with apartments, board and laundry

CARDIFF, KING EDWARD VII s HOSPITAL.—Resident Surgical Officer Salary £160 per annum, with board laundry and apartments.

CARDIFF WELSH METROPOLITAN MILITARY HOSPITAL, Whitchurch —Chief Resident Surgeon and Chief Resident Physician Salary £1 3s 6d. a day with board lodging &c

CARLISLE NON PROVIDENT DISPENSARY —Resident Medical Officer Salary £200 per annum, with apartments (not board)

CARMARTHEN JOINT COUNTIES ASYLUM —Temporary Second Assistant Medical Officer Salary at rate of £200 per annum with board lodging washing &c.

CHESHIRE COUNTY COUNCIL.—District Tuberculosis Officer Salary £350 per annum

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST Victoria Park E —House Physician Salary as agreed with board, residence and washing

CITY OF LONDON LYING-IN HOSPITAL, City road, E C — Resident Medical Officer for four months Salary at rate of £50 per annum with board lodging and washing

DERBY DERBYSHIRE ROYAL INFIRMARY —House Physician and Casualty Officer Salary £250 per annum, with board residence &c

DERBYSHIRE EDUCATION COMMITTEE.—Temporary Female Assistant School Medical Officers Salary £400 per annum inclusive.

EAST SUSSEX COUNTY COUNCIL.—Female Inspector of Midwives and Child Welfare. Salary £190 per annum

EPSOM COUNTY OF LONDON WAR HOSPITAL.—Chief Resident Physician Resident Radiographer and Resident Dental Surgeon. Also on the Visiting Staff Physicians and Surgeons to take charge of wards Operating Surgeons Ophthalmologist, Aural Surgeon, Dermatologist, and Radiographer noted in this form of aneurysm the characteristic thrill which he compares to the boiling of water, "quasi bullientes aquae," not only palpable but audible, as if the vital spirits were passing through a narrow orifice[10]

RARITY OF ARTERIO VENOUS ANEURYSM

It is remarkable how few specimens of arterio-venous aneurysm of the external vessels are in the museums of this country I have only been able to get references to some half dozen cases One is astonished not to find any in the Army Medical Museum, Millbank, or at Haslar or Greenwich Nor is there an example in William Hunter s Museum at Glasgow The Royal College of Surgeons of England has only three, including a recent uncatalogued one sent by Sir G H. Makins Its most remarkable specimen was sent in 1867 by Dr Beaumont, of Toronto, an old teacher of mine I was not a little surprised and greatly pleased to find a pathological memorial of this fine old St Bartholomew's man, a fellow pupil of Paget, who went out to Toronto in the early "forties" and became professor of surgery in the newly founded King's College It is an admirable specimen as illustrating the late changes in the veins The case is fully described by Beaumont in the *Medical Times and Gazette* for July, 1867 A man, aged 45, had 11 years previously been stabbed in the upper part of the thigh There was a very large pulsating tumour in the upper part of the right thigh, fully six inches in extent in either direction and extending nearly to Poupart's ligament The patient died under chloroform, which was administered for the purpose of ligaturing the external iliac artery The specimen shows a venous sac as big as a small cocoanut, measuring 14½ by 12¼ inches, very thin walls containing some old laminated fibrin, and the walls were in places calcified

The truth is, this is not a country of brawls and dirks, and pistol wounds are rare in civil life It is strange that no specimens found their way to the museums from the South African War The Army Medical Museum, Washington, has only two examples (Lamb)

The rarest of all forms, arterio venous aneurysm, is occasionally met with in the medical clinic as when a small aortic aneurysm opens into the superior vena cava, while on the surgical side trauma is responsible for 99 per cent of those connected with the external vessels Until the recent wars stab wounds accounted for the large majority of cases, but in the Japanese, the South African, and the Serbian wars the high velocity bullet heads the list of causes

PERSONAL EXPERIENCE OF WOUNDS OF ARTERIES

Naturally, as a physician my experience with wounds of arteries has been very limited—until recently only 10 cases, in 5 of which arterio venous aneurysm followed The other 5 cases came in medico legal post-mortem work in Montreal, and they may be just mentioned for their interest

1 A soldier during the vaccination riots in Montreal gave a man a prod with his bayonet, which passed through the top of the left lung and cut the subclavian artery just as it leaves the arch to curve over the pleura.

2. A man in a brawl received a stab with a penknife at the root of the neck followed by a traumatic aneurysm, which was operated upon unsuccessfully, the tip of the knife had cut the vertebral artery between the lateral processes of the fifth and sixth cervical vertebræ

3 A man received a blow on the head in a tussle, and some days later died suddenly of hæmorrhage from the nose, a fracture of the sphenoid was found with laceration, or erosion, of the internal carotid just where it turns into the sella turcica.

4 A man in riding jerked against the pommel of his saddle and drove a dirk which he was carrying into his femoral artery

5 A fatal bullet wound of the left internal iliac artery

The arterio venous cases I will quote in connexion with their most striking features Within a few months I have seen as many instances as in 40 years of hospital work two cases at the American Hospital, Paignton, in one of which Dr Beal did a successful Antyllus operation, a patient of Mr R B Wright at Chester, to whom I shall refer in connexion with the physical signs, and the two patients we have the opportunity to study to day—for one we are indebted to the kindness of Captain Mowat, of Sheffield, the other is under the care of Major Ernest Mallam at the base hospital

Exhibition of Two Cases

W W, aged 28, a private, had served in the Northumberland Fusiliers for eight and a half years, was always well and strong and never had a serious illness On Oct 19th at about 11 A M at La Bassée he received three shrapnel wounds, one in the left thigh Was in the trenches until 7 P M Lost an enormous amount of blood The fragment entered the left thigh just 3 inches below Poupart s ligament, and the piece is still in the leg There was a great deal of swelling and a good deal of disability at first The leg did not change in colour, but he was very weak from loss of blood The wound did not suppurate. Captain Mowat noticed the swelling in the left leg and felt the murmur He was at Sheffield from Oct 23rd to Dec. 10th, and gradually got well. Captain Mowat took a remarkable phonograph record of the murmur, which I heard a few weeks ago at Sheffield

Now the man is healthy looking, of good colour, he limps on the left leg, there is no swelling or discolouration The left thigh looks a little smaller than the right, particularly in the antero-lateral region There is a healed wound just 3 inches below Poupart s ligament in the lower end of Scarpa's space, where there is a diffuse swelling not very marked, and then a little groove like wasting in the line of the femoral artery The greatest prominence is at the site of the entrance of the bullet The pulsation is diffuse, but does not extend above Poupart's ligament The veins are not greatly distended, but the internal saphenous is visible, and those on the left side are larger than on the right

On palpation the characteristic thrill is felt of maximum intensity over the injury, and it is felt down the course of the femoral There is a slight firm induration just beneath the scar, but not a definite tumour Pressure on the femoral stops the pulsation at once The thrill is felt above Poupart s ligament There is no pistol shot sound to be felt Pulsation in the popliteal and tibials not palpable. On auscultation a machinery murmur of extraordinary intensity is heard of maximum intensity at the site of the injury, propagated down the femoral heard in the popliteal The arteries are not sclerotic and the heart sounds are clear

Major Mallam's case is an exact counterpart

Bullet wound of the thigh on Dec 30th, passing through Scarpa's space Much blood was lost, but the orifices of entrance and exit healed rapidly A large effusion of blood in the upper region of the thigh at first masked the nature of the lesion, and it was not until the swelling subsided that the characteristic signs of arterio-venous aneurysm were noted There are now moderate swelling in Scarpa's space, pulsation palpable, thrill felt with greatest intensity at the point of maximum impulse, and a loud machinery murmur

ANATOMICAL VARIETIES AND RESULTING CHANGES.

We need not take time to discuss the anatomical varieties which are all modifications of two types, the simple tangential opening between an artery and a vein—aneurysmal varix, and the formation

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[10] Opera, Ludg , 1675 p 51

> was the origin of the name aneurysm or dilatation) The other kind arises from the rupture of an artery and the discharge of the blood into the flesh beneath it Aneurysms due to the dilatation of an artery are longer than others, those due to a rupture are rounder In the former there is a thicker layer of tissue, in the latter you can hear a certain *crepitation* if you press them with your finger, while in aneurysms due to dilatation there is no sound
>
> It is foolish to follow the practice of the ancient surgeons and decline to treat any aneurysm, but it is dangerous to apply surgical treatment to all types So we will excuse ourselves from treating aneurysms in the armpit, groin, and neck on the ground that the vessels are large and that it is impossible or dangerous to isolate and tie them We also decline exceptionally big aneurysms, even if they occur elsewhere But we will operate as follows on aneurysms in the extremities, the limbs and the head.
>
> If the aneurysm results from dilatation, we will make a straight incision in the skin the whole length of the vessel, then, after separating the edges of the incision with hooks, we will carefully sever all the membranes between the skin and the artery Then pushing aside with blunt hooks the vein adjacent to the artery, we will expose the dilated portion of the artery on all sides Next, we will introduce the head of a probe underneath, and, lifting the aneurysm, insert along the probe a needle with a double thread, so that it passes beneath the artery We will cut the thread at the eye of the needle, making two threads and four ends of thread, then taking the two ends of one of the threads, we will pass them gently to one end of the aneurysm and tie them with precision Similarly, we will pass the other thread to the opposite end of the aneurysm, and then *tie up* the artery, so that the entire aneurysm lies between the two ligatures Then we will lance the aneurysm with a small incision at its centre, in this way its contents will all be evacuated without any danger of hæmorrhage Those who tie the artery, as I advise, at each extremity, but amputate the intervening dilated part, perform a dangerous operation. The violent tension of the arterial pneuma often displaces the ligatures
>
> If the aneurysm originates in the rupture of an artery, isolate with your fingers as much of the aneurysm as you can, including the skin. Then below the isolated part introduce a needle with a double thread of flax or of gut, after passing it through cut it at the needle's eye, forming two threads Take hold of the two ends of one of these and pass it to the right, there tie it tightly, so as not to slip Pass the other end similarly in the opposite direction—to the left If there is any fear of the threads slipping, pass a second needle with a similar double thread through the same spot, intersecting the first thread and crossing it in the form of the letter X (chi) Cut the threads as before, and tie them like the first ones, so that four threads form the ligature Then open the tumour at its top, and, after evacuating the contents, remove the superfluous skin, leaving the part tied by the threads In this way the operation is effected without hæmorrhage

And I must read Mr Livingstone's comment —

> It certainly is a beautiful piece of lucid writing I felt that if I was alone on a desert island with someone suffering from aneurysm, and the tide had washed ashore sufficient ἄγκιστρα, &c, that I shouldn't have minded trying the operation And Antyllus had real literary power What an admirable phrase is ἐκπτύεται, the "spitting out" of the ligature by the throbbing artery I don't think you can get it in English and I fell back on a lame substitute, "displaces"

Not unjustly does Paul Broca in his great monograph, "Des Anevrismes," claim that not only did Antyllus create operative medicine but the pathology of aneurysm "À chaque ligne on reconnait l'écrivain qui parle de ce qu'il a vu, de ce qu'il a fait"

Decay and Revival of Vascular Surgery

Aetius in the middle of the sixth century describes the method for cure of aneurysm at the elbow, known later as that of Anel (1710), ligation of the brachial artery three or four fingers' breadth below the axilla, followed by opening the sac, which was allowed to heal by suppuration A curious error of Sprengel has led to the connexion of the name of Philagrius, a fourth century surgeon, with this operation In the fragments of this writer given by Aetius aneurysm is not mentioned, but Sprengel never noticed that the extract on aneurysm which follows directly after one upon ganglion by Philagrius did not belong to this author but to Aetius himself

A casual perusal of the fragments of the Greek surgeons of the first three or four centuries of our era as given in Gurlt's "Geschichte der Chirurgie" gives the impression of a great and fruitful period with scores of men whose qualifications were those demanded by Thomas Fuller for the good operator —the eagle's eye, the lion's heart, and the lady's hand Then came the tragedy, the death in the West of the science of the Greeks The Church took over their philosophy, the Arabs absorbed much of the best of their medicine and added to it, but surgery as a progressive science and a successful art died with its founders, the great Greeks of the Græco Roman Empire So far as the surgery of arteries is concerned we might take a jump of a thousand years or more were it not for an Arabian, Albucasis of Cordova (tenth century), who wrote a famous surgical treatise, of which we have in the Bodleian the two earliest manuscripts A young scholar of Wadham and student of Christ Church, John Channing, in 1778 issued from the Clarendon Press a beautiful edition The description which he gives of aneurysm with its treatment is practically that of Antyllus He notes the stridor to be felt, which indicates that he was probably dealing with the arterio venous form

In vascular surgery the men of the Middle Ages and of the Renaissance, Henri de Mondeville, Guy de Chauliac, and even Ambroise Paré, were blind followers, who never even approached the position of their masters Not much more than a century has passed since men of the John Hunter type took up vascular surgery where Rufus and Antyllus had left it, and only to this generation of experimental surgeons, such as Eck, Ballance, Matas, J B Murphy, Halsted, Carrel, and Guthrie, could the best of the Greeks go to school. You may think perhaps, that I am scarcely just to the great mediæval surgeons, particularly to such a master as Ambroise Paré, who reintroduced the ligature, but in vascular surgery, the touchstone of the position of the art, they never wholly regained what the profession had lost

Our modern knowledge dates from William Hunter, in whose "Medical Observations and Enquiries,"[8] in a paper on Aneurysm of the Aorta he asks, "Does it ever happen in surgery when an artery is opened through a vein that communication or anastomosis is afterwards kept up between the two vessels?" He then describes, in a case following bleeding, the swelling, enlargement of the veins, and "a tremulous jarring motion" strongest at the part that had been punctured In a subsequent paper, 1761,[9] he described two cases very fully, and recognised the enlargement of the arteries and of the veins and the characteristic hissing noise "as if there was a blast of air through a small hole and interrupted, answering precisely and constantly to the stroke of the heart or diastole of the artery"

It is true that in the seventeenth century Sennertus, the distinguished Wittenberg professor, much rougher, covered with a thicker growth of hair, and in long standing cases varicose ulcers are common

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[8] London vol i 1757

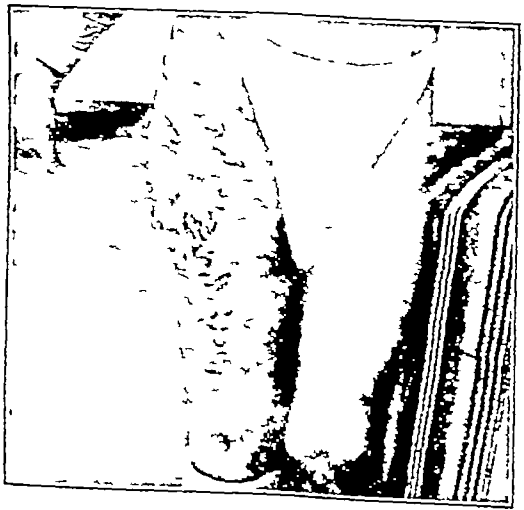
[9] Further Observations upon a particular Species of Aneurysm, Medical Observations and Enquiries, London, 1761

On *palpation* the characteristic thrill is felt, vibratory, rough, continuous, and increasing in intensity with the diastole of the artery Except in its roughness it is quite unlike any other thrill felt in cardio vascular lesions, and is pathognomonic. It has an interest, too, as one of the oldest of recognised physical signs, having been described by Antyllus While of greatest intensity at the site of the lesion, it may be widely diffuse and even felt at the finger tips in an axillary or brachial aneurysm, and at the toes in a femoral In the patient seen with Mr Wright[14] at Chester a few weeks ago, there was an additional physical sign which I have never before noted, nor in looking pretty carefully through the literature do I see it mentioned—a pistol shot sound of great intensity, exactly such as one feels and hears in aortic insufficiency It was an arterio venous aneurysm of the popliteal vessels caused by a bullet wound on Jan 29th The note which I dictated was —

> On palpation an intense vibratory thrill, continuous, with diastolic intensification is felt over the area of pulsation not below the middle of the leg The striking feature is the pistol shot shock felt during the diastole of the vessel, exactly resembling that which one hears and feels in the femoral in aortic insufficiency It is felt only over the area of pulsation, not in the femorals, and there is no valvular disease In addition, one feels the strong, firm, aneurysmal pulsation

In the second case at the American Hospital, Paignton, there was no pistol shot sound over the popliteal tumour, but one of great intensity could be heard, without the slightest pressure, over the femoral artery On the other side it could be brought out only with pressure of the stethoscope

FIG 3

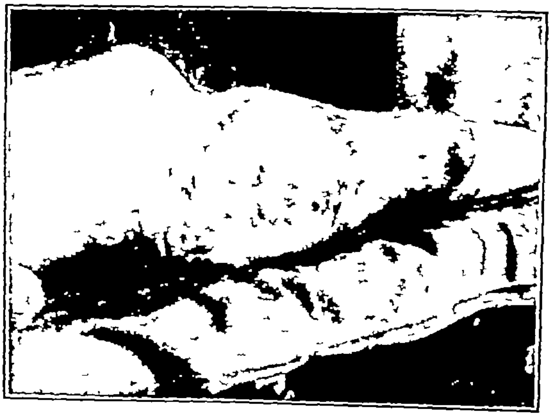


CASE 1.—Arterio-venous aneurysm of the femoral vessels of 20 years standing

In the early stages the tumour may not be large, or where it is simply an aneurysmal varix little or no swelling may be present If there has been effusion of blood the tumour, as in Major Mallam s case may diminish considerably in size Subsequently the diffuse swelling may be largely venous, but a circumscribed tumour may be either sacculi in connexion with the vein or artery, or sacculi at some distance from the original site of the injury, and there is not infrequently aneurysmal dilatation of the artery above the lesion

On *auscultation* the second characteristic physical sign is heard—a loud, rough, humming-top murmur, continuous, with marked intensification during the cardiac systole During distension of the vessel the murmur is rough, harsh, and vibratory, during its contraction it has a graver, deeper quality It may be widely diffused, heard up and down the vessels even to the finger tips in the brachial and axillary aneurysms, and to the toes in the femoral It may even be intense enough to be heard at some distance from the site of the aneurysm

FIG 4



Same patient as Fig 3 showing the varicose veins and two huge venous sacculi one above, the other below Poupart's ligament.

Practically these are the three great physical signs of arterio venous aneurysm the dilatation of the veins, the thrill, and the murmur Other minor features may be mentioned—absence or lessened pulsation below the site of the tumour, the remarkable influence of posture on the venous engorgement, the pulsation in the peripheral distended veins, the frequency with which phleboliths and thrombi may be felt

COLLATERAL CIRCULATION

From the surgical standpoint it is important to determine the adequacy of the blood supply beyond the lesion. Recumbent the legs, for example, may look alike, but within a few minutes after assuming the erect posture the one on the side of the lesion may become dusky in colour, and the veins dilate It is not easy to determine the blood pressure in the arteries below the lesion. Korolkow uses a modified Gärtner s tonometer, and Matas lays down the rule —

> If the peripheral blood pressure is shown by the manometer (a modified Gärtner s tonometer) to be normal or well sustained after compression of the main trunk above the aneurysm then the obliterative operation may be safely applied. If on the other hand, the blood pressure falls to zero it is evident that the collateral circulation is inadequate and that no chance should be taken with the obliterative operation or with any procedure whatever (ligature, extirpation &c.) which would permanently occlude the parent artery[15]

Another test is after application of an Esmarch bandage apply pressure on the artery above the aneurysm, and note the state of the circulation and the time taken for the skin vessels to fill In one of the Paignton cases (popliteal) in the sound leg it took three minutes to obliterate the anæmia of a sac communicating with both vessels—varicose aneurysm The accompanying diagrams (Figs 1 and 2) from Lexer's "Handbuch der allgemeinen Chirurgie" show all possible forms

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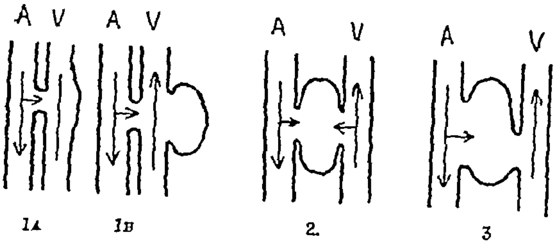
[14] On March [illegible] Mr Wright operated tying the artery above and below and closing the direct orifice into the vein There was no sac. The vein was unusually large

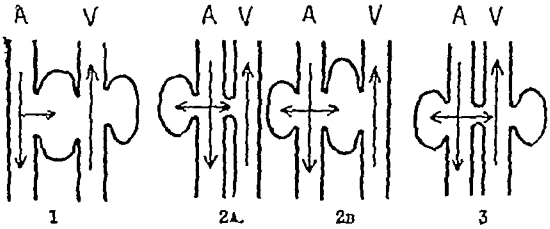
[15] Keen s Surgery vol v p 273

FIG 1.



1 Arterio-venous fistula without (1A) and the same with (1B) a venous sac—varix aneurysmaticus 2. Arterio-venous aneurysm with false intermediary sac—aneurysma varicosum 3 Arterio-venous aneurysm with arterial sac Secondary arterio-venous aneurysm

FIG 2



1 Arterio-venous aneurysm with false intermediary sac and varix on outer side of vein due to double injury of the latter 2. Arterio-venous aneurysm with immediate communication (A) or with false intermediary sac (B) and with a false arterial aneurysm due to a single venous and double arterial injury 3. Arterio-venous fistula with opposing sacs due to a double injury of both vessels.

The changes that follow are (1) The blood current is reversed, to a certain extent, in the veins, (2) the blood pressure is increased in them, (3) their walls become arterialised, and (4) the blood pressure in the artery is heightened on the proximal and lowered on the distal side of the lesion In smaller vessels very slight changes occur I show you a drawing of an aneurysmal varix of the anterior tibial vessels from a case in the Strassburg clinic, in which a year after the accident the vein was little if at all dilated In lesions of the vessels of the neck and arms the venous stasis is much less than in the legs, in which the effect of gravitation is so felt that year by year the changes become more pronounced, until, as in the photographs I show, large varicosities and sacculi are formed Femoral and popliteal arterio venous aneurysms may last for years without great involvement of the veins, but in a majority of the cases venous stasis forms the most serious sequel of the disorder

The changes in the arteries on the proximal side of the lesion are less striking, but sooner or later sclerosis occurs with dilatation, and sometimes with saccular aneurysm opposite the orifice of communication. Even within two months of the injury the femoral artery may be felt to be larger and with stronger pulsation (Paignton case) Remote effects on the general circulation are rare, particularly in aneurysms of the vessels of the head and arms One of my patients (Case 3) died from heart disease which may have had some connexion with his long standing lesion. In the leg progressive dilatation of the vessels may lead to serious effects In the case of Captain Mosher,[11] wounded in the middle of Scarpa's space 1898, at the time of death (1911) the dilated arteries extended from the bifurcation of the common iliac to the lower third of the thigh Hypertrophy of the heart followed, and death from progressive failure of the circulation

PHYSICAL SIGNS

In no form of aneurysm are the physical signs so distinctive *Inspection* may not show much, as in the cases you have just seen diffuse pulsation at the site of the communication, moderate swelling, but not necessarily any early venous engorgement

In the carotids, subclavians, and axillaries the condition may persist for years without much swelling or great enlargement of the veins On the other hand, in the form that was so common at the bend of the elbow in venesection days the circulation is much interfered with Even in smaller vessels such as the occipital the venous swelling may be enormous, as in a patient operated upon by Dr Cushing at the Johns Hopkins Hospital in 1905 This case illustrates, too, the progressive nature of the lesion, as year by year the vessels on the side of the head grew larger, and after seven years they formed a large pulsating mass which had to be resected, after ligation of the external carotid artery[12] In the leg, particularly in the situation in the cases you have here seen, venous engorgement sooner or later dominates the scene, and after some years the appearance may be very remarkable, as in the following case

CASE 1 *Illustrating the development of enormous venous sacculi* —The patient, aged 31, was shown at the Johns Hopkins Hospital Medical Society on Jan 16th, 1905 In his eleventh year he had a knife wound just above the right knee, not long after pulsation was noticed along the femoral artery, with marked swelling He has had good health, with very little disability, except from the increasing varicose veins, which sometimes burst and caused troublesome bleeding The leg presented a very remarkable appearance, as shown in Figs 3 and 4 The superficial veins were everywhere varicose, those of the antero-lateral aspect of the thigh were of enormous size, extending into the flank, and many of them were filled with thrombi. The course of the femoral particularly in Scarpa's space was occupied by a prominent pulsating tumour, the outline of which can be just seen in Fig 4 Over this there were an intense thrill and a loud humming murmur with systolic accentuation, pulsation was everywhere forcible Above Poupart's ligament, lifting the entire iliac fossa and extending into the hypogastrium, was a second tumour, in which the pulsation was very strong, a marked thrill, and the same loud murmur The size of the tumour which extended fully 8 inches transversely, can be well seen in Fig 4 It increased in the sitting posture The patient said this had been present for many years, but had he thought, increased in size It felt very solid and firm and the pulsation was extensile and strong His only serious disability was from the varicose veins

The tumours both above and below Poupart's ligament were huge venous sacs When I demonstrated this case a doubt was expressed whether these really could be venous sacs, but there are many specimens, as in the one I refer to of Dr Beaumont, and cases are recorded showing a similar condition A recent one was reported by Eisenberg[13] of a man, aged 65, wounded 18 years before in the thigh, and in addition to great dilatation of the femoral vessels there was a sac 3 inches in diameter of the iliac vein above Poupart's ligament Additional features that may be noticed on inspection are the increased size of the limb, an actual increase in growth has been noted by Broca in the young, the skin may be

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Reported in Lagarde's Gunshot Injuries 1914 p 281

[12] Journal of the American Medical Association Dec. 23rd 1905

[13] Ibid. Dec 13th 1913

perforation at the same level A probe could be passed from the artery into the vein through these apertures On the inner side and in front of the artery and vein, and communicating with both, was a sac 12 cm. in diameter formed of dense fibrous tissue and lined by a granular deeply pigmented clot "This sac does not form the communication between the vessels although the probe passes readily through either into it nor are they (i.e , the sac and the vessels) directly united, but rather by way of a small space or vestibule which lies in front of the orifice of the sac " The veins were enormously distended both above and below the level of the communication

Evidently this large venous sac, which communicated freely with the artery, formed the pulsating tumour to be felt in the front of the thigh

4 *Rupture* may occur with fatal hæmorrhage, of which a number of cases are recorded.

Disability from Varicose Veins and Thrombosis

5 In the crural vessels progressive disability may result from the varicose veins, thrombosis, and ulceration When left too late the condition of the vessels is unfavourable to operation and specially favourable to thrombosis—the surgeon s chief danger These accidents are well illustrated in the following case.

CASE 5 —A man, aged 34, whom I saw with Dr Halsted and Dr Bloodgood, was admitted in May, 1897 Eight years before he was shot in the popliteal space He did not notice the tumour for a year It was a large spindle-shaped mass filling the popliteal space, with a well marked continuous thrill felt over the tumour and far down the leg The femoral artery was ligatured in Hunter s canal. The leg became gangrenous and had to be amputated On dissection, just where the femoral becomes the popliteal there was a communication between the vein and the artery, an opening 1 cm in diameter Opposite to this on the wall of the artery was a sac measuring 2 by 3 cm. Above the opening the veins were greatly distended and dilated, with thickened walls At the time of the operation it was noted that some of them were thrombosed and there was a small clot in the artery, and the communication between the artery and the vein was also closed by a small thrombus

Widespread thrombosis probably accounts for the sudden onset of swelling and disability of a limb many years after the accident Evidently this happened in the remarkable case reported by Rokitansky[1]

A man, aged 62, admitted Nov 28th, 1842 was in 1809 shot in the shoulder The bullet was removed, but some grains of shot remained. He recovered, but had always a cramp-like feeling in the tips of the fingers of the left hand. For two years there was an increase in the size of the whole arm which had increased rapidly in the six weeks and on admission was œdematous and cold with the skin of a dark red colour In the arm pit was an old pulsating tumour the size of a hen s egg, with marked thrill. The subclavian was tied on Sept. 23rd. He died 15 days afterwards of secondary hæmorrhage There was an arterio-venous aneurysm of the axillary vessels, which were greatly enlarged and sclerotic and there was a clot in the veins.

And lastly, the vascular tissue involved in the aneurysmal area may take on a nævoid growth. Apart altogether from arterio venous aneurysm, the entire vessels of a limb, arteries and veins, may take on active growth, as in the extraordinary specimen of macroangiosis of the arm in the Charing Cross Hospital Museum, in which the growth of the vessels followed an injury This has happened in certain cases of arterio venous aneurysm of the vessels of the head, and though the orifice of communication may be small, within a few years the vessels (as in Cushing s case already referred to) may become enormously enlarged much more than can be accounted for by any increase in pressure

TREATMENT.

It is not my place to speak of treatment, but we all agree, I think, with the conclusion arrived at by Subbotich, senior surgeon of the Belgrade State Hospital, from his experience in the Balkan War, "that arterio venous aneurysms should be operated upon, as they offer small prospect of spontaneous cure, although they often remain stationary for a long time and cause relatively little trouble " It is a good deal a question of situation and technique As the cases here reported indicate, with the lesion of the axillary and subclavian vessels good health may be maintained for years without any serious trouble, but there are always risks, particularly of thrombus formation in the distended veins, and even after lasting 30 or 40 years serious trouble may arise Urgency is greater in the case of the lower limbs, and I should say that it would be very much safer in the two cases we have just seen to operate before the venous engorgement becomes excessive

A new and truly marvellous technique has been developed in vascular surgery, very largely owing to the work of Alexis Carrel, and the increasingly favourable results in this all important department of surgery have followed directly upon animal experimentation It is not too strong a statement to make that up to date vascular surgery cannot be done in a hospital whose younger surgeons have not full opportunities to experiment upon animals The extraordinarily delicate technique of vascular suturing is an art acquired only with much practice It is a chapter in the history of surgery of which our colleagues may be proud. I was greatly impressed with the statistics given by Matas at the last International Congress of Medicine dealing with operations on aneurysm generally

Of the 225 cases collected 194 affected the lower limb, 23 the upper limb 4 involved the carotid artery, 4 the abdominal aorta. Of the whole number, 53 3 per cent were aneurysms of the popliteal As to the operation involved, in 150 cases the obliterative operation was done, in 50 the restorative, and in 25 the reconstructive. Of the 225 cases 206 were successful, in 4 cases gangrene followed, and all four operations on aneurysms of the abdominal aorta were followed by death.[18]

Within the next year there will be greater opportunities for vascular surgery than have ever before been offered The results of the last wars should be carefully studied by our surgeons, those given by Stevenson for the South African, by Saigo for the Japanese, and by Subbotich for the Balkan The statistics will be found in great detail in the monograph by Monod and Van Vert.[19] They are also given by Sir G H. Makins in the Bradshaw lecture on Gunshot Injuries of the Arteries,[20] 1913, in Bernheim's (of the Johns Hopkins Hospital) recently issued monograph on "Surgery of the Vascular System",[21] and may I refer the younger army surgeons to the section on aneurysm in "Keen s Surgery" by that modern Antyllus, my old and valued friend Rudolph Matas, of New Orleans.

In conclusion, may I put in a plea for the museums? Specimens should be sent to the Army Medical Museum, Millbank, and to the great Hunterian Collection at Lincoln's Inn Fields, and may I ask that very careful reports of the cases be sent to the Central Committee for preparation of the medical and surgical history of the war, 34, Guilford-street, Russell square, London W C caused by the bandage while the femoral was compressed above Hunter's canal, but in the affected leg the skin vessels of leg and foot were filled within a minute! The femoral artery on this side felt larger and had a much more powerful pulsation

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[1] Observation 45 of his great monograph, Ueber einige der wichtigsten Krankheiten der Arterien.

[18] THE LANCET August 23rd, 1913, p. 559

[19] Revue de Chirurgie vols xli. and xlii., 1910

[20] THE LANCET Dec 20th 1913, p 1743

[21] Lippincott Company, 1913

RESULTS

Left alone, what becomes of these cases? Much depends upon the position of the aneurysm Those in the upper extremities are more favourably situated than in the lower The following may happen —

Non Intervention followed by Good Results

1 The aneurysm may remain unchanged for years and interfere little, if at all, with the patient's health and vigour Particularly is this the case with the cervical and axillary vessels Case 3 of my series illustrates this in a remarkable way, as for years he rowed in races and lived a very athletic life Case 2 also illustrates the wisdom of non intervention

CASE 2.—On April 9th, 1900, Dr *Alderson* sent me from Russelville, Kentucky, a man, aged 29 On the night of Jan. 5th he had received four bullets, one in the left shoulder, one in the back of the left arm, one in the left lower axillary region, and the fourth, the important one, entered the middle of the fold of the left trapezius muscle, passed inwards and downwards in front of the spine, and came out under the right clavicle All the wounds healed rapidly, but at first he had some difficulty in swallowing The right supraclavicular fossa was occupied by a pulsating swelling extending for about 7 cm upwards and outwards There were a marked thrill and a loud humming top murmur with systolic intensification, which was heard up the neck and down the vessels of the arm The bullet could be felt just below the clavicle The tumour had increased, and the question was whether it was safe to leave him alone This was the policy I urged strongly Twice he narrowly escaped operation Two years afterwards I heard from him and he remained well, the tumour was somewhat smaller, but the bruit was still a little troublesome Five years after the accident I heard again He had remained well, the tumour had not increased in size, and he was able to use his arm and do everything

Spontaneous Healing

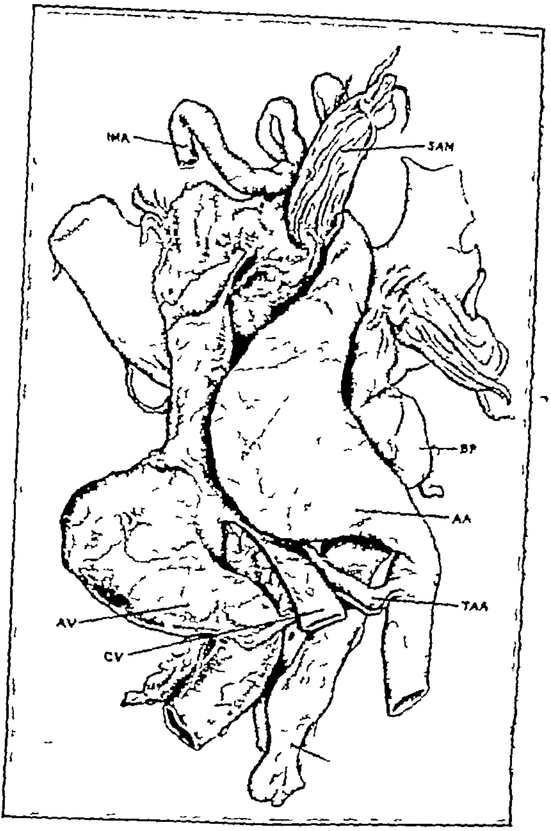
2 Spontaneous healing may occur, the orifice closing between the artery and the vein This must have happened in Case 3, as a careful dissection by Professor J J Mackenzie, of Toronto, failed to demonstrate any communication between the greatly dilated vessels As such a mode is rare, I give an abstract and a sketch of the dissection (Fig 5)

CASE 3 —I reported the case originally in the *Annals of Surgery*, 1893 In 1878 the man, in running down a sloping grass plot, fell and forced a lead pencil into the arm pit, a gush of blood followed and the arm became black and blue to the wrist The aneurysm involved the axillary vessels He subsequently lived a very athletic life, rowed in the Argonaut Boat Club, and served in the South African War, where he came under Sir G H Makins's care He was invalided in consequence of a sudden pain on the left of the head and neck, and the patient was positive that the tumour had enlarged. He wrote to me on Oct 17th, 1904, saying that he had marched 610 miles in 32 days and fought 16 battles, with the result of increasing his aneurysm very materially, particularly at the base of the neck. He died in May, 1909, 31 years after the accident, of gradual heart failure

There are many cases in which the condition has lasted quite as long as this with equally good health, but the special point of moment in this case is that in the careful dissection of the vessels made by Professor Mackenzie no communication could be found between the greatly dilated axillary vessels The final report in this case was given in THE LANCET of Nov 1st, 1913. Closure of the orifice is exceedingly rare Another case is reported by Pluyette[16] —

A man, aged 33, applied in October, 1904, with a traumatic arterio-venous aneurysm of the right subclavian produced by a revolver bullet The physical signs were of the usual character On Nov 15th he returned to the hospital, having had severe pains in the right hand and arm during the night The parts were cyanosed, the pulse was scarcely palpable, but what was most remarkable was the disappearance of the thrill and murmur over the site of the aneurysm There was pain in the course of the arteries, particularly the axillary and the brachial The radial appeared to be large and hard, and there was no pulsation It seems to have been an instance of cure by the formation of a thrombus in the arteries

FIG 5



CASE 3 —Arterio-venous aneurysm of the axillary vessels thirty-one years after the injury S.A.M., Scalenus anticus muscle B P, Brachial plexus. A.A, Axillary artery T.A.A., Thoracico-acromial artery C.V, Cephalic vein. A.V, Axillary vein I M A Internal mammary artery

Occurrence of Sudden Death

3 Sudden death may occur, either from heart failure or from embolism Nothing was found to account for the sudden death in Case 4 of my series

CASE 4 —A man, aged 29, admitted in November, 1904, had received 15 years previously a pistol shot in the lower third of the thigh, following this a tumour appeared which had been present ever since There was much disability owing to enlargement of the leg, with great distension of the veins much lividity, and a persistent ulcer above the ankle. He died suddenly, apparently of syncope Clinically there was a large pulsating tumour at the lower end of Scarpa's triangle, not easily compressible, with a continuous machinery murmur and a thrill transmitted up and down the leg Anatomically the condition found by Dr Rufus Cole and Dr W G MacCallum was very remarkable The femoral artery was dilated, and at the beginning of the lower third of the thigh presented two perforations separated by a narrow bridge of tissue, the femoral vein just opposite showed a output by the urine, whereas in thymusectomy, just as in starvation and diabetes, the chief route of excretion is the urine In this connexion it should also be remembered that in osteomalacia there has frequently been reported an increased calcium output by the urine (von Noorden[16])

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[16] Bulletin et Mémoires de la Société de Chirurgie de Paris, 1905.

The study of the calcium metabolism also makes it very unlikely that a deficiency of fat in the diet is *the cause of the trouble* Freund[17] has shown that while cod liver oil increases the percentage retention of the calcium of the food, milk fat, on the other hand, causes an increased excretion of the salt, which is just the state of matters obtaining in active rickets And, further, it is interesting to note that Rosenstern[1] records the case of a child that developed rickets while on a diet rich in fat

That rickets is of the nature of an infection is a most seductive theory and one against which it is most difficult to argue Its geographical distribution, its seasonal incidence, and the factors of hygiene which favour its appearance recall very forcibly the behaviour of endemic cretinism, and also that of typhus fever, both of which diseases are probably infectious There is, however, a dearth of experimental proof in favour of such a conception, and in any case, whether the etiological factor is of the nature of a microbe or not, the infectiousness of the disease is certainly not great, since rachitic and non rachitic children can be housed together without the latter running any risk of contracting the disease

Some years ago I carried out an experimental research into the etiology of rickets, and came to the conclusion that the disease could be induced in animals by confinement These results were embodied in a paper published in the *British Medical Journal* in July, 1908 I may perhaps here mention that Schmorl had an opportunity of examining my specimens, and he expressed the opinion that the bone changes were identical with those found in human rickets From my experiments there was no evidence whatever that deficiency of fat, or any other dietary error, was a factor in the etiology All the animals to which a fat poor diet had been given developed marasmus, and after death none presented signs of rachitis, whereas those allowed a liberal diet of milk and porridge, but deprived of exercise, became markedly rachitic This is, of course, directly opposed to the earlier teaching of Bland Sutton, whose experimental results have never been questioned in this country, and have more or less dominated the pathology of the disease ever since

Bland Sutton s experiments were carried out in the Zoological Gardens, London, where previous to his researches it had been found practically impossible to rear young animals without them developing rickets He found that the young were usually fed on lean horseflesh and bones, but as their teeth were not sufficiently strong to crush the bones and thus extract the marrow, he concluded that the diet must necessarily be very poor in fat To counteract this defect he administered cod liver oil and by this change in the diet alone he reports that he was successful in rearing young animals free from rickets It is interesting to find, however, that rickets is still a common disease in zoological gardens (in those of London and Glasgow to my own knowledge) and that the superintendents of these institutions do not find it possible by the administration of cod liver oil to hinder its ravages

So far as I am aware there is only one zoological garden, at least in Europe, where rickets does not prevail, and that is the most excellent one of Carl Hagenbeck, situated on the outskirts of Hamburg There the conditions are made to simulate the natural home of the animals, which are not kept cooped up in cages but allowed to roam about freely in parks enclosed by high railings Trees, earth, and rocks from the natural haunts of the animals are utilised to make the place of exile as like the home conditions as possible It is not likely that this latter factor has anything to do with the prevention of the disease, and to my mind it is due to the avoidance of "domestication," which, in von Hansemann's opinion, is the chief etiological factor According to this author, who has written one of the most interesting papers on the subject within recent times, it is the herding of animals under unnatural conditions which induces the disease, and the more remote these are from nature the more powerful is their effect Von Hansemann has come to this conclusion not only from a consideration of the disease as it occurs spontaneously in the human and animal worlds, but also from that experimentally induced He remarks in his paper that rickets is unknown in Japan, and in consequence he thought that country a suitable place for conducting experiments Through the good offices of one of his Japanese students he got a young wild monkey captured and confined in a cage, and when curvature of the limbs appeared had it sent to him in Germany, where he made a careful histological examination of the bones The bone changes he describes as identical with those met with in human rickets, and he concluded that they had been brought about by the confinement

Since the publication of my paper I have heard of several instances in the animal world where confinement or deficient exercise was responsible for the development of rickets, or at least a disease clinically closely simulating it Dr John Fergus, of Glasgow, at a discussion on this subject before the Glasgow Medico Chirurgical Society, related how during the summer his son and niece each had a fox terrier pup of the same breed and of about the same age His son was able to run about with his pet and thus it obtained plenty of exercise, but his niece, who was unable to do this, had her favourite tethered to a garden seat in order that she might always have it by her Both were fed exactly alike so far as could be ascertained, and the only difference in the treatment of the two animals seemed to be in the amount of exercise allowed. By the end of the summer the boy's dog was a fine healthy animal, whereas that of the little girl had become so deformed from what Dr Fergus described as rachitic curvature of the bones that it had to be destroyed

The following is an extract from a letter which I received from a farmer on the West Coast of Ireland

> I have learned of a case of rickets in a pup about which I am sure you would like to hear This pup was fed on a perfect food—new milk, but from the very start was kept confined in the bottom of a barrel, where it was quite

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* Since the publication of Hansemann s paper several reports have appeared on the question of rickets in Japan. In the year 1906, while examining recruits, rickets and osteomalacia were accidentally discovered by Ogata in the Province of Toyama, which is situated on the western shore of the north island It would seem that the disease is endemic in this region and according to folk lore to have existed for at least 50 to 100 years. The land is low lying very moist and badly irrigated and the houses are not so well lit or ventilated as in the rest of Japan To these factors Ogata is inclined to ascribe the disease and as a prophylactic measure he suggests that these defects should be removed as far as possible

THE ETIOLOGY OF RICKETS

A STATISTICAL STUDY OF THE HOME CONDITIONS OF 400 TO 500 RACHITIC CHILDREN

BY LEONARD FINDLAY, M D , D Sc Glasg ,
VISITING PHYSICIAN ROYAL HOSPITAL FOR SICK CHILDREN GLASGOW

ALTHOUGH it is now over 300 years since Glisson first described "The Rickets," the reason why the bones are deficient in calcium still remains obscure, but so carefully had this pioneer observed the symptoms of the disease that little, if anything, of clinical interest has been added to his classical description Bland Sutton[1] and his followers, who include the majority of English and American writers, believe that the cause lies in some error of diet, most probably a deficiency of fat Marfan[2] has been preaching for many years that it is due to auto intoxication from the intestinal canal, while von Hansemann[3] puts it down to what he classes broadly as domestication There are others again —e g , Moussu[4] and Koch[5]—who have considered rachitis to be of the nature of an infection, and finally, Basch,[6] Matti,[7] Klose and Vogt,[8] and Stoeltzner[9] are of the opinion that the disease arises from an absence of one of the internal secretions

It is admittedly very difficult to draw conclusions from clinical observations, and especially is this so with regard to the matter of diet in the class of child that suffers from rickets, and accordingly much experimental work has been done towards the elucidation of the problem. In order, however, that one may give due weight to the very various conditions under which different workers have sought to engender the disease, it is necessary fully to appreciate the criteria by which a diagnosis of rachitis can be confidently made For this end a careful histological examination of the bones is essential In a growing bone the trabeculæ are composed of calcified tissue studded throughout with bone cells and surrounded by a narrow rind of structureless tissue The extent of this zone of structureless, or so called osteoid, tissue varies with the rate of growth, being more abundant the more rapid the growth, but in rachitis it becomes excessive and may be even more abundant than the true bone itself It is the presence of this osteoid tissue, which may in places almost entirely replace the bony trabeculæ, that is alone pathognomonic of the disease

Careful microscopic examination has demonstrated two facts—viz , that all examples of spontaneous and experimental rickets in animals described by veterinarians and experimentalists are not identical with the disease as met with in man, and that merely naked eye or chemical examination of the skeleton (as pointed out by Schmorl[10] and Stoeltzner[11]) has been the cause of a great deal of misconception in the subject Depending on naked eye examination, as is well known, was the reason for confusing for so many years congenital syphilitic and rachitic osseous changes

One cannot lay too much stress on the importance of the histological picture of the bone lesions, nor on the help which a true appreciation of these changes has given us in the valuation of the experimental work of the past and must give us in the experimental work of the future This same factor, however, has unfortunately tended to confine interest to the bone changes, with the result that the question of general metabolism has been overlooked From chemical examination of the bones and tissues it would appear that in rickets there is a serious error of the calcium metabolism consisting in the inability of the body to utilise this salt, which as a rule is present in the diet in sufficient amount Though the poverty of the calcium is found chiefly in the bones, it exists to a certain extent in the other tissues as well

It is by the investigation of the calcium metabolism alone that a diagnosis is possible in the earliest stages of the disease—i e , before any bone or other gross changes have presented themselves, and it is the only method during life by which one can declare with certainty that the disease is active During this period of the disease more calcium is excreted in the urine and fæces together than is ingested with the food, and by watching the behaviour of this calcium interchange the influence of certain factors, curative and otherwise, can be studied. Unfortunately, with the facts at present at our disposal, it is impossible to say whether the calcium, being mainly excreted in the fæces, passes for the most part through the intestine without being absorbed, and is thus conveyed to the tissues in insufficient amount, or whether, as in osteomalacia, a disease considered identical with rickets by many authorities—at least so far as its histology is concerned (Schmorl)—the bones and tissues are unable to fix the calcium which is brought to them in abundance by the circulating blood

Dibbelt[12] inclines to the former view, but the histological examination of the lesions induced by feeding animals on a diet poor in calcium does not substantiate his contention Soft bones can most certainly be obtained in this way, but there is a complete absence of the characteristic osteoid tissue The trabeculæ are thinner and more widely separated than normally, but nature has made the most of the material at her disposal, and all the trabeculæ are perfect in their formation

The latter theory is therefore more likely, and it is not improbable that the power of the bones and tissues to retain the calcium is dependent on a hormone, the product of some ductless gland This view of the subject ,has been suggested by Stoeltzner,[9] who reported rapid improvement in his cases by treatment with suprarenal extract Subsequent workers, however, have not confirmed his results More recently Basch, Matti, Klose and Vogt have indicted the thymus gland, and a few months ago Garrod[14] made a strong plea for the hypothesis that some affection of this organ is responsible for rickets A considerable amount of experimental work has been done on this aspect of the subject, but the results are so contradictory that judgment must be reserved for the present There seems no doubt that the bone changes after thymusectomy described by Matti are of a rachitic nature, but that they are dependent on the removal of this structure is not so certain After the operation the animal becomes very lethargic, and the osseous changes do not appear for some considerable time after Hart and Nordmann[13] state that so long as the animals are allowed a sufficiency of exercise no bad effects from thymusectomy are noticed, and Pawlow[15] some years ago drew attention to the tendency to softening of bones in dogs subjected to operations for biliary, pancreatic, and intestinal fistulæ Moreover, in rickets and thymusectomy the calcium metabolism shows definite differences In rickets the calcium is chiefly excreted by the fæces, there being a diminished

Intestinal troubles (Chart 2)—As mentioned above, Marfan holds that an intestinal auto intoxication is the source of the trouble, and states that almost invariably there will be obtained a history of some gastro intestinal disorder for a considerable time before the onset of the disease My statistics certainly do not support this teaching, since in by far the largest number of the cases the condition of the bowels was described as regular Although it must be admitted that gastro enteritis is a not infrequent condition in the class of child which supplies most examples of rickets, marasmus is a more frequent sequel, and marasmic children, as is well known, are not prone to the disease

CHART 3

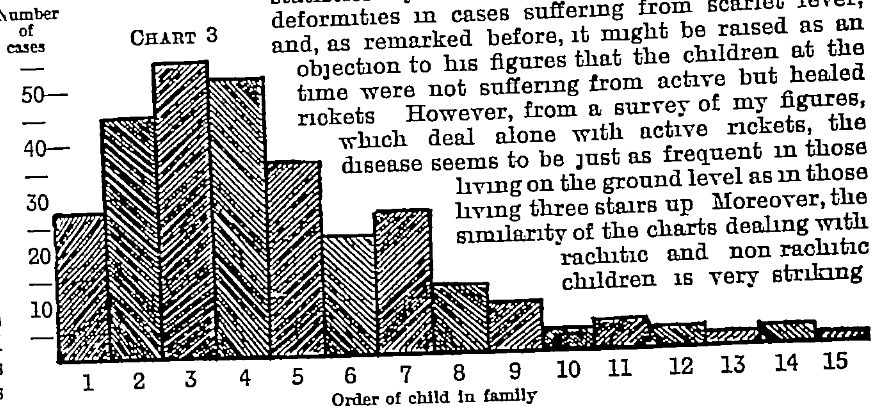
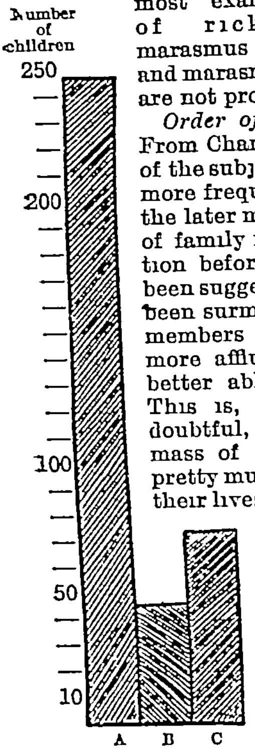


CHART 2.



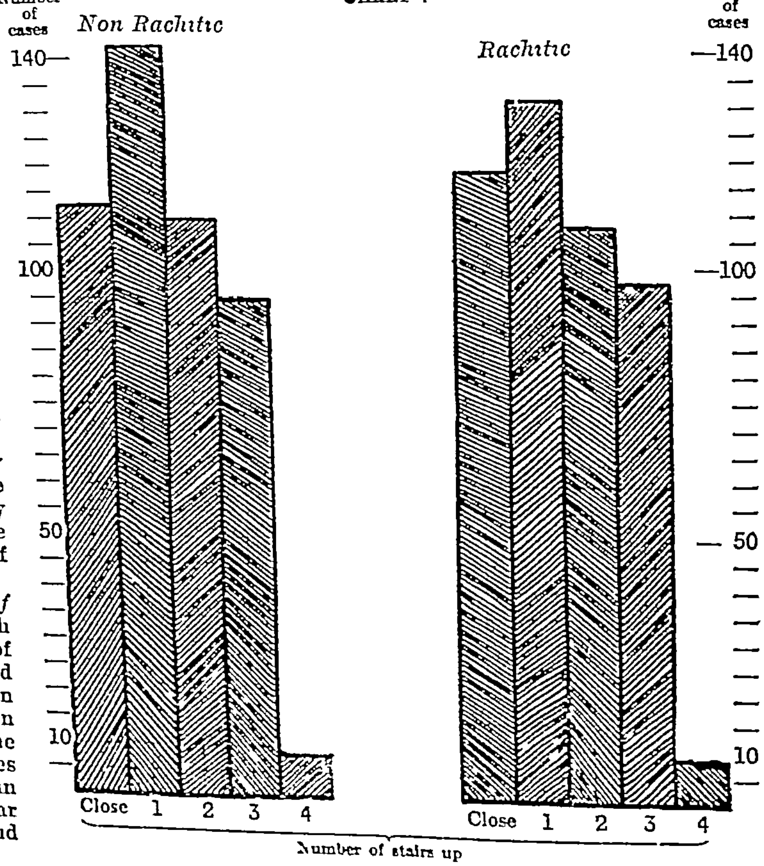
Condition of bowels previous to onset of rickets A Regular B Constipation C, Diarrhœa

Order of the child in the family—From Chart 3, dealing with this aspect of the subject, it will be seen that rickets more frequently attacks the earlier than the later members of a family This type of family incidence has attracted attention before, and several reasons have been suggested to account for it It has been surmised that by the time the later members are born the parents are in more affluent circumstances and thus better able to feed and house them This is, however, very doubtful, as the great mass of the poor earn pretty much the same all their lives Again, it has been suggested that the rarity of the disease in the younger members of the family is due to the fact that they are nursed and taken out by their older brothers and sisters, which is, in my opinion, a more likely explanation It is not improbable, however, that this peculiarity of family distribution is more apparent than real, and is entirely explained by the fact that the majority of families are composed of only four or five children

Situation of house number of stairs up (Chart 4)—If want of fresh air plays any part in the etiology of rickets, one would not be surprised to learn that children living in top flat houses, being probably taken out little, were more prone to the disease than those occupying houses on the ground level McGregor in his investigations paid particular attention to this point, but he did not find that children living three stairs up were more frequently affected than those in houses on the level of the street McGregor obtained his statistics by observing the frequency of rachitic deformities in cases suffering from scarlet fever, and, as remarked before, it might be raised as an objection to his figures that the children at the time were not suffering from active but healed rickets However, from a survey of my figures, which deal alone with active rickets, the disease seems to be just as frequent in those living on the ground level as in those living three stairs up Moreover, the similarity of the charts dealing with rachitic and non rachitic children is very striking The infrequency of the cases resident in houses four stairs up is to be accounted for by the fact that there are very few houses of this type in Glasgow

Amount of air space in house allowed to each child (Chart 5)—As overcrowding and deficient air space are characteristic of the houses of the class which supplies most examples of this disease, and the very opposite of what prevails in those parts of the globe where rickets is unknown, not only in the human but also in the animal world, it seemed not unlikely that investigation of these conditions in a city like Glasgow would show that they are definitely proportionate to the frequency of the disease In my researches I have taken one individual per room as the unit, and

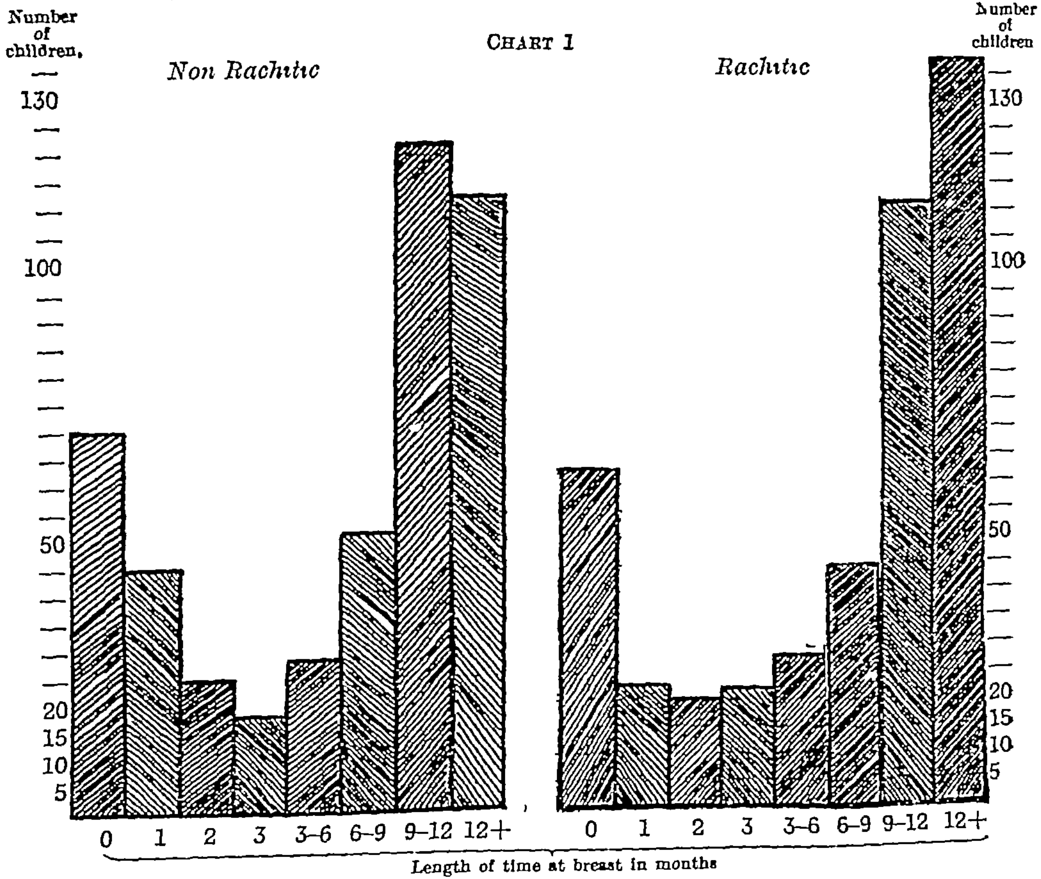
CHART 4



impossible it could exercise itself One swallow does not, of course, make a summer, and one case of the kind does not prove that rickets is caused by want of exercise, but in the light of your investigations, and the great rarity of this disease in the West of Ireland (I having never seen a case of rickets in the West of Ireland in man or beast), has weight

Through the son of another farmer in Ireland I learned that his father had noticed that during the winter rickets occasionally developed in sheep which were housed in sheds, whereas those left on the hills, though not so well fed, never showed the slightest trace of the disease.

CHART 1



That exercise has a very definite effect on the retention of calcium is shown by the work of Kochmann and Petzsch.[10] These authors during the course of a research into the factors influencing calcium metabolism encountered one animal in which they found it impossible to bring about an increased excretion of that salt In the protocol dealing with this experiment it is noted that the animal never was at rest, and the authors concluded that exercise was one factor which strongly influenced the metabolism of calcium As further exemplifying the effect of exercise in rickets I might perhaps quote from Mayo,[20] who, writing on this malady in 1674, says that "scabies or itching occurring in the course of this disease contributes much to its cure," and to my mind it can only be by forcing the patient to exercise himself that any benefit can accrue

During the past two or three years I have been collecting information regarding various factors in the life of the rachitic child, some of which have been suggested as predisposing to the disease The points investigated were (1) The length of time the child was breast fed, (2) the order of the child in the family, (3) the condition of the bowels previous to the onset of the trouble, (4) the amount of air space in the house allowed to the child, (5) the number of stairs up the house is situated, and finally (6) whether or not the child has been taken much out of doors It should perhaps be mentioned that in Glasgow, as in most of the smaller towns in the West of Scotland, the houses are built on the tenement system These tenements are not usually separated from the street by a garden, and are three or four storeys high Each flat contains three or even six houses, the number depending on the number of apartments In the poorer districts of the city houses of several rooms have been subdivided into houses of one apartment, so that many of the common passages are dark and badly ventilated Other workers, as McGregor,[21] have studied some of these conditions—e g, the number of stairs up the children reside, but his figures relate for the most part to children in whom the disease was healed, whereas I have taken pains only to utilise facts concerning cases in the active stage of the disease Whenever possible I have compared the rachitic with non-rachitic children

Length of time child has been breast fed—It has been suggested that denying the child its natural food is an important etiological factor, but my records do not lend support to such an idea In Chart 1 are graphically represented the number of children breast fed for varying periods, and in the rachitic as well as the non rachitic it will be seen that the majority have been suckled for nine months or longer The similarity of the rachitic and non rachitic charts is very striking, and disposes not only of the idea that want of breast milk, but also, as has been assumed, that prolonged suckling is at the root of the mischief

SIR ALMROTH WRIGHT'S LECTURE ON THE TREATMENT OF WOUNDS IN WAR

By Sir W Watson Cheyne, Bart, C B, F.R S,
President of the Royal College of Surgeons of England

In this short note in reference to Sir Almroth Wright's recent lecture on the treatment of wounds in war I do not propose to criticise his paper, indeed, I am in agreement with a good many of his statements, especially with those on the use of antiseptics in septic wounds In speaking of the treatment of septic wounds Sir Almroth Wright objects to the use of antiseptics, and in the present state of our knowledge I believe that he is quite right This is a point which I have taught for years and on which I laid special stress in my paper at the Medical Society last November Indeed, I would go further than Sir Almroth Wright appears to do in objecting to the practice of syringing out these wounds with antiseptic lotions I dislike to see septic wounds washed out with antiseptics That procedure cannot possibly disinfect the wound nor in any way diminish the sepsis even temporarily except by the mechanical removal of the pus, which can be done much more safely by the use of isotonic solutions, and not only so, but the antiseptic may seriously interfere with the antibacterial action of the tissues especially if it is at all a strong solution used under the idea that it will act as a bactericide

Free drainage and irrigation, referred to by Sir Almroth Wright, are of course well known and long established methods of treating septic wounds, and are, in my opinion, the best methods of dealing with them The only new practical point in Sir Almroth Wright's suggestions, a point which, however, he had made previously, is the use of a strong solution of salt with the view of leading to increased flow of lymph Curiously enough, it is stated that this acts by osmosis, but that must surely be a slip of the pen Colloids such as lymph dialyse very slowly or not at all, and practically the only result of placing a strong solution of salt outside a blood vessel would be the exit of the water and salts of the blood Any increased flow of lymph which may arise from the introduction of a hypertonic salt solution into a wound will be the result of irritation, and the question then arises whether salt is the best irritant, or whether, indeed, it is wise to use an irritant at all I must confess that my inclination is against the employment of irritants because I doubt very much whether the lymph does contain all, or indeed the most important, antibacterial substances of the body My own view is that these substances reside in the tissues themselves to a much greater degree than in the blood and lymph, and the application of an irritant may seriously interfere with the natural processes However that may be, I shall watch with great interest Sir Almroth Wright's attempts to eradicate sepsis from wounds by what he terms "physiological methods"

The reason why I am writing this note is, however, to emphasise the point on which I am particularly insistent—viz., that while Sir Almroth Wright's studies concern wounds as they reach him at the base hospitals already in a highly septic state and in a stage in which antiseptics as ordinarily employed are of no avail, there is a preceding period, which he does not come across, in which the septic process has not yet taken root in the wound, and in which it may be eradicated by the proper use of antiseptics It is on this period that my researches are concentrated, and at this stage the use of antiseptics presents to my mind the only possible chance of success Our work and Sir Almroth Wright's are in no way antagonistic He takes matters up at a stage where our suggestions are possibly no longer of any special value or where these suggestions have not been followed or have failed to accomplish their object But what a change in the whole aspect of military surgery if our plans should succeed! What a saving of suffering and of life! And reports are beginning to come in which show that such success is not improbable Surely this is the most important point in the treatment of these wounds, and I do not think that we can too often call the attention of the profession to this most important, though short, period in the history of these cases This is the time for the employment of antiseptics, and I am convinced that if suitable antiseptics are chosen, and if they are thoroughly and scientifically applied, a very considerable proportion of the cases will escape the dangers and the troubles of a septic wound

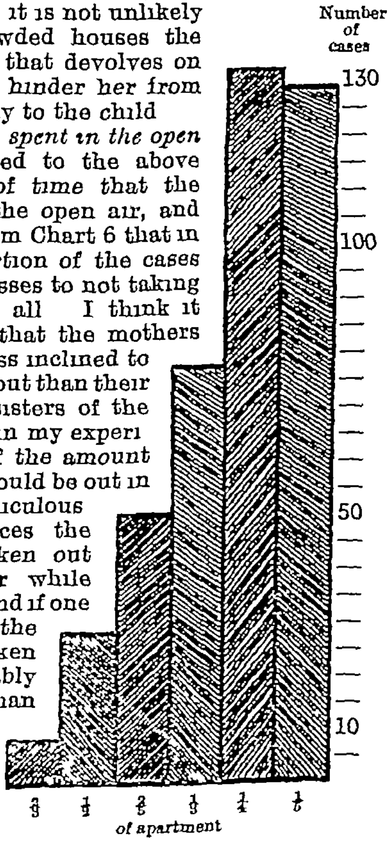
It is being constantly said that there is something peculiar and special in wounds in war as compared with those which occur in civilian practice In my opinion this is not so, it is only a question of degree and not of kind. I have been very much surprised to read in the daily papers accounts of the wonderful discoveries which were being made at the front with regard to the bacteriology of these wounds, of the anaerobic bacteria, the coliform bacilli, the streptococci, and so on But the same bacteriological flora is common enough in civil injuries, especially in those soiled with earth, and are quite familiar to those of us who have made a study of these matters Nor are the bacteria in injuries in civil practice confined to the exterior of the wound, as Sir Almroth Wright seems to imply The whole wound becomes infected just as happens in the wounds which he meets with at the military base hospitals, and septic compound fractures are often just as serious in civil as in military practice From reading his remarks one would think that all compound fractures in civil practice ran an aseptic course Alas! far from it Sir Almroth Wright, when he comes back to this country, will find ample opportunities for continuing his search for a physiological method of treating septic wounds

The difference between the military and the civilian compound fractures is one of degree and not of kind In the civilian cases the injury is *usually* more limited than in those inflicted on the field of battle, there are seldom the long channels in the tissues, difficult of access, in the former which occur in the latter, but there is the same blood clot and the same torn and bulging muscles, rendering the channel irregular, in the one as in the other And though the infection may be carried in further in the military than in the civilian cases, this does not, I think, mean so much as one might at first sight suppose The bullets or the pieces of shell soon part with the septic material which they carry in with them, as shown by the frequency with which these bodies become encapsuled This was an observation made long ago by John Hunter who built up a theory that if a bullet were in the depth of the tissues the latter did not resent its presence or make any attempt to have expressed the amount of air space per child in fractions of this unit I have not differentiated between rooms of varying size Examination of my results shows very definitely that the disease is proportionate to the amount of air space allowed to the child, and that as this diminishes in amount the incidence of the disease rapidly increases Unfortunately I have no figures relative to a series of non rachitic children of the same class, and it is just possible that the amount of air space is simply a gauge of the poverty of the family, and in consequence other factors than want of air space are in action The examination of the blood[22] which I carried out some years ago in this disease tends, however, to support the idea that this factor is at work. The average rachitic child showed a higher percentage of hæmoglobin and a greater number of red blood cells than the average healthy child, exactly the condition which is found in persons subjected to a rarefied atmosphere

Probably the want of sufficient fresh air acts in a twofold manner In the first place, the absence of pure air will act as a sedative and tend to make the child less inclined for exercise I have frequently noticed that if a child is confined to the house it is more easily tired, is less active, and wishes to go to bed earlier, so that the living in overcrowded rooms acts just in an opposite manner to taking the child out Again, it is not unlikely that in overcrowded houses the amount of work that devolves on the mother will hinder her from attending properly to the child

Amount of time spent in the open air—Closely allied to the above is the amount of time that the child spends in the open air, and it will be seen from Chart 6 that in the larger proportion of the cases the mother confesses to not taking the child out at all I think it will be conceded that the mothers of the poor are less inclined to take the children out than their more fortunate sisters of the upper class, and in my experience their idea of the amount of time a child should be out in the open air is ridiculous In many instances the child is only taken out with the mother while doing messages, and if one gets a history of the child not being taken out it is probably true It is more than likely, too, that many of my cases included among those allowed out were practically speaking not taken out These two factors—confinement and deficient fresh air—act, as I have said before, by making the child more lethargic and less inclined to exercise itself, although it is quite possible that deficient oxygenation of the blood itself helps towards the production of the special rachitic metabolic error The results which I have obtained in the treatment of the disease with massage, passive movement, and electricity are strongly confirmatory of the view that deficient exercise engenders the condition So far as my experience goes no variety of dietetic or medicinal treatment brings about the same rapid and complete cure The children are encouraged to walk, and as yet I have not seen any bad effects follow such practice

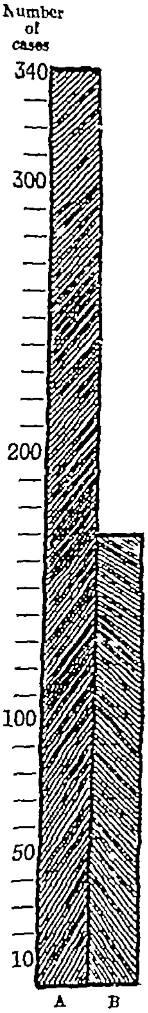
CHART 5



In view of these facts—the effect of deficient exercise on the calcium retention, the influence of confinement in the production of human and experimental rickets, and the frequency with which the disease is encountered in overcrowded houses—I considered it not unlikely that rickets would be exceedingly prevalent in those parts of the world where the people were confined in badly ventilated houses and where sunlight was absent for long periods of the year

After a fairly extensive search through the diaries and journals of travellers to Iceland, Greenland, and Alaska, parts of the world where the winters are long and dark and where the houses are badly ventilated and devoid of all sanitary conveniences, houses in which many people are huddled together for weeks at a time, I have not come across a single suggestion that rickets is ever encountered Yet these are just the places where one would have expected *a priori* the disease to have been rampant True, the Esquimos are described as being bandy legged, but this is accounted for by the lowness of the roofs of the houses, the heavy ungainly boots that they wear, and the great amount of time that they spend crouched up in their boats The absence of the disease is the more remarkable when one remembers that for weeks at a time darkness prevails, and during the winter the inhabitants spend most of the time in badly ventilated huts, although it must be admitted that it is just at this season of the year that abundant fat is consumed

CHART 6



A Child not taken out B Child taken out

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Glasgow

its base (about the level of the internal semilunar cartilage), the base being about 3 in. and the length of the flap 2 in The wound did not involve the knee joint On the right thigh there was a burn of the second degree In the afternoon he was brought to the sick bay, where his injuries were dressed under an anæsthetic. The wound on the inner side of the knee was swabbed with pure carbolic, then sutured His scalp wound was thoroughly cleansed, then sutured The other wounds were also carefully cleansed and dressed. The wound perforating the lip was sutured, the suture not involving the mucous membrane The ears were lightly plugged with gauze Eight minims of antistreptococcic serum were injected hypodermically the same evening, the usual reaction followed, also morphia, gr ¼ He was transferred to the hospital yacht *Sheelah* on Jan 26th for further treatment

CASE 3 *Abdominal injury* —A midshipman This officer was brought to the forward distributing station from the gun control tower where the pointer of the director was driven into his abdomen just below the xiphisternum, the result of a shell explosion He also received an incised wound in the right leg and burns of the first and second degree on both legs and genitals He suffered considerable pain in the region of his abdominal wound, but apparently it did not perforate the abdominal wall. It was treated with iodine solution and dressed with gauze The wound in the right leg was a small incised one situated at the back of the internal malleolus where the flexor tendons had been partially severed, this wound also received a simple dressing The burns were treated with picric acid dressings He was given ¼ gr of morphia that night hypodermically, also ♏ 8 of antistreptococcic serum. The following morning he stated he had not had a good night Temperature 104° F, pulse 108 There were marked tenderness and rigidity in the region of the wound, but none in the lower part of the abdomen His general appearance was good and there was never any vomiting He was given another hypodermic injection of morphia, gr ¼ that night (Monday) The following morning (Tuesday) he stated he felt much better The temperature had fallen to 99° and the pulse to 99 There was still considerable amount of tenderness and rigidity in the region of the wound He was transferred to the hospital yacht *Sheelah* for further treatment

CASE 4 *Fracture of the left femur* —This patient, a stoker messenger received the above injury during the action While descending from the signal distributing office down the escape to the deck below, the shock caused by firing the 13 5 guns caused him to fall and fracture his left femur He was brought to the forward distributing station, where a fracture in the middle of the left femur was easily diagnosed. He suffered considerably from shock, so morphia gr ¼, was given hypodermically and a long Liston splint applied. After the action he was put to bed in the sick bay As he still suffered from shock, morphia, gr ¼, was given hypodermically that evening and again the following Monday He was transferred to the Naval Hospital, Queensferry, on Jan 26th for further treatment

CASE 5 *Lacerated wound of the hand compound fracture of first metacarpal and right fibula* —Chief petty officer This patient walked to the after distributing station during the action suffering from the above injuries the result of a shell explosion On examination there was a compound fracture of his right fibula just above the external malleolus There was a bad laceration of the left hand, fracturing (compound) the first metacarpal bone There was also a smaller wound in the right hand, as well as burns about the face and left eye from cordite The wounds were carefully dressed and the fractured fibula was put up in splints Morphia gr ¼ was injected that night and again the following night Treated with ♏ 8 of antistreptococcic serum and had well marked reaction afterwards He was transferred to the Naval Hospital, Queensferry for further treatment on Jan 26th

CASE 6 *Fractured rib* —This patient (an A B) was brought to the after distributing station from Q turret suffering from severe pain in the left side in the region of the eleventh rib He received his injury during the action, and it was due to a shell explosion which caused his left side to fall against a supporting piece On examination there was severe pain on pressure over the lower ribs on the left side, the left side of the chest was strapped He suffered considerably from shock so morphia, gr ¼ was given hypodermically His abdomen was very rigid, and though at first he complained of no pain, later on he did, and at 8 P M he passed 4 oz of bright red blood per urethram There was no evidence of urinary infiltration into his scrotum or elsewhere, and a catheter was not passed. His temperature and pulse remained normal No specially tender spot could be detected in his abdomen, although he kept it rigid The following day the blood completely disappeared from his urine, his temperature and pulse remained normal, and he felt better, although there was still some rigidity present He was discharged on Jan 26th to the Naval Hospital at South Queensferry for further treatment

CASE 7 *Burns of the face and head* —A stoker This patient was brought to the forward distributing station from the signal distributing office during the action suffering from burns of the face and head The eyes were not affected Picric acid dressings were applied, and morphia, gr ¼, was given hypodermically the same night On Jan 26th he was transferred to the Naval Hospital, South Queensferry, for further treatment

CASE 8 *Wounds of the feet* —This man (an A B) came to the after distributing station after the action suffering from wounds in both feet due to splinters from a shell explosion On the left foot there was a small but deep cut from which he pulled out a piece of shrapnel about 1¼ in long, there was a certain amount of oozing from the wound There was also another smaller wound on the dorsum of the right foot Simple dressings were applied He was transferred to the Naval Hospital, South Queensferry, on Jan 26th for further treatment

CASE 9 *Fractured clavicle* —A stoker This patient came to the forward distributing station during the action after being blown back and falling down the fore escape owing to a shell explosion He received a fracture between the outer and middle thirds of his clavicle (right) The fracture was put up by the Sayres method He was transferred Jan. 26th to the Naval Hospital, Queensferry, for further treatment.

CASE 10 *Burns of the left side of face and neck* —This boy was brought from the fore 6 inch control during the action suffering from burns of the first and second degree of the left side of the face and neck. Picric acid dressings were applied He was transferred to the Naval Hospital on Jan 26th for further treatment

CASE 11 *Burns of the face, sprain of the right ankle* —This boy was brought to the after distributing station during the action, suffering from slight burns of the face and scorching of the scalp, as well as a sprained right ankle the result of a shell explosion near the signal distributing office, where he was stationed There was some shock present, so morphia, gr ¼ was given hypodermically Picric acid dressings were applied to the burns, and lead lotion to the sprained ankle. He was transferred to the Naval Hospital, South Queensferry, on Jan 26th, for further treatment

I regret at not being able to obtain more details as to the progress the patients made after we discharged them to hospital They all steadily improved, and some of them, I believe, have returned to duty already The case of the midshipman (Case 3) gave us some cause for anxiety, as we thought exploratory operation desirable to find out if the parietal peritoneum was perforated, but as his symptoms were not urgent, and considering the very septic condition of the ship, we came to the conclusion such a procedure was too risky When he was removed to the *Sheelah* no operation was considered necessary His condition progressed favourably, and he is now convalescent A fracture of the sternum was subsequently discovered

None of the patients received any active treatment except the chief petty officer (Case 5), who was operated on the hand for suture of tendons, and the sub lieutenant (Case 2), who had an operation for septic parotitis resulting from the fracture of the left angle of the jaw Later on he developed a cellulitis in his left forearm, caused by a piece of cordite which entered at the wrist and fetched up in the middle of the forearm, the piece of cordite was afterwards removed I believe that the stoker (Case 4) had his fractured femur plated, but I was unable to find out definitely remove it, while if it remained near the surface they underwent suppuration with the view of extruding it

I hope that these two stages in the history of wounds in war, the one before sepsis has become established and the other after it has taken root, will be clearly differentiated in the minds of those who have to deal with them, and that, because the latter cannot be disinfected by our present means, surgeons will not therefore relax their attempts to eradicate the septic elements in the former or early stage while there is still time to do so It is a terrible attitude to take up that these wounds must necessarily become septic and that it is useless to make any attempt to prevent this occurrence

TREATMENT OF THE WOUNDED ON BOARD H M S "TIGER" DURING THE NAVAL ACTION OF JAN 24TH

BY J C KELLY, M D, B A. DUB,
SURGEON R N

THERE were two medical distributing stations, one aft and the other forward. I was stationed at the after one, which was situated directly beneath the quarter deck and immediately forward of X turret We had a plentiful supply of water from two large fresh water tanks, while hot water could be supplied from a steam geyser There were two cases of "emergency surgical dressings," one big medicine chest, and a set of drawers containing tourniquets, bandages, strapping, instruments, and all the drugs and medicines most likely to be required. In case of the electric light failing, light could be obtained from six oil lamps, which were fixed in convenient places, besides an operating table we had a small stand for basins and another for instruments

My first aid party consisted of about nine persons altogether, including three of the sick berth staff, the remainder consisting of gun room and ward room stewards, cooks, &c The forward distributing station was quite accessible from the after one by means of the ammunition passage My senior medical officer and the other surgeon were stationed here, as well as a similar first aid party consisting of officers' stewards, cooks, &c Like the after one, the forward distributing station was fitted with hot and cold water, operating table, cases of dressings, &c, and in addition there was an X ray apparatus, the tubes, however, were broken during action owing to the concussion caused by our fire

It was arranged that after the action the party stationed aft should search for wounded in Q and X turrets and along the port 6 inch battery, and that the party stationed forward should search A and B turrets and the starboard 6 inch battery We soon had everything rigged up, dressings and lotions out, and the operating table ready in case it would be wanted, and then my party came forward of the bulkhead next the distributing station into the ammunition passage, and there we remained during the entire action

At 8 A M we sighted the enemy off our port bow, and at 9 2 A.M we fired our first shot, and from that on until the "secure" sounded the firing continued The time passed quickly, and after the first half hour when the excitement of hearing our own guns fire in anger had passed off, my first aid party spent the time endeavouring to find out what was happening, and later on when they heard we had been hit they discussed the chances of our going back to Devonport and getting some leave while the ship was being repaired One or two started reading papers, but they did not do so for long as things became too "hot" Each time we were hit the shell caused a terrific crash, shook the ship, then one could hear any quantity of loose débris and splinters falling

At about 11 20 our first patient was brought to us, a boy (Case 11) suffering from burns about the face and a sprained ankle We soon treated him and put him in one of the officers' cabins close by Very soon after the chief gunlayer (Case 5) walked from Q turret, in spite of his receiving a compound fracture of the right fibula, he was badly burned about the face and left eye, and had a badly lacerated wound in the left hand, fracturing the first metacarpal bone As we were under a very heavy fire at this time, and with so little armoured protection, I did not care to treat him in the after station, so I sent him to the forward distributing station where his wounds could be more efficiently dealt with.

When the action was over we searched for wounded I went to Q turret In the gun house we discovered two men dead, and in the working chamber below we found an A.B (Case 6) He was suffering from considerable pain in his side, so we put him in a Neil Robertson stretcher, and after hoisting him up into the gun house through a trap door we eventually got him out of the turret, and from there carried him down to the after distributing station We strapped his left side, gave him a ¼ gr of morphia (as he was suffering from a certain amount of shock), and then put him in one of the adjoining officers' cabins The only other case treated in the after station was another A B (Case 8) I then went to the forward distributing station where the remainder of the wounded had been brought All the injuries of the patients that had been brought here were caused by a shell which exploded in the intelligence office, which was situated under the signal distributing office and gun control tower where these patients were stationed This shell also accounted for 8 deaths

In the afternoon we brought all the patients up from the distributing stations to the sick bay, where their wounds were thoroughly cleansed and again dressed We arrived back at our base on the following Tuesday morning (Jan 26th) The three wounded officers were transferred to the hospital yacht, *Sheelah*, and the men to the Naval Sick Quarters, South Queensferry

CASE 1 *Burns of the face and fracture of left ulna*—A lieutenant This officer came to the forward distributing station during action, suffering from burns of the face and scorching of the scalp, the result of a shell explosion beneath the gun control tower where he was stationed His hair was badly scorched, but the scalp did not appear to be burnt The burns about the face were mostly of the first degree There was a certain amount of shock present, so that morphia, gr ¼ was given hypodermically the same night The burns were dressed with picric acid There was also a small fracture of the left ulna situated about its middle, consisting of a small triangular piece of bone detached from the posterior border of the ulna. On Jan 26th he was transferred to the hospital yacht *Sheelah* for further treatment.

CASE 2 *Multiple injuries*—A sub lieutenant This officer came to the forward distributing station during the action suffering from multiple injuries received, the result of a shell explosion near the gun control tower where he was stationed There was a deep scalp wound on the left side of the vertex about 2 in long, both membrana tympanorum were ruptured, causing bleeding from both ears, there was a wound perforating the lower lip the lower incisor teeth were knocked backwards and the left angle of the jaw was fractured. On the lower and inner side of the left knee there was a flap of skin and superficial fascia separated up to gives them a grey appearance It is interesting to note that though there is this intense injection of the fauces the gland at the angle of the jaw may show little enlargement

The patient lies with the legs flexed and the neck held rigid and resents movement If an attempt be made to extend the legs it is found that they cannot be extended beyond a right angle to the thigh. The patient may be acutely conscious of his condition, and may from time to time become delirious and violent, at other times he may be completely comatose In an acute case the disease may run its whole course in a few hours, headache, delirium, coma rapidly succeeding one another so that death occurs within 24 hours In some cases there may be profound septicæmia without any sign of meningitis and in such cases on lumbar puncture the cerebro spinal fluid may be found normal These are cases of acute meningococcal septicæmia.

Now by the side of such an acute disease as is above presented one has the case of a patient with fever, headache, and vomiting, but without any definite signs on examination. In spite of the temperature being high, there is little or no acceleration of the pulse, respiration is quiet, after a few days the temperature falls, the headache becomes less, and the patient is convalescent What is the nature of such a case? It may be designated "influenza,' and few would deny that it may be due to the influenza bacillus If a lumbar puncture is performed the cerebro spinal fluid may be found to be turbid and contain meningococci, but the case gets well whether lumbar puncture is done or not, and few practitioners would wish to subject their patients to the inconvenience of a lumbar puncture for a slight febrile attack, and yet such an attack may be the onset of an acute meningitis

In infants and young children, again, the symptoms and course of the disease often make it most difficult to diagnose In severe cases with a rash, profound coma and rigidity of the limbs there is no difficulty When, however, a rise of temperature is the only sign of illness the difficulty is considerable, and diagnosis can only be made by lumbar puncture and examination of the cerebro spinal fluid It must not be thought that such cases are exceptional, they are probably far from rare and pass undiagnosed In infants blindness is a frequent concomitant of the disease, whilst in adults deafness is more frequent

As the disease passes into a chronic stage retraction of the head and neck may occur, and in infants marked opisthotonos is a striking feature In the endemic form occurring annually in London there is a mortality of about 50 per cent, 35 per cent are left with some mental defect, hemiplegia, diplegia, hydrocephalus, or blindness, whilst only 15 per cent recover completely In the epidemic form the mortality varies from 90 per cent in the earlier period of an epidemic to 30 to 50 per cent towards the end of the period These figures are based on the occurrence of the disease before the introduction of serum treatment which has profoundly modified the mortality

It is known that there are several strains of meningococcus which vary in their infectivity, and that the endemic strain is commonly less virulent than the epidemic—on the other hand, as severe cases do occur with the one strain as with the other

Diagnosis

In some cases the symptoms are so distinct that diagnosis is perfectly easy, the headache, vomiting, rash, fever, rigid neck, and flexed limbs giving a clinical picture which is unmistakable Symptoms similar to the above may be present in other forms of meningitis or in poliomyelitis, and there is only one method of making the diagnosis certain, and that is by lumbar puncture and examination of the cerebro spinal fluid Now lumbar puncture is perfectly simple if performed with an instrument suitable to the age of the patient, the patient in the right position and in the right manner If properly carried out it gives rise to but little pain, and in many cases it is quite unnecessary to give an anæsthetic

It is impossible here to go into the technique of a lumbar puncture, but failure to reach the canal or obtain the fluid rarely occurs when the puncture is rightly performed It is advisable that the patient should be in a recumbent position, lying on the right side with the legs flexed and the back bent, and that a fine needle with a stilette be used. If a large needle is used it is much more painful and in young children will not pass the space between the laminæ Some lumbar puncture needles that I have seen are unnecessarily large It is important to avoid touching the bone if possible, it always gives rise to more pain, and is likely to cause bleeding into the needle which may block it or contaminate the cerebro spinal fluid and spoil the cytological examination

The cerebro spinal fluid spurts out under pressure Sometimes it is so thick that it will not flow through a fine needle, but comes out readily under gentle aspiration All degrees of turbidity are met with, from a slightly opaque to a thin creamy fluid. It is said that the fluid from some cases may be perfectly clear and yet contain meningococci I have never come across such a case, but they have been recorded by Netter and others It is recognised that the cerebro spinal fluid from a case of meningococcal septicæmia may be perfectly clear, and the patient may die from the disease before the cerebro spinal system is affected The albumin in the fluid is increased from 0 02 to 0 2 or even to 1 per cent, the cells are mostly polymorphonuclear in character and the meningococcus can be seen within and outside the cell The normal sugar reaction of the fluid is absent

As the case progresses and improvement takes place the fluid becomes clearer, the meningococci less frequent, the cells less numerous and changed in character, so that in the later stages of the disease the greater proportion of the cells are lymphocytic

Treatment

Having made the diagnosis treatment should be simple if we accept the experimental and statistical evidence produced by Flexner with regard to the use of serum. The mortality which in untreated cases amounts to 70 to 80 per cent is brought down to from 25 to 27 per cent Unfortunately there are various strains of the meningococci, and the serum obtained from a horse immunised against certain strains of meningococci is not potent against all strains It is, of course possible always to add one more strain to a horse already immunised, for I believe that such a horse receives about every 14 days a further injection of meningococci, so that the serum of the horse may be made polyvalent to any number of strains Flexner showed that

EPIDEMIC CEREBRO-SPINAL MENINGITIS[1]

BY FREDERICK E BATTEN, M D CANTAB, F R C P LOND,

PHYSICIAN TO HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET ETC

MAY I thank the Harveian Society for the honour they have done me in asking me through their secretary to open the discussion on this most important subject? It is one which has always interested me, for in my connexion with the Children's Hospital, Great Ormond street, it has been possible to study the disease in its endemic form and to compare the features of the endemic with the epidemic type of the disease Your excellent secretary has wisely allocated certain portions of this subject to other speakers specially skilled in their various departments, and my part will be to give a general review of the subject, leaving it to subsequent speakers to fill in the numerous gaps I shall more especially deal with the clinical features, diagnosis, and treatment of the disease, leaving it to others to deal with the bacteriology, vaccine therapy, &c

Epidemiology of the Disease

It must be recognised that cerebro spinal meningitis is no new disease either in its endemic or epidemic form During the last century epidemics have occurred on the continent, in America, and in this country The last epidemic in this country was in 1907–08, when it occurred in Belfast and Glasgow It may be said to be an endemic disease in Norway, and if one studies the excellent monograph on the subject published by Looft one sees that it not only is constantly found in that country, but varies in its incidence not only from year to year but also according to the season of the year It must be recognised that cerebro spinal meningitis due to the meningococcus is constantly present in London It is an endemic disease but has an epidemic period in the spring of each year, the greatest number of cases occurring during the months of February, March, and April, falling off during May and June—only a few cases occurring during the last six months of the year

It is interesting to compare the course of this disease with that of poliomyelitis, an endemic disease having a seasonal variation showing a curve which begins to rise in June, reaches its maximum in August, falls away to a low level in November Cerebro spinal meningitis as an endemic disease affects chiefly children, and especially infants below the age of one year In the year 1907 epidemic cerebro spinal meningitis was made a notifiable disease in the county of London and permanently so in 1912 It is interesting to note that in this year also poliomyelitis was made a notifiable disease

The disease is spread by the transference of the meningococcus from individual to individual As Professor Andrewes rightly points out, "the disease does not spread as a meningitis, what is spread is the meningococcus, the meningitis is an accident, which happens only in a certain proportion of those invaded by the meningococcus"

Misleading Names under which the Disease is Known

The names under which this disease is known are somewhat misleading Epidemic cerebro spinal meningitis presupposes that the spinal membranes are invariably affected, which is not always the case, for cases of acute meningococcal septicæmia occur in which death supervenes before the meninges are affected "Spotted fever" suggests that the disease is accompanied by a rash—a symptom which is by no means constantly present Epidemic cerebro spinal fever might serve, but even such a name suggests that the spinal membranes must be affected

Meningococcal fever or septicæmia might be suggested, but that would not certainly solve the difficulty, and would raise bacteriological difficulties which might be harder to deal with than the clinical inconsistencies Let us stick to the name epidemic cerebro spinal meningitis, recognising that just as the pneumococcus may at times give rise to infection in different parts of the body—thorax, peritoneum, joints, membranes of the brain—so the meningococcus may in like manner fall on different structures, but seems to have a preference for the membranes of the brain

Experimental Work

In 1905 Flexner produced cerebro spinal meningitis in the monkey by injecting subdurally virulent cultures of the meningococcus The infective inflammation produced resembled the human infection closely, except that it was often more severe The inoculation caused severe illness in a few hours and death in from 18 to 24 hours At the height of the infection a blood invasion occurred The rapidly fatal instances resembled the fulminating cases among human beings, the other the human cases of average severity A monkey was immunised and the serum obtained therefrom injected directly into the spinal canal of infected monkeys with favourable results, if injected into the blood and subcutaneous tissues the animals succumb An immune serum prepared in a horse by alternate injections of dead and living cultures was shown to have similar properties to the serum produced in monkeys By the use of this serum the mortality, which in untreated cases is about 80 to 90 per cent, fell to 18 per cent for those treated within the first three days of illness, to 27 per cent between the fourth and seventh day of illness, and to 36 per cent when treated after the seventh day It is important to remember that the mortality among cases occurring towards the end of an epidemic is considerably lower than that at the beginning

Clinical Features

Shortly stated, epidemic cerebro spinal meningitis may be said to be an acute epidemic disease starting with fever, vertigo, severe headache, and vomiting Delirium is often present, and the patient complains of intense pain in the back and neck and often of a sore throat A rash may be present over the body either as a mottling of the skin or as raised erythematous areas with a small central vesicle into which hæmorrhage may occur The rash is usually distributed over the periphery of the limbs, and is, except for its distribution, like a measles rash In the acute form of the disease the patient has the appearance of a profound toxæmia. The soft palate is injected, the fauces swollen and red and covered over with mucous secretion which given. Considering what liability there is for the optic nerve to be affected by the disease itself I should personally feel disinclined to use a drug which tends to produce optic atrophy. If it is desired to use an arsenic preparation I would suggest salvarsan or neosalvarsan. Both preparations have had a long trial and do not appear to produce optic atrophy.

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[1] A paper read before the Harveian Society of London on April 22nd 1915

4. *Vaccines*.—The discussion on the use of vaccines in the treatment of the disease has been assigned to Dr. Colebrook, and I will not encroach on his sphere of action. I hope, however, he will make quite clear the possible value of vaccines in the prevention as distinct from the treatment of the disease.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

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THE PSYCHOLOGY OF TRAUMATIC AMBLYOPIA FOLLOWING THE EXPLOSION OF SHELLS

By HUGH S. PEMBERTON, M.B., CH.B. LIVERP.,
LIEUTENANT R.A.M.C.

THE paper by Mr. J. H. Parsons in THE LANCET of April 3rd on the above subject has reminded me of a case under my care which presented several features of psychological interest. The facts are as follows.

Sergeant ——, belonging to a battery of field artillery under my medical charge, was working his gun under rather heavy shell fire on March 14th. His gun was No. 1. A direct hit was made on No. 2 gun with high explosive shell, killing three men. I saw Sergeant —— shortly afterwards, and although naturally excited he appeared otherwise normal. He went on working his gun until dawn the next day, when he collapsed and was found lying across one of the disembowelled corpses. In all he had been at work for about 12 hours continuously, during which time the battery had fired between four and five hundred rounds. I saw him again a few hours later; he was conscious but very feeble, and obviously much shaken. There was considerable amblyopia and distinct contraction of the fields of vision (rough test), no change in colour vision. The sense of taste was much blunted; he could barely distinguish between salt and powdered quinine tablets laid on the tongue. The sense of smell was practically absent, but this was not of much importance, as he stated that his smelling powers were at all times small. Hearing was naturally much affected, but not more so than that of several other men in the same battery; no tympanic fractures were discernible. There were no changes of cutaneous sensation in the face, arms, or trunk, but both thighs, from about the apex of Scarpa's triangle to the knee, showed curious alterations. There was partial anæsthesia—that is to say, a normally painful pin prick was felt as a tactile sensation, while touching the skin lightly with cotton wool was not felt at all. The patient merely complained of "numbness" in these areas. The motor changes were not striking; he naturally showed great fatigue in practically every muscle; the eyelids were half closed, but there was no nystagmus. On the other hand, he walked slowly with a distinctly spastic gait; the knee jerks were brisk. Other reflexes appeared normal; the plantar reflex was of the flexor type. I sent him back to the wagon lines for a week where, while the sensory changes gradually disappeared, symptoms of mental distress seemed to increase. He still walked feebly and spastically, and reverted continually to the sight of the dead men at the next gun, one of whom was a friend of his. I finally sent him into hospital and he is now, I believe, in England.

There are several obvious factors in the production of such signs and symptoms. 1. Excitement during a prolonged and somewhat critical attack. 2. Over-stimulation of eyes and ears. The flashes of night firing are very brilliant, while many batteries close together and all firing rapidly invariably produce temporary deafness among the gunners. 3. Some natural fear from close hostile bursts. 4. Disgust at the sight of the killed, two of whom were decapitated and one disembowelled. 5. Great physical and mental fatigue from continuous laying of the gun during 12 hours.

But why these factors, which must have been operative to some degree at least in all those near, should produce those results in this particular man I leave it to others to attempt an explanation.

On Active Service.

NOTE ON A CASE OF CEREBRO SPINAL MENINGITIS

THE TENACITY OF THE MENINGOCOCCUS

By HENRY J. ALFORD, M.D. LOND.,
MEDICAL OFFICER OF HEALTH OF TAUNTON

THE following case may be of interest in showing the length of time that the meningococcus may be found in the naso pharynx after apparent recovery from the disease.

A case of cerebro spinal meningitis was notified to me on March 2nd, 1915, on the morning of which the patient died, after an illness of five days. He was a boy, aged 9 years. On making inquires into the case I found that his elder brother had returned from Deal (on his discharge from the army) on Feb. 13th. He complained of feeling ill, with pains in his head and limbs, and he went to bed, sleeping in the same bed as his younger brother already mentioned. In about a week he felt quite well and returned to his work in this town. On March 31st I took a swab from his naso pharynx and sent it immediately to the County Bacteriological Laboratory at Weston super Mare, and on April 4th I received a certificate from Dr. W. G. Savage stating, "Meningococcus present."

The case is interesting as showing that although the germ will only live a few hours on the swab, it may do so for at least two months in the naso pharynx.

Taunton.

A "FLY-DANGER" EXHIBITION.—There will shortly be opened at the Zoological Gardens, Regent's Park, London, N.W., an exhibition for the purpose of demonstrating to the public the best ways of combating the danger which arises from the disease carrying habits of the house fly. Traps of all kinds will be shown, and the preventive measures to be taken where it is necessary to collect manure heaps for garden and horticultural purposes indicated.

subcutaneous and intravenous injection of the serum had no effect in diminishing the mortality in cases of meningitis

Methods of Treatment

The following methods of treatment will be discussed —(1) Lumbar puncture, (2) intrathecal injection of serum, (3) treatment with soamin, and (4) vaccine treatment

1 *Lumbar puncture* —This alone is often of considerable value in treating cases of cerebro spinal meningitis It frequently relieves many of the acute symptoms It may be repeated on several days in succession with advantage, it is also of value in estimating the progress made by the meningitis Combined with this, irrigation of the spinal canal with normal saline solution may be used This injection can be done either with the syringe or by gravitation method with a funnel and rubber tube attached to the lumbar puncture needle It is important to watch the pulse whilst the fluid is being run into the canal and to avoid any increase in the cerebro spinal pressure

2 *Intrathecal injection of serum.*—There are several points to be considered in the intrathecal injection of serum. First, what serum should be used There are various sera on the market prepared by Flexner, Lister Institute, Mulford's, Burroughs and Wellcome, Parke Davis, &c Flexner's (now prepared by the Department of Health, New York) I have used most frequently Some of the others I have used, but it is most difficult to appraise the value of the serum, for it may not be antitoxic to the special strain of meningococcus with which one is dealing

Injection of the serum —Lumbar puncture is performed and the spinal fluid is allowed to flow out The quantity that flows away must depend on a variety of circumstances—the age and size of the patient, the amount of pressure, but at least 20 to 30 c c should be obtained Sometimes it flows out so readily that 4 to 5 ounces are obtained

Sophian insists on the value of watching the blood pressure whilst the fluid is flowing away, and if there is a fall of more than a few millimetres stop the flow and begin to inject the serum The injection of the serum does not, however, tend to raise the blood pressure, but tends to make it fall still further, so that from the time of the lumbar puncture to the completion of the injection of the serum there may be a drop of 20 to 30 mm of mercury Sophian is entirely guided by the blood pressure as to the quantity of cerebro spinal fluid removed and the quantity of serum introduced—and any pressure in injecting the serum produces a rapid fall of blood pressure The amount of serum introduced must vary according to the age of the patient In young children 10 c c can usually be introduced, whereas in adults 20 to 30 c c or more can be introduced

Method of introduction —The usual method of introduction is by a syringe, and having always used this method I am of opinion that the pressure exerted can easily be regulated On the other hand, Sophian insists on the advantage of giving the serum by the gravitation method and controlling its administration by the blood pressure He says "My ordinary procedure in an adult case, beginning with an average blood pressure of 110 mm of mercury, is to stop the further withdrawal of fluid if there is a moderate drop in blood pressure, for example, 10 mm of mercury, in children 5 mm If there is no change in the blood pressure the fluid may be allowed to flow away till the normal pressure is reached, roughly estimated by counting the drops of fluid as they flow from the needle One drop of fluid every 3–5 seconds corresponding to a normal pressure"

The serum having been carefully warmed to the body temperature is now injected The blood pressure drops and continues dropping steadily as the larger quantity of serum is injected. After there has been an initial drop of 20–30 mm of mercury the blood pressure begins to drop relatively much faster if more serum is injected Thus if 15 c c of serum cause a drop of 20 mm of mercury in the blood pressure, injecting only a few more c c of serum may cause a sudden drop of 40 more millimetres, making a total drop of 60 mm The gravitation method of administering serum is excellent, but in practice it is not easy to carry out nor to control by blood pressure observation, and the syringe method is to me more convenient The quantity of serum injected must be regulated by the condition of the patient, if it flow in easily 20 c c is an average dose After the serum has been injected the patient should be tilted so that the head is lower than the buttocks, in order to allow of the serum, which is of greater specific gravity, gravitating towards the brain

How many and how often should injections be given ?—As soon as the diagnosis has been made the first injection should be given, and this should be repeated every 24 hours and the fluid examined on each occasion The important indication for the continuation or discontinuation of injection is the number of organisms present in the fluid At first they are numerous, intra- and extra cellular, later they become intracellular and finally disappear As a rule, four to six injections are required to bring about the result, and this is the number which Flexner advises The opacity of the fluid cannot always be taken as a guide, as a rule it becomes less turbid, and a fluid which rapidly becomes clear is an indication of good prognostic value

It is, I think, a mistake to go on with frequent injections of serum after the acute stage of the disease has subsided Lumbar puncture by itself will often relieve the symptoms, and it is advisable to do this from time to time both for this purpose and also to see the condition of the cerebro spinal fluid

3 *Use of soamin* —Soamin was introduced in the treatment of trypanosomiasis about 1907, and about this time was used in the treatment of syphilis Dr George Low used it with success in the treatment of cerebro spinal meningitis in Africa, and has advocated its use for the disease in this country It is administered in 1 to 3 grain doses dissolved in water and injected intramuscularly on alternate days For the treatment of acute meningococcal septicæmia it would seem a rational method of treatment, but it is difficult to see how it can have an effect on a meningitis The greatest objection to its use is, however, its toxic effect in producing optic atrophy and blindness Not a few cases of such blindness were produced by the use of the drug when it was given for syphilis in 1908 and 1909

It is sometimes argued that any remedy must be used in such a severe disease as cerebro spinal meningitis, but recovery with loss of sight must, I fear, be regarded as a greater disaster than death It is stated that there is no case on record where optic atrophy has been caused by less than 60 grains and that this is then a safe total amount to be normal and no nucleated red cells were seen In March, 1914, owing to the kindness of Dr Garrod and his house physician, Dr A. Geoffrey Evans, Dr Weber examined the patient again while she was temporarily in St Bartholomew's Hospital She looked much the same as before, and complained of a little giddiness A medical man, who had chanced to notice the enlarged spleen, had sent her to the hospital The blood count showed Hæmoglobin, 77 per cent, red cells, 5,160,000 per cubic millimetre, white cells, 123 800 A differential count of the white cells showed that 96 5 per cent were lymphocytes Dr Weber said that looking back on this case it appeared doubtful whether the symptoms which from time to time induced the patient to seek medical advice had any causal connexion with her chronic lymphocytic leukæmia, although in 1909 a real improvement was perhaps associated with the reduction in the size of the spleen by the radium and atoxyl therapy In chronic lymphocytic leukæmia extreme enlargement of the spleen, as in this case, was an unusual feature, and perhaps the absence of anæmia had some prognostic importance Might not this absence of anæmia be taken as showing that the red bone-marrow was not overwhelmed by the leukæmic disease, and that (in spite of the leukæmia) it remained able to maintain its normal erythropoietic activity, which was so essential to the well being of the whole organism? It was quite conceivable that cases similar to the present one occurred in which the total number of white cells was much less than in it. The possibility of such a case being one of so called "Banti's disease" (an example of permanently or temporarily "compensated" Banti s disease, without any considerable anæmia) might arise, but he believed that in all cases of chronic "Banti s disease," as well as in practically all cases of chronic splenomegaly, apart from the leukæmias the tendency was towards a leucopenic blood count rather than towards an excess in the number of white cells A condition of chronic splenomegaly combined with a numerical excess of white cells should always arouse a suspicion of the case being one of chronic leukæmia (in a more or less quiescent state)

Sir William Osler, who had seen Dr Hall's case, said that it presented the clinical features of acute leukæmia and the examination of the blood corresponded He could not remember having seen a case with a lymphocyte count above 90 per cent The only characteristic feature absent from the symptoms of Dr Hall s case was purpura

Dr James Galloway said that he had had many opportunities of seeing the effects of treatment by means of X rays The most striking result had occurred in the first case he had had treated in this way It was one of myelæmia, the patient being extremely ill The amount of improvement was wonderful and the patient lived for five years Ultimately all the hæmopoietic processes seemed to cease and all the blood cells diminished He had discovered no means of determining which cases were likely to be benefited by X ray treatment and which made worse He also could remember a case in which mental symptoms developed resembling those of acute alcoholism.

Dr W Ironside Bruce spoke of the methods which he employed while treating such cases with X rays He used a felt filter for without a filter skin changes were sure to follow The same reduction of the white cells occurred with the filter as without it He preferred large infrequent doses rather than small continuous ones, and awaited the result of each dose He made a practice of keeping the number of white cells as nearly as possible at 40 000, below that number they often dropped suddenly He had not found that exposing the ends of the long bones, either alone or together with exposure of the spleen, was more beneficial than exposure of the spleen alone to the action of the rays Speaking of the results of this form of treatment, he said that an effect was usually noticeable in the blood after two or three weeks Improvement occurred in the patient s condition even in the absence of a fall in the leucocyte count He did not think that the treatment influenced the ultimate prognosis but the temporary improvement was very encouraging

Dr Parkes Weber was of opinion that no case of leukæmia had ever been cured He took the view that Dr Hall s case was not one of acute leukæmia but of lymphocytosis due to infection The nature of the infection in such cases was unknown.

Dr Hall, replying to the discussion, commented on the absence of any reference to benzol treatment, and stated that in the only case he had tried it the result had been disappointing There was a slight diminution of leucocytes for a short time after first giving it, but this was not maintained

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SECTION OF DERMATOLOGY

Exhibition of Cases and Specimens

A meeting of this section was held on April 15th, Dr J J Pringle, the President, being in the chair

Dr G Pernet showed a Rodent Ulcer of three years' duration, in a man aged 26, and commented on the early age at which it had commenced.—The President, Sir Malcolm Morris, and Dr J H Sequeira referred to similar cases seen at a less advanced age

Dr Pernet also brought forward a young man who exhibited extensive picric acid staining of the skin and hair due to his work, which was that of filling high explosive shells —Dr S E Dore, Sir M Morris, and Dr A. M H Gray referred to the discolouration of the urine sometimes caused by the absorption of picric acid in the treatment of ringworm, burns, and other skin conditions, but which generally was unaccompanied by constitutional symptoms, but Dr H W Barber recorded one case in which toxic symptoms occurred in a child

Dr Graham Little exhibited an Ulcer on the Foot due to several closely repeated X ray applications for a wart on the sole which had been administered by a layman He asked for suggestions as to prognosis and treatment.—A general discussion ensued as to the value of X rays in the treatment of warts, in which the President, Dr W K Sibley Dr H G Adamson, Dr Dore, Dr Pernet, Dr J M H MacLeod Dr Sequeira, and Dr P S Abraham took part, various opinions being expressed as to the value and limitations of the procedure

Dr Little also brought forward a case of Folliculitis Decalvans of the Scalp of several years' duration in a lady aged 55, who also presented the condition of keratosis follicularis of about six months' duration in the axillæ, bends of the elbows, groins, and back, the latter lesions simulated those of Darier's disease, but the association with lesions of the scalp had not, as far as he knew, been reported —The President, Sir M Morris, Dr Sequeira and Dr MacLeod, while agreeing with the diagnosis of folliculitis decalvans were inclined to adopt the view that the lesions on the body were probably early Darier's disease but Dr Adamson expressed the opinion that the lesions of the latter disease were not essentially follicular

Dr Sequeira brought forward a patient suffering from Gummatous Syphilis and Diabetes Insipidus He referred to several similar recorded cases as supporting the view that diabetes insipidus was commonly of syphilitic origin —Mr J E R McDonagh pointed out that this correlation was more marked in congenital than acquired syphilis He was inclined to attribute the condition to arterial disease —Dr Parkes Weber and Dr Kinnier Wilson accentuated the relationship of diabetes insipidus to syphilis, the latter suggesting that the pathogenesis of the condition was a certain degree of basal meningitis with pressure in the floor of the third ventricle in the region of the pituitary body

Dr Wilson and Dr Dore exhibited a case shown at a previous meeting of a man who had lived in the tropics and who had various patches of thermo anæsthesia and other indications of a peripheral neuritis, as well as bullæ on the feet and thickening of the skin of the hands with nail changes In their opinion the bulk of evidence favoured the diagnosis of leprosy —Dr Pernet accepted the suggestion of the exhibitors but Dr Abraham and Dr MacLeod thought that further evidence ought to be adduced before accepting so grave a diagnosis

Dr Dore showed cultures from a case of Favus, which were discussed by Dr MacLeod and Dr R A Bolam

Dr Sibley demonstrated a typical case of Epidermolysis Bullosa or congenital tendency to the formation of bullæ from trivial injury in a woman aged 50 He referred to an apparently identical condition developing after traumatism during adult life —The case exhibited was discussed by the President and Dr Adamson who had seen it on several occasions during the previous 17 years

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF MEDICINE

Leukæmia

A MEETING of this section was held on April 27th, Dr A E GARROD, Vice President, being in the chair

Dr A J HALL read notes of a case presenting symptoms of Lymphatic Leukæmia of acute onset terminating in complete recovery The patient, a man aged 26 years, consulted his medical attendant in March, 1911, on account of swelling of the glands on the right side of the neck He stated that he had noticed this coming on for a few days previously, but as it had given him no pain he did not seek advice earlier During the next few days the swelling gradually increased and became slightly painful He also felt shivery and out of sorts towards the late afternoons so that he went to bed early During the last few nights he had been hot and sweated At this time he did not complain of any sore throat, nor could any cause be found for the glandular enlargement Slight albuminuria was present, otherwise there was nothing abnormal When seen by Dr Hall six days later there was a large mass of glands in the right side of the neck extending from the clavicle to the edge of the jaw Individual glands could be distinctly felt, fairly soft, but not discrete They were painless and not tender on palpation Besides this mass, solitary enlarged glands could be felt on both sides of the neck, both axillæ, and both groins They were all firm and painless The spleen was felt about three quarters of an inch below the costal margin He did not look anæmic There was no sore throat, his teeth were in good condition There were no hæmorrhages A blood examination showed Hæmoglobin, 96 per cent (Haldane), red corpuscles, 5,400,000, leucocytes, 32,000, lymphocytes, 96 per cent, and polymorphonuclears, 4 per cent No eosinophiles were seen, and there were no evident changes in the red cells He had some pain in the glandular mass His temperature was 101° F in the evening A provisional diagnosis of acute lymphatic leukæmia was made and he was put on to liquor arsenicalis After two days the glands were smaller and the patient complained for the first time of sore-throat on the right side Later, vomiting occurred A differential count was as follows Large lymphocytes, 85 2 per cent, small lymphocytes, 4 4 per cent, and polymorphonuclears, 10 4 per cent No eosinophiles were seen in counting 300 cells, nor were there changes in the red cells The right tonsil became more painful and was covered with an exudate The spleen extended lower in the abdomen. After this the improvement was steady and continuous week by week. In July the glands were only just palpable, and the spleen could hardly be felt In August he was able to go shooting From that time to the present he had remained in excellent health Dr Hall remarked that at the time of the acute onset the diagnosis of acute lymphæmia was provisionally made The absence of severe anæmia, great prostration, and any tendency to hæmorrhage, together with the rapid and complete recovery, which had remained uninterrupted for four years, suggested that such provisional diagnosis was incorrect and that the case belonged to the category of lymphocytosis associated with cervical and general adenitis, to which attention had been more recently drawn The existence of such cases should make our prognosis somewhat guarded in atypical cases suggesting acute lymphæmia

Dr HALL also narrated some cases of Myelogenic Leukæmia 1 A case of chronic myelæmia treated by X rays in which, after a severe exacerbation, complete subjective recovery took place enabling the patient, a man aged 34, to perform his full work as electrician in a colliery for nearly three years After this another severe exacerbation occurred lasting for three months in which the liver became enlarged, with ascites, choked discs occurred on both sides with impaired vision and some hæmorrhages With further X ray treatment all these symptoms disappeared and he had a further period of five months with complete subjective recovery and was able to continue full work A third acute exacerbation followed ending in death about five months later Particular stress was laid upon the long duration of the patient's first improvement, and the complete, though short, subjective recovery after the second exacerbation, when his leucocyte count was never below 300,000 and sometimes more than double that, and the spleen and liver were much enlarged 2 Chronic myelæmia treated by X rays, with complete restoration to working health for about six months During this time the leucocytes dropped to normal and remained so, the spleen from being extremely large was only just palpable The patient died after a few days' acute illness which was called "pneumonia." 3 A chronic myelæmia in a woman, in whom the very large spleen had become completely dislocated so as to rest on the floor of the pelvis and form a large median tumour rising up into the abdomen and reaching above the navel In the absence of a blood count the tumour had been diagnosed as pelvic in origin, and an exploratory laparotomy performed. Dr Hall also spoke of a case of acute leukæmia associated with very severe and persistent pains in the bones

Dr F PARKES WEBER read a short paper on an instance of Long Quiescence of Leukæmia The patient, then aged 63 sought hospital advice in March, 1909,[1] for what she described as "bearing down pains," "as if she were going to have a child" These pains seemed to come on when she became fatigued from walking, &c Nothing abnormal was detected by gynæcological examination, but the spleen was found to be greatly enlarged, extending downwards decidedly beyond the anterior superior iliac spine The liver could not be felt. The inguinal lymphatic glands were moderately enlarged on both sides, the axillary glands (on both sides) could only just be felt, and the cervical glands were apparently not enlarged at all From March 16th to May 27th, 1909, the patient was in the German Hospital for treatment by atoxyl injections and radium applications (Dr N S Finzi) The spleen distinctly decreased in size under the treatment, and the lymphatic glands in the groins became scarcely larger than they are in some healthy individuals On Dec 6th, 1909, the spleen did not quite reach the level of the anterior superior iliac spine The following table shows the results of blood examinations up to the end of the year 1909 —

—	March 4 1909	March 29, 1909 (before radium treatment)	May 26 1909 (after radium treatment)	Dec. 6 1909
Red cells per cubic millimetre of blood	4,100 000	4 176 000	3,800 000	5 740 000
Hæmoglobin per cent	80	—	75	82
White cells per cubic millimetre of blood	67 000	43 200	12 000	47 120
Differential Count of White Cells per cent				
Lymphocytes	94·0	99 0	84·0	89 4
Neutrophile polymorphonuclears	0·8	0·5	14·0	10 0
Large hyalines	2 4	—	—	—
Intermediates	2 8	—	—	—
Eosinophiles	0	0·5	2·0	0·2
Basophiles	0	—	—	0·4

The differential count on March 4th was kindly made by Dr A E Boycott Both eosinophiles and mast cells were found, though none were present amongst the cells counted The red cells appeared normal No nucleated red cells were ever noted Dr Weber was able to examine the patient again on Dec 4th, 1911, when she complained of rheumatic-like pains in her feet, but looked well. The inguinal glands were moderately enlarged on both sides, and the spleen could be felt extending down to below the anterior superior iliac spine Blood examination (Dr G Dorner) Hæmoglobin, 70 per cent, red cells, 5,380,000 per cubic millimetre of blood, white cells, 95,600 The differential count of white cells gave Polymorphonuclear neutrophiles, 3 2 per cent, lymphocytes, 96 6 per cent, eosinophiles, 0 2 per cent The erythrocytes appeared hypothetical antacoid supposed to be derived from the islands of Langerhans of the pancreas is called insuline

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[1] See F P Weber Case of Chronic Lymphocytic Leukæmia without Anæmia, Transactions of the Medical Society of London, 1910 vol. xxxiii, p 364

The monograph gives an admirable, comprehensive, critical, and suggestive, yet not too diffuse account of the problems and practical importance of the now vast field associated with the terms ductless glands and internal secretions There are no illustrations and but few references to the vast literature of the subject There is neither preface nor index, but only the subject matter of the lectures themselves

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The Commoner Diseases, their Causes and Effects

Translated from the German of Prof Dr L JORES, of Marburg, by W H WOGLOM, M D, Assistant Professor in Columbia University N Y With 250 figures in the text London and Philadelphia J B Lippincott Company 1915 Pp xvi + 424 Price 16s net

IN 1913 Professor Jores, at that time professor of pathological anatomy at Cologne, published an excellent volume containing 34 lectures on pathological anatomy, entitled "The Anatomical Bases of Important Diseases" This has been translated by Professor Woglom with considerable freedom, as his rendering of the German title *Anatomische Grundlagen wichtiger Krankheiten* may be taken to show, and with substantial success

The lectures cover a great deal of ground, but are not unduly long or drawn out The first three deal with morbid conditions of the blood, then follow nine on vascular and cardiac disease, embolism, infarction, and bacterial infections of the blood Various acute and chronic diseases of the lungs are next considered, tuberculosis of the lungs and other organs is described in four lectures Without giving further details as to the contents of the book, one may say that it gives an accurate and well proportioned view of both general and special pathological anatomy It is designed for advanced rather than for early students of medicine, and is admirably calculated to supply the wants of medical practitioners who wish to bring up to date their knowledge of pathology The illustrations are numerous, well chosen, and well reproduced, they are perhaps less sharply and brilliantly printed in the translation than in the original, because the paper used in the German edition is more white and glossy The German original forms an admirable text book for medical students who feel it necessary to learn to read German, its matter is sound, and its style is characteristic of the average German writer

The translation by Professor Woglom is unusually happy, he has cut up and rearranged the often cumbrous and involved sentences of the German original with great skill, yet without the sacrifice of accuracy in the rendering The price of the translation in England is the same as that of the original

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Investigation into Scrapie

By J P M'GOWAN, M A, M D, B Sc Edin, M R C P Edin With an appendix on a case of Johne s Disease in the Sheep Edinburgh William Blackwood and Sons 1914 Pp 116

THIS book gives a history of the disease known as scrapie in sheep, and contains an account of Dr M'Gowan s researches into the malady The funds for the investigations were furnished by the Board of Agriculture for Scotland and were administered by a committee from the East of Scotland College of Agriculture and the Board

In 12 chapters of 111 pages the author discusses the subject, describes his experiments, and advances his conclusions The history of the malady in Britain, the disease as it is said to occur in other countries, and the symptoms and pathology of the complaint are given, and a case of the affection as seen in Germany has a chapter to itself. The remaining chapters discuss the different stages of sarcosporidiosis, which Dr M'Gowan considers to be the cause of scrapie He believes that two varieties of the disease exist, one marked chiefly by itchiness and the other by paralysis

A period of about two years has been occupied in the investigation of the disease, and the researches have been exhaustive and thorough The history of the research work, however, seems to be better and more exact than the history given of the disease We are not convinced that louping ill is the same disease as the one known as scrapie Louping ill has been the subject of a somewhat close investigation in previous years, notably in 1906, when the Board of Agriculture attributed it to a large, sporulating, rod shaped bacillus We also believe that the French *tremblante* and the German *Traberkrankheit* are identical with what has been hitherto known in this country as louping ill and not with scrapie

The conclusions the author comes to with reference to scrapie are 1 That the sarcocyst is always present in the skeletal muscles of scrapie sheep 2 Pruritus, the chief symptom of scrapie, can be reproduced in rabbits by injection into them of sarcosporidial emulsions 3 Clinical examination of typical cases makes it probable that the paretic symptoms are due to a primary muscle lesion 4 The marked post mortem condition of sarcosporidiosis can alone account for the phenomena of the disease 5 No single view can explain so well the symptoms and general features of the disease as this Two farms during the investigations furnished cases of Johne s disease in sheep with the usual naked eye and microscopic appearances

Dr M'Gowan s research is very praiseworthy, and it may be gathered from his conclusions that medicinal therapy is useless in the disease Regeneration of the flock and slaughter of affected animals early are the measures advocated He considers that ewes can transmit congenital infection to the offspring and that the disease is not contagious Some other authorities consider it markedly contagious More research work is necessary in this disease, as indeed it is into other maladies of sheep, such as braxy and louping ill

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Local and Regional Anæsthesia

With Chapters on Spinal, Epidural, Paravertebral, and Parasacral Analgesia, and on other Applications of Local and Regional Anæsthesia to the Surgery of the Eye, Ear, Nose and Throat and in Dental Practice By CARROLL W ALLEN M D With an introduction by RUDOLPH MATAS. Many Illustrations Philadelphia W B Saunders Company 1914 Pp 625 Price 25s

THE work that Professor Matas has done in connexion with local analgesia is so well known that a book such as this, which is practically an extensive exposition of his practice, is sure of a warm welcome from all those interested in the subject Without any such preliminary call upon favour this book would still deserve a wide circle of readers amongst those who practise local methods of anæsthesia for it is a comprehensive survey of the whole matter which is well presented in the text and illustrated by many excellent

Dr SEQUEIRA exhibited two Polish children with very extensive Favus of the scalp and trunk

Dr HALDIN DAVIS showed a girl with extensive Ulceration of the Face and Nose due to congenital syphilis, and asked for opinions as to the value of salvarsan and neo-salvarsan in such cases —Dr BOLAM, Dr MACCORMAC, Dr GRAY, and the PRESIDENT strongly advocated the use of salvarsan when the ulceration was active, but Dr SEQUEIRA thought the administration of mercury by inunction and potassium iodide internally would be equally efficacious

Dr A DOUGLAS HEATH presented a case of very unusual, extensive, deeply Pigmented and Atrophic Lichen Planus in a man, aged 56, which was said to have developed at the age of 3 months On the hands the lesions were verrucose Fresh lesions which were constantly developing were characteristic lichen planus papules but there were no lesions of the mucous membranes —Dr Heath's views were generally accepted by the PRESIDENT, Dr DORE, Dr ADAMSON, and Dr MACLEOD

Dr SEQUEIRA and Dr JENKINS OLIVER showed cultures of Microsporon Ringworm from mother and child

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NORTH STAFFORDSHIRE MEDICAL SOCIETY —A meeting of this society was held on April 15th at the North Staffordshire Infirmary, Dr John Russell, the President, being in the chair —Mr A W Gill showed three cases of Congenital Heart Disease in children aged respectively 4, 8, and 9 years —Mr R Alcock showed (1) Sarcoma of Knee (pathological specimen), (2) Melon Seed Bodies from Compound Palmar Ganglion (pathological specimen), (3) patients undergoing treatment with Salvarsan, and (4) a case of Malignant Pustule —Mr S McMurray showed cases of Congenital Nystagmus and Miner s Nystagmus —Mr W Webster showed 1 A woman exhibiting Sulph hæmoglobinæmia or Enterogenous Cyanosis 2 Two brothers with Myopathy of Pseudo hypertrophic Type. 3 Large Tumour of Brain in Inferior Parietal Region, which gave rise to no localising symptoms When the brain was removed post mortem a large gliosarcoma in the inferior parietal region was found 4 A case of a young woman with Amyotrophic Lateral Sclerosis of Charcot. 5 Two Prostates removed by Freyer s method —Dr Harold Hartley exhibited patients suffering from (1) Secondary Cancer of Cervical Glands, (2) Lympho sarcoma of Neck, (3) a Myxoma of Bone (pathological specimen), and (4) a pathological specimen illustrating the complete operation for removal of a cancer of the breast

LONDON DERMATOLOGICAL SOCIETY —A meeting of this society was held at St John's Hospital on April 20th, Dr W Knowsley Sibley being in the chair At the clinical meeting which followed a series of cases were shown by Dr Morgan Dockrell, Dr J L Bunch, Dr Sibley, Dr Simonds Gooding, and Mr C H Mills —Mr C R Kempster read a paper entitled "The Inhibitive Action of X Rays upon Malignant Growths" and showed a case of epithelioma affecting the tip of the nose which had been entirely cured by a few exposures to the X rays He also exhibited photographs and microscopical specimens of a case of epithelioma of the leg which had also been cured by the X rays —Dr Dockrell, Dr Sibley, and Dr Gooding joined in the discussion

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ROSYTH AS A GARDEN CITY —The construction of the Rosyth Naval Base had not proceeded far when the need for permanent dwellings in the vicinity of the works became apparent, and this need has grown more urgent as the scheme progresses towards completion A desire was early shown to make Rosyth a community which should be free from the more sordid housing features that are found in most industrial centres, and negotiations to develop the area on garden city lines were carried on by local authorities, interested proprietors, and the Admiralty A start is to be made in the near future by the Scottish National Housing Company which is to build up 270 acres on lines approved by the Admiralty As an initial step the company will put in hand 150 houses, to be rented at figures varying from £16 to £25, and architects have been asked to submit sketch plans for the scheme The company s aim is to have the houses ready by October, and it is intended to erect about 3000 houses within the next five or six years

Reviews and Notices of Books.

An Introduction to the Study of the Endocrine Glands and Internal Secretions

By Sir EDWARD SCHÄFER, Regius Professor of Physiology University of Edinburgh Leland Stanford Junior University Publications University Series 1914 Pp Price 75 cents.

THIS monograph is published by Stanford University, California, and in it we have the Lane medical lectures delivered in 1913 Professor Schäfer is not, by the way, "Regius" professor, for the professor of physiology in the University of Edinburgh is appointed not by the Crown but by the curators of the University

There is no one more competent to deal with endocrine glands than Professor Schäfer, who has contributed much to our knowledge of what was once a heterogeneous grouping of so called ductless glands The five lectures deal with (1) general considerations regarding internal secretions and the organs which furnish them, (2) the functions of the thyroid apparatus, (3) of the adrenal apparatus, (4) the pituitary body, and (5) the internal secretions of the pineal gland, of the alimentary mucous membrane, of the pancreas, and of the sexual glands

The term "endocrine gland" is used by the author to indicate "an organ which is known to form some specific chemical substance within its cells and to pass this directly or indirectly into the blood stream" Instead of the term "internal secretion" the author uses the term "endocrine" to denote substances of a specific nature like the active chemical agents which are produced by the ductless glands Specific active chemical agents are also passed into the blood by organs other than ductless glands—e g, the pancreas The author introduces certain new terms As endocrine glands produce substances which cause depression or cessation of function as well as those that excite function—hormones—for the former the term chalone, from a Greek word "to make slack," is introduced *Chalone* is "an endocrine product which inhibits or prevents the activity of an organ or tissue, as distinguished from a *hormone*, which excites the tissue to increased activity' The term hormone he employs in the sense in which it is used by its inventor There is more nomenclature as represented by the general title "antacoid substances" or simply "antacoids' These are specific organic substances formed by the cells of one organ, which pass into the blood to produce effects upon other organs similar to those produced by drugs

Descriptive details necessarily make up a large part of the text, but here and there the author offers much critical and suggestive comment In Lecture II, which deals with the thyroid apparatus, we have additional new nomenclature "The antacoid of the parathyroid ('parathyrine') is probably of chalonic, i e, of inhibitory nature The term "thyrine" is used to denote the active principle of the thyroid, "whether it is identical with, or contained in, the iodo thyrin of Baumaunn or not" Another suggestion is made regarding the "chromaphil substance" of the medulla of the adrenals As *adrenalin* "has a commercial attachment it is better to employ the neutral expression *adrenine* in place of it" The

THE LANCET.

LONDON SATURDAY, MAY 8, 1915

The Medical Profession and the Needs of the Army

THE cloud in which the various phases of the ar are veiled combines with the far reaching and mplicated nature of the naval and military mpaign to make the easy optimism of him who nds that all is always for the best nearly as hard bear as the outbursts of our GUMMIDGES Those, owever, who resolutely take the broad view that gainst a powerful enemy there have been ersistently opposed obstacles which, if they ave as yet not been so obviously effective as ad been hoped, have none the less produced in hat enemy a dislocation of plan and a failure n great objectives, will know better than to impede he responsible leaders by criticism, made for the ake of criticism, or by useless regrets But this loes not mean that we must always applaud every hing that is done, or must abstain from indi ating where it appears that a thing might e better done And we think that in regard o the help that remains to be rendered by the civilian medical profession to the army there is required from the War Office a frank explanation, for there is uncertainty at present A feeling of doubt exists in the medical profession as to the further and urgent need of medical men with the army There should be no two opinions in the case SIR ALFRED KEOGH has most distinctly stated that he requires more men, and we know that the War Office is willing to do all that lies in its power to render any medical help that is offered available for the army, whether that help be general or special, whether it be proffered as whole time or as part time engagements But there is not as yet a very definite plan for using the medical services of any save those who accept commissions unconditionally, and this has not been made obvious to medical men who desire, if possible, to help the military authorities and their country They have never been told what is, as a matter of fact, the thing which they principally want to know —namely, that they will have to fit into the machine in the first instance, relying later upon showing by their work that the place where they find themselves could be exchanged with advantage to the general cause

The call on the patriotism of the medical men who are now asked to join the army is indeed very great The higher posts have been filled and a waiting list has been established behind their present occupants What is required is medical men to join the army regardless of their civilian position and experience, in subordinate positions and, as a rule, with great sacrifice of income The War Office cannot offer such men any commensurate return whatever, neither rank nor pay nor facilities for clinical research can often be based upon the special attainments or equipment of any medical man accepting a commission. We feel safe in saying that a man who possesses special qualifications in some direction will in the course of internal administration be, when practicable, placed where he seems to be exceptionally fitted A skilled operator may be sure that as soon as opportunity serves he will be doing the operating surgery in his district, and a specialist will quickly find his particular services in demand But at the beginning the War Office finds itself unable to go into individual claims The principle of half time employment is recognised, but only as secondary to whole time service, and the call is really for compliance with the general pattern of medico military duty It is to the patriotism of the medical man that appeal is being made, and we are sure that the response will be forthcoming, but we feel that it would come more quickly if the reasons were officially stated why the offers of assistance must be practically unconditional This war has been from a scientific point of view a triumph for medical men, and they may well feel that they deserve generous treatment In our forces the freedom from disease has been wonderful, and the official manifestations of pleasure at the medical work done have been both ungrudging and thoroughly well deserved But this must not blind us to the fact that while medical officers are an integral part of the army their work is dictated by military exigencies One example which has recently been brought forward in our columns will exactly illustrate what is meant here. A scientific surgeon, on learning that he has to send back many of his patients to other hospitals before he has been able to judge the results of his treatment, and before, in his opinion, the patients are ready to travel, naturally experiences a sense of deep disappointment, but as an officer in the army he knows that the clearing of the beds has been made necessary because other casualties are expected to pour in, these must be received, and the beds are required in which to receive them This is not a failure of scientific surgery, it is an adaptation of means to ends The surgeon must not feel that he is being wasted in certain cases he might do more good, but at the expense of wider profit to the Army And the army as a whole must remain the chief thing We doubt if it has been put sufficiently clearly to the doctors who have made applications to the War Office without success that they, urgently as their services are required, cannot be placed in the billets where they would be most useful individually, but may have to fill berths which they think unsuitable and where the duties may not appear nearly so important as the civilian diagrams and anatomical plates Moreover, some of the side issues of anæsthesia are treated in a particularly full and interesting manner There is, for instance, an excellent chapter on pain and a consideration of the various theories as to its intimate nature, whether it is to be considered as a separate sensation or as always an over stimulation of ordinary senses The author does not arrive at any definite conclusion on the point

A chapter is devoted to anoci association, and here we note that Dr Allen does not favour quinine and urea chloride because it "produces massive fibrinous exudates in the infiltrated area with occasional tendency to suppuration" In some respects the book is almost too prodigal of detail, and we think that an unnecessary amount of space is taken up with the details of experimental work in connexion with arterial anæsthesia, a form of anæsthesia having no special claims, and one which, indeed, Dr Allen does not himself recommend The author is fond of the combination of alkaloids, generally morphia and scopolamine, both with local analgesias and with spinal analgesia He gives an interesting account of the attempt to produce general anæsthesia through the intravenous use of local anæsthetics, and shows how enormous doses produce only imperfect analgesia, rendering the process impossible for human surgery

There have been several large works published recently on local analgesia Dr Allen's is certainly not the least large of these, nor is it by any means the least useful Though it would be all the better for pruning, it is a thoroughly valuable work

LIBRARY TABLE

The Way of the Red Cross By E Charles Vivian and J E Hodder Williams With a preface by Queen Alexandra. Published for the *Times* by Hodder and Stoughton, London, New York, and Toronto 1915 Pp 289 Price 2*s* 6*d* net —Our country is fighting not alone for victory, or in defence of her plighted word, or to help to save Europe from the ideals of Bernhardi and from German "world power," but also for her very existence, and it may be doubted if those who have to sit at home, whether from disabilities of age or other physical infirmities, or because they are needed in some form of work, do realise all that our brethren in arms, British, Belgian, French, Japanese, Russian, or Serbian, are undergoing In the book now before us are a series of pictures drawn with a vivid and sympathetic pen of men and women, gentle and simple, military and civilian, all "doing their bit" earnestly and heroically because it is their duty so to do Here we see the admirable organisation at work in the offices in Pall Mall, the doings in a base hospital in France, and can read talks with patients, nurses, and medical officers, which bring home to us the blessings conferred upon the victims of war by the Red Cross Society and the Order of St John of Jerusalem The tear and the smile are very near together in such chapters as "The Guardsman," "Soldats Belges," "Washing Up," and many another, but the note of the book is the unwearied patience of everyone concerned, whether in the fighting line, in the hospital, in the packing shed, or in the office "In one day," said a clerk in the base hospital, "we had 2500 wounded in and sent 700 out to the hospital ship, and it's no use trying to explain the amount of clerical work that involves But we had to get it done And we did it" The Red Cross Society, which cheers the broken, helps the wounded and the sick, or, if that be not possible, smooths the way of those who are to die, cannot be carried on without material, however willing the personnel, and material means money All the profits from the sale of the book are to go to the Red Cross Fund, but more is wanted now and much more will be wanted in the immediate future If any reader can afford to send a contribution for the work it may be sent to the publishers, Messrs Hodder and Stoughton, Warwick square, London, E C, marked "The Way of the Red Cross," and will be duly acknowledged in the *Times*

Guida per il Medico in Guerra By Dr P Sisto Pp 184 *Guida per il Chirurgo in Guerra* By Dr O Uffreduzzi. Pp 197 Turin Unione Tipografico editrice 1915 Price 2 50 lire each.—We are not inclined to think that army surgeons will derive a great amount of help from these little books, for the reason that anyone possessed of sufficient medical and surgical education to obtain commissions in the army will find them deficient in affording information as to the most recent improvements in the methods of dealing with injuries and diseases peculiar to warfare Dr Uffreduzzi gives some useful details with diagrams as to the arrangement with reference to the fighting line of field ambulances, and field and base hospitals About three fourths of the book deals with the treatment of wounds, both generally and in connexion with special parts of the body, and does not seem to recommend the use of antiseptics except to cleanse the skin around the wound The following passage would probably not be endorsed by many military surgeons exactly as it stands "Swabbing the wounds with tincture of iodine is useless and harmful, as is also the use of free ablution with sublimate and carbolic acid now universally abandoned" The author gives no rules as to the principles to be followed in accordance with varying conditions, but it must be allowed that those principles are only slowly evolving He mentions the use of iodo benzine to cleanse the skin, but does not allude to the practice of his compatriot, Dr Guido Cremonese, of Rome, who recommends its free use in swabbing infected wounds We welcome the advice to give prophylactic doses of antitetanic serum in lacerated wounds soiled with earth and horse excrement, as we believe that the occurrence of comparatively few cases of tetanus with the British army now in France is mainly to be attributed to this practice A short résumé of the respective duties of the regimental surgeon, the ambulance officer, and the surgeon at the field hospital is, in our opinion, the best and most useful part of the book

Dr Sisto's book is a vade mecum of the practice of military medicine compressed into a small and quite inadequate compass Turning to a disease which has lately been attracting a great deal of attention among military surgeons, epidemic cerebro spinal meningitis, we find no mention of retention of urine, which occurs frequently in cases where the cerebral symptoms are comparatively slight, neither under the heading of prophylaxis, which is dismissed in two lines, is there any reference to the supervision and isolation of carriers We notice that most of the authors quoted for reference have names suggestive of Teutonic origin the Royal Navy do not readily admit of comparison with those of the sister service Nevertheless, the health of the service afloat is shown to have been satisfactory for several years past Equally interesting for purposes of future comparison are the details of casualties in the British merchant service, especially those resulting from the destruction of vessels which may be expected to recur in the event of the continuance of the present conflict From particulars furnished by the Marine Department of the Board of Trade it appears that in the year 1913 masters and seamen employed in the merchant service were more numerous than at any previously recorded period, whilst the mortality from disease, wreckage, and other casualties compares favourably with that of previous years In this case especially the records of future years will enable some measure to be derived of the serious loss of life now being wantonly inflicted on our non combatant sailors by the piratical conduct of the enemy

Annotations.

"Ne quid nimis."

EFFECT OF THE SPIRIT TAX ON THE COST OF MEDICINAL COMPOUNDS

ONE of the unintended consequences of the spirit duty has always been to impose a heavy burden of taxation on a large and important class of medicinal compounds, for alcohol is more extensively employed in the manufacture of galenical preparations than any other substance A very high proportion of a hospital drug bill is in respect of the duty on spirit, and the same, of course, applies to a pharmacist s account with his wholesale house This was the case under the rate of duty in force before the increased duties were proposed on spirit last week, and it is therefore obvious that the tax on spirituous medicines will be double the previous tax unless some concession is made in the case of medicinal spirits Under the old duty a hospital using a hundred gallons of rectified spirit a year paid something like £115 in respect of the duty on alcohol, while at the new rate the duty would, of course, be £230 Some of the large London hospitals use 200 gallons of rectified spirit a year, and in exceptional cases more than this amount, so that the tax is a very serious matter indeed In introducing his proposals in the House of Commons on April 29th the Chancellor of the Exchequer intimated that he was anxious to exempt medicinal spirits from the increased tax, and that he was endeavouring to devise a means of making an exception in the case of such spirits In the past Mr Lloyd George, as well as his predecessors, when urged to differentiate between potable spirits and alcohol used in the manufacture of tinctures and like preparations, has refused to do so on the ground that it has been impossible to formulate a practicable scheme to prevent fraud, but with a tax of 29s 6*d* a gallon on proof spirit and 46s a gallon on rectified spirit it is urgently desirable that the Excise authorities should exercise all their ingenuity in devising a plan by the operation of which medicinal spirit may be freed from the extraordinarily heavy burden of taxation without loss of revenue by the fraudulent use of spirit The case for a rebate of the duty on medicinal alcohol is equally strong from the point of view of the Insurance Act Drug Fund as from that of the hospitals The problem is admittedly a very difficult one, but there is some hope that a satisfactory solution will be found

TREATMENT OF TUBERCULOSIS

THE Local Government Board have issued two circulars in reference to the arrangements to be made for the treatment of tuberculosis One is addressed to the metropolitan borough councils and the other to the councils of counties and county boroughs (England) Their contents are similar In reference to tuberculosis officers, the Board refer to the fact that some tuberculosis officers are absent on naval or military duty, and that their absence should be duly reported Further, the councils are reminded that at the present moment it may be difficult in all cases to secure that tuberculosis officers should have the additional qualifications which were recommended It is only right that relaxation of certain rules should be permitted at the present time, when the needs of the nation call for all medical men that can be spared, indeed, it might well be upheld that the younger officers should be encouraged to obtain temporary commissions in the Royal Army Medical Corps, their appointments being held open for them and their duties in the meantime being carried out by older practitioners The Board also point out that they have had under consideration the question of the provision by local authorities of nursing for persons suffering from tuberculosis who are being treated in their own homes The Board rightly recognise that the provision of skilled nursing for some of these cases forms an essential part of the treatment, and we trust that in the future suitable arrangements will be made, but it is pointed out that the need of nurses for military purposes will for the time being preclude any extension of the nursing service in this direction Another important matter referred to is the organisation of voluntary committees for the care of patients suffering from tuberculosis The Departmental Committee on Tuberculosis expressed the opinion that the effectiveness of the dispensary could be greatly increased by the formation of such committees consisting of representatives from the local authorities, boards of guardians, Insurance Committees, and from all charitable and social work organisations in the district The assistance such committees could give would be great, such as the provision of additional food, change of air, clothing, suitable occupation, and so on The circular points out that much of the work to be so undertaken would be outside the powers of local authorities, and the committees would have to rely largely on voluntary contributions But with careful organisation the help thus afforded would be great The experience of sanatorium officials goes to show that the ultimate result of the treatment at such institutions largely depends upon whether the patients can be placed in healthy environment and find suitable occupation after their discharge In a large number of cases this is most difficult of accomplishment, and consequently many relapses occur We cordially support the recommendation of the Board that such committees should be formed with as much support as possible from the borough and county councils ones, which, at heavy cost to themselves, they have resigned, so as to help in the general welfare of the army

We have before us many letters from medical men very anxious to help in the national stress, who have been kept from volunteering because they have felt that their particular services were not in request They do not seem ever to have been told that their particular services are not sought, but their general help They have never been urged to join the army as a patriotic action When a general practitioner of any standing unconditionally leaves his practice and accepts a lieutenant's commission he gives up so much that he has a right to expect that the measure of his sacrifice should be recognised by the country The doctor who joins the army occupies a special position He is a citizen whose actual professional civilian work is useful with the fighting forces, he is a layman whose equipment is necessary for military purposes It is not a question of asking a doctor to give up being a doctor to become a soldier, during war, as a doctor he is a soldier When the barrister or the stockbroker joins the army it must be very seldom that his experience in law court or counting house serves him as a fighting man His action is as patriotic as that of the practitioner who joins the Royal Army Medical Corps, but the latter costs little or nothing to train, and this should be recognised There is no doubt that more doctors are and will be wanted for the army—signs of local plethora mean nothing And we believe that the army will obtain the number of medical men needed, however great that number may be, and however dangerously depleted the ranks of civilian medicine may thus become But we would urge upon the authorities that the case of many of those who will be taking commissions calls for generous appreciation of their self sacrifice and a clear explanation of the demands made upon them

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The Registrar-General's Report for 1913

THE seventy sixth annual report of the Registrar General has recently been presented to Parliament The document relates to the births, deaths, and marriages in England and Wales during 1913, and as it has only been available to the public within the last few days our readers will not unreasonably look for some explanation of its late appearance In a prefatory note Mr BERNARD MALLET expresses his regret that this report, relating as it does to 1913, should not appear until the spring of 1915, as he fully recognises the importance of prompt publication of the data in question, considered as a permanent record of vital statistics Having regard to the delay in the issue of the two preceding reports—caused partly by the requirements of the Census and partly by the extensive changes of form and matter inaugurated in the report for 1911 — the Registrar General hoped until recently that, the disappearance of these two causes of delay having been achieved, a much earlier publication of the present report would have been secured—not later than 12 months after the completion of the year to which it refers The realisation of this hope has, however, been prevented by the war, which has had the combined effect of reducing the expert staff of workers in the department, and of imposing new duties on the remainder We are assured, however, that unless the interference due to war is further increased a definite improvement may be expected in the date at which the report for 1914 will be available to the public

In view of the special circumstances of the time the advisability of curtailing the present report was considered, but this course was, as we think wisely, rejected, because of the consideration that the value of a series of annual tables would be seriously impaired by any interruption of its continuity Consequently, all the important tables in the last two reports have been repeated in the present The Registrar General expresses the opinion that while tables of primary importance ought to appear annually, and in as constant a form as circumstances permit, it will be advantageous to vary from time to time both the subject matter and the manner of treatment of other portions of the report Whilst, therefore, matters of prime importance will henceforth be given every year, the records of other matters of less, though still considerable interest will be published for "sample years" at intervals, the subjects so dealt with being varied from year to year in order to increase their number This is a departure which will much enhance the value of these reports Speaking generally, the vital statistics of the year 1913 are distinctly favourable It is satisfactory to note that both in 1912 and in 1913 the marriage-rate showed a further increase on the rate in the preceding four years, the provisional figures for 1914 indicating a still further rise The birth rate, however, failed to show any recovery The death rate in 1913, although somewhat higher than in 1910 and 1912, was otherwise the lowest on record Apart from the effects of the warmer summer, the reduction of mortality below all previous records which characterised 1912 was maintained throughout the year now under review

As 1913 was the last complete year preceding the outbreak of hostilities, the statistics in this report concerning the British army and navy will be studied with interest, if only as affording a basis of comparison with the less favourable figures which must be looked for in subsequent reports giving the results of the existing European War Highly significant in this connexion is the fact that the average regimental strength of the British army was actually lower in the year under notice than it had been at any time since 1899 The health of the army, both in the United Kingdom and abroad, appears to have been maintained at a high standard Particulars concerning error of diet, was a factor in the etiology of rickets He found that the important factor in animals was the deprivation of exercise He now supplements his observations in this respect by an interesting examination of the dietetic and hygienic conditions of between 400 and 500 rachitic children He shows charts demonstrating that neither the want of breast-milk nor prolonged suckling exerts any definite influence on the incidence of rickets among the cases examined—an interesting refutation of the suggestion that dietetic factors are of paramount importance or that artificial or patent foods are causal agents Some observations upon the occurrence of intestinal disturbances prior to the onset of the disease do not appear to lend support to Marfan s view that an intestinal auto intoxication is the cause of the condition An analysis of the cases according to the level of their homes above the ground revealed no important fact A study of the amount of air space allowed in the home to each child demonstrates that the less air space the greater the incidence of the disease Lastly, the amount of time spent in the open air is studied in regard to these children and reveals the interesting fact that a considerable proportion of these children are not taken out at all. Dr Findlay believes that the two factors, confinement and deficient fresh air, render the child lethargic and diminish the amount of muscular exercise obtained, and further suggests that deficient exercise affects the metabolism of calcium, a thesis for which there is some experimental support On the basis of his observations he advises massage, passive movement, and electricity in the treatment of the disease We commend his paper to our readers as a thoughtful and suggestive piece of work

THE PATHOLOGY OF LEPROSY

THOUGH many points in the pathology of leprosy remain unsolved, it cannot be denied that the experimental investigations carried out during the last few years have thrown considerable light upon this difficult subject In the current number of the *Annals of Tropical Medicine and Parasitology*, Vol IX, No 1, a very interesting and timely summary of the present state of our knowledge of leprosy, and the results obtained concerning it by experimental studies, has been contributed by Dr H Bayon, research bacteriologist to the Government of the Union of South Africa The author has discussed the whole question of the clinical and pathological features of the disease, its specific organism, the experimental transmission of the infection to animals, and the relation of spontaneous rat leprosy to the human disease He has also dealt with serological tests and reactions in leprosy, and the degree of communicability of the infection He has something also to say concerning the treatment and prophylaxis of the malady It is gratifying to find that Dr Bayon views hopefully the prospect of the ultimate extinction in time of this terrible disease As regards its communicability, he believes that the evidence which has been accumulated justifies the conclusion that the usual mode of infection is by direct or indirect contact especially under unfavourable hygienic circumstances, including overcrowding and lack of personal and domestic cleanliness Intimate contact, such as that between mother and child, or sleeping in the same bed with a leprous person, supplies the requisite conditions for the transference of the disease In countries like South Africa, where leprosy is not uncommon and where native servants or nurses are employed to wait upon white children, the danger is greater than some authorities have been inclined to admit It is pointed out that the disease may exist in a native servant for a long time before its presence is recognised by the employer Instances are mentioned where infection is believed to have followed upon the common use of drinking cups or other vessels Although Dr Bayon regards as "far fetched" the suggestion that a biting insect may act as the intermediary in the transmission of leprosy, he nevertheless admits the possibility that the common house fly may suck up germs of the disease from leprous sores and transfer them mechanically to a healthy human subject In this connexion those who have travelled in the East cannot fail to have been struck with the frequency with which flies swarm upon the open sores and round the nostrils of leprous beggars With respect to spontaneous rat leprosy, it presents numerous points of resemblance to the human malady, and the experiments which have already been made suggest that it may be etiologically related to that form of the disease from which man suffers, the relationship being possibly of a similar kind to that which exists between bovine and human tuberculosis As regards treatment, Dr Bayon reminds his readers that the macular variety of leprosy is subject to spontaneous remissions and apparent cures without the aid of any remedies Chaulmoogra oil seems to be indicated for the nodular form of the disease, and as far as present experience goes, cultural extract may be usefully employed for the macular cases With respect to prophylaxis, the measures recommended include registration and sanitary inspection of the homes of lepers, but segregation of the sufferers in asylums, settlements, or colonies is strongly urged, early separation of children from their leprous parents is necessary, and the strict enforcement of personal and domestic cleanliness, along with the abolition of overcrowding, must be carried out in localities where leprosy is known to be endemic

INVALID CHILDREN S AID ASSOCIATION

THE Invalid Children s Aid Association held its twenty seventh annual meeting on April 28th, Field Marshal Lord Grenfell presiding Three resolutions were submitted to the audience The first, proposed by the chairman, was in favour of the approval and adoption of the annual report, and as Lord Grenfell pointed out, this report showed the excellence of the work done by the association, and the steady spread of its activity The association now has 20 branches at work in London, and nearly 40 more provincial branches, most of them federated to the London Association As evidence of the activity of the London branches, Lord Grenfell quoted the fact that in 1914 over 8000 invalid children were assisted by convalescence, surgical instruments, or whatever particular form of medical or surgical aid their medical attendants had ordered, while the sum of over £15,500 was expended in giving this aid A second resolution, pledging financial support to the association, was proposed by Countess Ferrers, who spoke eloquently of the assistance so freely given by the association A third resolution recommending the re election of

FROM GERMAN MEDICAL JOURNALS

RECENT numbers of the *Presse Médicale* have contained interesting excerpts from current German medical journals which deserve to be brought to the notice of the medical profession in England In one of the January numbers of the *Deutsche Medizinische Wochenschrift* Dr Loewenfeld, of Munich, a neurologist, published an article on the national character of the French and on its psychopathic traits as evidenced in the present war He declares that the specific psychological characteristics of the French are vanity, ostentation, carelessness for truth, exaggerated emotivity, and an innate tendency to cruelty, as seen, for instance, at the time of the Terror and the Commune, and as exemplified by "the brutalities of which the Germans and Austrians have been the victims since the present war began" The delicate comments of the French editor on this profound analysis of the racial character of his people can be imagined. It is not necessary, unfortunately, to go back to the days of Tilly or Wallenstein to find proofs of German cruelty, the hecatombs of Belgium do not date back to the Terror, or even to the Commune Yet to read the puerile communication of the German neurologist one might suppose that the deliberate and methodical application of a system of terrorisation, on a colossal scale, as an integral part of the German conception of war, advocated in all frankness by its exponents, had never even been devised, still less carried into effect In a February number of the same journal Dr Erich Hesse, attached as ' Hygieniker" to the 19th Army Corps, explains the excellent general condition of the troops under his own more immediate observation as due in great part to their supplies of French red wine A solemn explanation of how these immense stores came into their hands—"the inhabitants had fled owing to fear of well merited punishment"—is followed by an equally serious appreciation of the great self restraint of his soldiers in so rarely ' exceeding the bounds of decency" Their good health, their resistance to the petty hygienic troubles of the trenches, the favourable evolution of intestinal catarrhs, &c, are all attributed to the same cause "Ah! le bon vin rouge de France!" says the French editor by way of comment There have been many articles dealing with venereal disease in the German medical journals In the *Deutsche Medizinische Wochenschrift* of Jan 14th Professor Neisser, of Breslau, says that the figures of 70 6 per 1000 cases treated in hospitals during the Franco German war of 1870, as representing the proportion of venereal cases, have already been largely exceeded in the present war After remarking that an appeal to the honour of the heroes of Louvain and Flanders would be sure to have a deterrent effect (Man könnte aber gewiss mit Grösserem Erfolg an das Ehrgefühl unserer Truppen appellieren), he nevertheless makes the following proposals to deal with the situation (1) imprisonment of all prostitutes that can be discovered, (2) energetic prophylactic treatment with salvarsan and mercury of all women "suspected" (*sic*) of prostitution, (3) the distribution of suitable protective appliances to the armies of occupation Anyone conversant with French journalistic levities can imagine for himself the chance thus afforded for an expression of caustic humour Neisser's proposals have been followed by numerous criticisms and counter suggestions in the columns of the same journal. Dr Kurt Mendel (of the *Neurologisches Centralblatt*) can find no remedy for the extremely widespread infection but absolute continence Others make proposals for the regulation of this traffic which are on a par with their methodical and well organised arrangements for the distribution of bread tickets At a "Kriegsärztlicher Abend" held at Lille on Jan 20th (*Münchener Medizinische Wochenschrift*, Feb 9th), and attended by some 200 military medical men, it was proposed to distribute appliances to the troops by means of automatic machines Complaints were also made of the behaviour of the women in the Germans' hands, and here a passage, in its nauseating frankness, may be given in the original "Selbst die bessere französische Prostituierte halt sich den Deutschen fern es kommen fast nur die niedersten und schmutzigsten Prostituierten in Betracht, die man sich denken kann Sie sind eine gefährliche Infectionsquelle, weil sie alle Reinlichkeitmassnahmen, die die bessere Prostituierte durchführt, missachten *Daneben gibt es Frauen, selbst mit 4 und 5 Kindern und Mädchen, die sich aus reiner Not, um ein halbes Stück Brot den Soldaten anbieten* Diese Neulinge der Prostitution sind besonders gefährlich, weil sie die Hauptträger der Infectionsquelle werden" As the French editor truly says, what human being can read without horror and disgust the unconscious revelation of a world of infamy contained in these lines?

THE ETIOLOGY OF RICKETS

IT is somewhat remarkable that in a disease so widely spread and so common as rickets there should still remain so much that is enigmatic, or, at any rate, controversial in its etiology, in spite of careful clinical and experimental research in this and other countries The whole subject of the etiology of this condition is reviewed in an interesting and critical manner in a paper by Dr Leonard Findlay, which we publish in this week's issue of THE LANCET He points out that in this country and in America, following the interesting observations of Sir John Bland Sutton at the Zoological Society's Gardens some years ago, the dietetic factor in the etiology has received a great deal of attention It is natural, since this disease can apparently be induced in some animals under experimental conditions, that considerable importance should attach to such observations, but Dr Findlay rightly points out that it is essential that the truly rachitic character of the lesions induced in animals should be established by microscopical examination Moreover, he points out further that there is a metabolic disturbance in rickets in the human subject, notably in regard to calcium salts, an important fact which is often lost sight of It would appear that there is an inability on the part of the body to use this substance, even though present in the diet in sufficient amounts The theory that this depends upon some hormonic defect is a tempting one, but is not at present definitely established It has long been recognised that there is probably a hygienic factor in the causation of rickets, since the disease is so much more common in towns and in the older countries than in the country and in newer settlements Dr Findlay, on the basis of some experimental observations previously published, arrived at the startling and heterodox conclusion that there was no evidence that deficiency of fat, or, indeed, any

Mr LESLIE PATON pointed out that so long as the pathology of any disease was obscure its treatment must be empirical and frequently ineffectual This was the present day attitude in regard to detachment of retina, which was really a terminal effect. In cases of tumour of choroid detachment was caused by accumulation of œdematous fluid behind the retina, this fluid being an irritative product In some cases the cause was a perforating wound of the sclera, a case of which he quoted Sometimes the detachment was due to a rapid exudation of lymph and serum into the subretinal space in severe choroiditis or general uveitis, or it might be caused by subretinal hæmorrhage He believed that detachment might occur from cicatricial contraction of the retina itself From an examination of different types he thought it safe to conclude that symptomatic detachment might arise from either a push from behind, a pull from inside, contraction of the retina, or a combination of any of these factors He reminded the meeting of the main contentions of Raehlmann and Leber, and said that most cases of simple detachment occurred in myopes, he had found it to occur in all degrees of myopia, in which condition there was an increased cubical capacity of the scleral cavity Vail of Cincinnati, had shown that in myopes the circular ciliary muscle was usually atrophied from non use, and that authority considered it part of a generalised atrophy of the ciliary body, with diminution of aqueous secretion and lowering of ocular tension. Mr Paton then proceeded to discuss the question of sympathetic detachment stating that he considered it a moot point as to whether it was really sympathetic, or whether the action was a setting up of a chronic cyclitis or uveitis in the sympathising eye He had had some cases of cure—i e, restoration of function, and he realised that spontaneous cure sometimes eventuated, though similar cases left alone had not got well, as had the cases in point after his treatment In every case he thought all the facts should be placed before the patient, so that he could decide on whether he would have anything done or not especially as knowledge on the subject was not yet complete enough to enable a safe prognostication to be made in any *particular* instance

Dr A MAITLAND RAMSAY, reviewed the literary landmarks He agreed with Mr Paton that no theory of causation of detachment sufficed to account for all the cases, the underlying cause in all was disease of the uveal tract and of the pigment epithelium, though this might be nothing more than senile degeneration The presence of a collection of fluid between the choroid and retina led to many forms of evacuation, which were briefly indicated—38 in number The most important factor in the treatment he considered to be absolute rest in bed, patients often volunteered the statement that they could see best in the morning after a good night's rest, but that sight failed as the day advanced. The rest period should not be less than four to six weeks Relapses occurred most frequently in those who had rested but a short time Every effort should also be made to improve the patient's well being, particular attention being bestowed on procuring regular action of the bowels, kidneys and skin Next the pressure bandage was important, both eyes should be covered and the pressure must be quite appreciable though stopping short of pain But where the bandage caused pain, and on its removal the eye was red and irritable, it should be discontinued owing to the possibility of irido-cyclitis supervening Cases which did not bear the pressure bandage he regarded as of unfavourable prognosis .The third important factor of treatment was subconjunctival injections after 48 hours of bandaging, but only if the electric ophthalmoscope showed that the site and character of the detachment appeared favourable The pain following the injections (which he detailed) was mitigated greatly by using chemically pure chloride of sodium Diaphoresis he did not employ until a fortnight's trial by his other methods showed little or no improvement In some cases diaphoresis started an improvement which became slowly progressive He used *pilocarpine* for this There should be a period of leisurely recuperation afterwards, resumption of business immediately after cure seemed to invite relapse and this was also helped by constipation Failure was almost certain when the choroid was extensively diseased when the pupils were sluggish in responding to mydriatics, and when intraocular tension was greatly reduced

The debate was continued by Sir ANDERSON CRITCHETT, Mr E TREACHER COLLINS, Mr R R CRUISE, Mr J B LAWFORD, Mr SYDNEY STEPHENSON, Mr D LEIGHTON DAVIES, Mr P W MAXWELL Mr J B STORY (Dublin), Mr O HIGGENS Mr G MACKAY (Edinburgh), and the PRESIDENT and the authors replied

Mr CYRIL WALKER read a communication on

Angiosarcoma of Retina

The patient, aged 4 years, was seen on Nov 11th, 1914 Eight months before there was said to have been a film over the right eye, no pain or redness It disappeared in about six weeks In June and September there was some pain in the eye, but the boy had regularly attended school to the end of October The right eye was seen to be the seat of a brownish yellow hypopyon There was no ophthalmoscopic reflex, the tension was normal, and the pupil dilated well with atropine. There was doubtful perception of light The left eye was normal, and the patient's general condition good Ten days later the eye became red and tender and there was some continuous pain, the tension was *plus* 1 The contents of the anterior chamber were evacuated, and Professor Walker Hall reported that the material was probably sarcomatous The eye was accordingly excised and submitted to the same authority Early in December some three quarter inch of the stump of the optic nerve was removed, with a mass of tissues surrounding it Pathological examination showed that recurrence had commenced in the stump of the nerve and the surrounding tissues, but there was a small margin of healthy tissue. Mr A. Osborne, of Ilfracombe, reported that recurrence took place within a fortnight of the second operation, and that the mass had attained the size of a cocoanut The boy's mental condition was not affected, and there had been no metastasis The specimen showed that the ciliary region was not invaded

Clinical Meeting

At the clinical meeting at the Royal London Ophthalmic Hospital the following cases were shown —

Mr J GRAY CLEGG (Manchester) Case of Bullous Keratitis, whose sister was similarly affected

Mr SYDNEY STEPHENSON (1) A case and drawing to illustrate Coarse Striate Clearing of a Corneal Cicatrix and (2) a case of Blue Sclerotics.

Mr C WRAY (1) Cases operated on for Conical Cornea, (2) drawings of Cured Conus, and (3) Exostosis of the Orbit (two cases)

Mr E TREACHER COLLINS (1) Case of Congenital Ectropion of both Lower Lids, (2) *Double Facial Paralysis*, (3) Detached Retina cured by rest in bed and scleral puncture, and (4) Aphakia with apparent accommodation

Mr LESLIE PATON Cases of Healed Detachment of Retina.

Mr W T HOLMES SPICER Congenital Cataract and Spontaneous Dislocation of Lens in three members of the same family

Mr J ATTLEE Peripapular Ectasia

Mr RAYNER BATTEN Collapsible Periscope

Mr W H H. JESSOP Acute Central Retinitis

Mr G H POOLEY (Sheffield) Extensive Pigmented Moles of Face, Eyelids, and Conjunctiva

Mr R FOSTER MOORE (1) Two instances of Disappearance of a Detachment of the Retina in Patients with Albuminuria, and (2) Pigmented Mole of rapid growth

Mr CYRIL H WALKER (Bristol) Hyaline Bodies at the Optic Disc

Mr A. C HUDSON Iridescent Corneal Scar

The PRESIDENT (Mr F RICHARDSON CROSS) read a paper on

Eye Symptoms in Kaposi's Disease (Xeroderma Pigmentosum)

In a general review of the disease he stated that spots like freckles appeared in the first year or two of life, and were often precursors of the grave skin disease described by Kaposi in 1870, accompanied by dryness and atrophy of the skin and other serious changes Frequently more than one member of a family were affected The prognosis was very gloomy, early death might occur from deep ulceration towards the brain or other vital parts, or from exhaustion or hæmorrhage The muco-cutaneous surfaces, such as the

the association's council and executive committee was proposed by Lady Jellicoe, who instanced the number of former Invalid Children's Aid Association "cases" now serving their country at the front or on the waves as conclusive evidence of the excellent work it does It had been hoped that Captain Francis Grenfell, V C, would have been able to be present at the meeting and to speak This was impossible, as he was actually serving at the front, but his letter expressing his regret at being unable to be present, written from the trenches near Ypres, was read out, and made a most moving appeal to its hearers Year by year the work of the association increases, and year by year the difficulty of collecting the funds grows, but the association is favourably known to so many medical men that the public ought to feel sure that the money given does good medical service

ASPERGILLOSIS OF THE NASAL ACCESSORY SINUSES

Mr Herbert Tilley has published in the *Journal of Laryngology, Rhinology, and Otology* for April five cases of aspergillosis of the maxillary antrum The rarity of the condition is intimated from the fact that there can be found no mention of it in the literature of rhinology, it is suggested, however, that this condition may have been overlooked Myxomatous disease is most likely to be confused with it The mode of infection with the aspergillus mycelium is not known, it may be grafted upon a chronic inflammatory infection of the antral mucous membrane Marked nasal obstruction is a prominent feature, and this is associated with sneezing and the discharge of a mucoid or slightly muco purulent fluid There may be neuralgic pains in the cheek and face Especially important for diagnostic purposes is the occasional expulsion of small masses of a whitish grey, semi translucent, viscous material In no instance is the discharge so free as to suggest an ordinary, chronic empyema On examination the most striking feature in the cases seen was the pale, swollen, and œdematous condition of the nasal mucous membrane, and, further, this was not overcome by the application of 20 per cent solution of cocaine In no other disease, says the writer, is the lack of response to cocaine so marked Trans illumination revealed opacity in both infra orbital regions It was impossible, also, to get any return of fluid on irrigation These points are all suggestive of this condition and diagnosis is assured, of course, with the discovery of the mycelium This, however, is often a matter of some difficulty In the instances here recorded Professor S G Shattock had undertaken the examination In the mucin examined there pervades a well developed mycelium, the coarseness of whose filaments at once excludes actinomycosis There are, of course, also collections of bacteria which are, however, much less widely distributed than would be expected The mucin is probably secreted under irritation and is subsequently inspissated and the contained cells are polymorphonuclear leucocytes It is curious to note, finally, the presence of crystals resembling the Charcot Leyden crystals found in asthmatic sputum

WE regret to announce the death of Sir William Richard Gowers, M D Lond , F.R C P Lond , LL.D , F.R S , which took place on May 4th at his residence, 34, Ladbroke square, W

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM

ANNUAL CONGRESS

(Concluded from p 959)

AT the annual congress of the Ophthalmological Society of the United Kingdom two set discussions were arranged The first, upon Ophthalmic Injuries in Warfare, introduced by Mr W H H Jessop, was reported last week The second, on Detachment of the Retina, was introduced by Mr M S Mayou

Detachment of the Retina

Mr MAYOU, in introducing the set discussion on this subject, said that detachment of the retina was only a sequel to other intraocular diseases He dealt in the first place with its associated physical phenomena, and secondly with congenital detachment especially The condition was really one of separation of the retina between the pigment cell layer and the rods and cones—i.e , where the two layers of the optic cup come together during fœtal life, and which was subsequently represented as a lymph space Detachment of retina was essentially a cystic condition He was strongly in agreement with von Graefe s view that it was exudative in origin, and that detachment could not occur without fluid being effused from the choroidal vessels, the fluid having a higher specific gravity than that in the vitreous chamber It was probable that there was no true tissue adhesion between the rods and cones and pigment cell layer, or at least so slight that it was not a factor in keeping the retina in its place This potential space was filled with lymph, permitting the rapid tissue change associated with the bleaching and regeneration of the visual purple In the normal eye distension of the vitreous in its hyaloid was by fluid derived from the ciliary process, the vitreous exerted a pressure by having a higher density than the lymph in the inter retinal space In many diseases the vitreous became more fluid than normal, or the framework of the vitreous shrank with the hyaloid, and there was free fluid in the space between hyaloid and retina With degeneration of the vitreous the densities of the fluids on the two sides of the membrane closely approximated, and a slightly increased density of that in the inter retinal space would produce detachment For the investigation of such cases it was necessary to use a fixing agent which coagulated but did not destroy albumin, and boiling was the best It was very difficult to ascertain the underlying cause of shrinkage of vitreous Detachment of retina occurred when a larger pressure was exerted outside than inside the membrane Detachment could occur with a normal vitreous, as when the choroid was the seat of a growth Owing to the effusion of albuminous fluid the retina was pushed inwards, and some of the fluid was squeezed out of the connective tissue meshes passing forward into the anterior chamber Glaucoma might supervene before the complete shrinkage of the vitreous Detached retina associated with growth in the choroid was exudative in character, though it might cause secondary changes in the vitreous He detailed some cases in children who had come under his care In myopia a fluid exuded into the inter retinal space of low density would cause detachment, possibly associated with venous obstruction Inflammatory exudation from the choroid might cause detachment if of serous rather than plastic nature Injuries might cause detachment, either with or without perforation of the globe Fibrous bands in the vitreous he thought, rarely caused detachment by contraction, though they might predispose to it by causing shrinkage and fluidity of vitreous Cysts in the retina in its normal position might be of considerable size and by bulging, cause detachment on either side Some of the cures of detachment, he thought were probably due to evacuation of the fluid contents of these cysts Congenital detachment was not usually recognised, as it occurred in microphthalmic eyes, and was not then seen clinically Summarised, his contention was that the essential feature in congenital separation between the layers of the retina was distension of the primary optic vesicle with fluid, and that the fibrosis of the vitreous was of secondary development, not the cause of failure of union between the inner and outer layer such permeation and the growths remained superficial, and while this stage lasted they would be eminently amenable to treatment by radium

Dystrophies of Cornea and Glaucoma —Primary Pneumococcal Choroiditis —Artificial Maturation of Cataract —Sarcoma of Socket

Mr **GRAY CLEGG** read four communications The first was on Dystrophies of the Cornea and Glaucoma, with especial reference to a familial variety of the former Changes in the cornea occurred which resembled those found in glaucoma, but there was no tension element Two sisters in a family of three were shown, all affected by the disease, which probably existed in at least one other relative Another case was related in which similar changes were present, but as there was a doubtful tension element iridectomy had been done in one eye and trephining in the other without any beneficial effect on the cornea

The second paper was on Primary Pneumococcal Acute Choroiditis The disease occurred in a healthy male aged 27 It affected the right eye, which had been previously examined and found healthy At first the appearances were considered by three oculists to be those of tubercle, consisting of two blurry yellowish white foci at the macula In spite of treatment an acute panophthalmitis developed, and 29 days after being first seen a Mules's operation was performed A specimen taken at the operation showed a pure culture of the pneumococcus of Friedländer

The third paper was on a method of Artificial Maturation of Cataract allowing of early extraction. The method was, briefly, as follows The night prior to operation the pupil was well dilated with atropine, and paracentesis was performed with an iris knife Massage was applied directly to the lens capsule by a smooth iris repositor, and this was followed by indirect massage by the back of a lens scoop Atropine was again instilled If no irritation resulted no more atropine was used after the day of operation. Often within a week the eye was perfectly quiet the pupil returned to its ordinary size and regained its activity Extraction could then be resorted to, either without or with iridectomy In this way the whole process could in many cases be gone through in three weeks to recovery

The last paper described a case of Sarcoma of the Socket The patient had already had his left eye removed and was wearing an artificial eye About August, 1910 it would not keep in position owing to the presence of a pedunculated growth towards the outer part of the socket The mass was excised but in November 1910 it recurred A section of the original growth raised suspicions of malignancy, and a few days later the lid margin with the conjunctiva and the whole contents of the orbit were removed The structure as described by Professor Walker Hall, was suggestive of perithelioma. Possibly the tumour was caused by a fine crack in the artificial eye which he had been wearing

Mr W B **INGLIS POLLOCK** (Glasgow) read a paper on

Dissolving Senile Cataract in the Early Stages

In a consecutive series of 100 patients with senile cataract who were under treatment for not less than three months with alkaline lotions and dionine, fibrolysin and iodolysin drops, 45 per cent. of the 178 eyes showed great improvement and 41 per cent an improvement in vision, 7 per cent remained stationary In 8 per cent the treatment failed to arrest the progress of the cataract The method did not cause pain and could be persevered with over long periods Attention should be directed to the general health, and the internal administration of an alkali was an advantage Several patients had he said remained free of recurrence for a period of from three to six years

Lieutenant Colonel H **HERBERT** I M S, read a communication on

The Capsular Opacities of Morgagnian Cataract

He showed photomicrographs of the capsule of a very long standing cataractous lens which had passed beyond the Morgagnian stage The capsule showed scattered white dots clinically Under the microscope these were found to consist of spaces formed between layers of thickened capsule and containing mainly lens débris similar to the bulk of the cataractous lens Reasons were given for supposing that similar changes may account for the globules or clear rings of after cataract And reference was made to two processes at work, singly or together, in senile cataract The one, representing simply deficient nutrition resulting eventually in an abnormally dry, shrunken lens The other, apparently due largely to destruction of the lens cells lining the capsule, consisted essentially in undue admission of aqueous into the lens, and its results

Hyperplasia with Colloid and Amyloid Degeneration of the Episcleral and Circumdural Fibrous Tissues

Mr **GEORGE COATS** recorded a case of conjunctival and orbital growth which commenced in a man aged 25 and progressed slowly during a period of observation of 17 years Waxy semitranslucent, nodular masses occupied the bulbar conjunctiva and overlapped the cornea The patient's health remained unimpaired throughout Pathologically the condition was essentially a proliferation of the deep episcleral and circumdural fibrous tissues, with a homogeneous form of degeneration which, in its more advanced manifestations, gave the staining reaction typical of amyloid disease The vessels were similarly affected, and giant cells, lymphocytal infiltration calcification, and ossification were present The histology of the case was typically that of "amyloid disease of the conjunctiva," a purely local condition not associated with tubercle, syphilis, &c The unique feature of the present case was the simultaneous involvement of the orbital tissues

THE NATIONAL INSURANCE ACT

The Reduction of Capitation Fees

THE London Panel Committee at its recent monthly meeting gave consideration to the question of the reduction of capitation fees from 1*s* 9*d* to 1*s* per quarter and decided to refuse concurrence with the proposal of the London Insurance Committee to that effect The London Panel Committee representing, as it does, those practitioners in the metropolitan area most intimately concerned in the matter with which it was dealing is not likely to lack support from its constituents It will also find sympathy accorded to it by other bodies and by individual practitioners elsewhere, who are equally concerned with the unavoidable reduction of the incomes of panel practitioners as the result of the enlistment of insured persons on their lists At a meeting of Glasgow panel practitioners specially convened to consider the forming of a local branch of the Panel Medico Political Union, Dr A. Salter made special reference to what was taking place with regard to fees in London, and submitted to the meeting that precisely the same conditions would be found before long applying to medical men in Scotland His observations on this topic and the expression of his views with regard to the policy of the Insurance Commissioners were received by his hearers with a cordiality which left no doubt as to the depth of the feeling of anxiety, not unmixed with resentment, provoked by the situation

To return to what took place at the meeting of the London Panel Committee the position taken up by those who discussed the resolution and substituted for it an amendment which defined that position more clearly, can hardly be treated by anyone as unreasonable, although, no doubt the London Insurance Committee at any rate might in existing circumstances find it difficult to comply with the suggestion thus submitted to it The recommendation made by the Panel Service Subcommittee was—

> That the Panel Committee do not concur in the proposal of the Insurance Committee to make to each practitioner on the panel during the second quarter of the medical year 1915 two payments in advance of the amount due to him at the rate of 6d. for each capitation fee of 1s 9d credited to him in accordance with the Medical Benefit Regulations, 1913 and that the Insurance Committee be so informed

The amendment referred to which was moved by Dr M Bernstein in words suggested by the chairman, Dr H J Cardale, was—

> That all words after "that" in the recommendation be deleted and the following substituted The Panel Committee recognises that a reduction in the Medical Benefit Fund on account of insured persons who have enlisted is inevitable and accepts it but it does not agree to a general reduction being made from the lists of all practitioners alike but considers that the reduction should be made strictly in accordance with the numbers removed from each list

eyelids, became thinned, shrunken, and fissured with superficial ulcers , and the eyeball might participate in any phase of the disease, and warts might occur on the lid edges The ocular conjunctiva was usually hyperæmic Some cases showed pterygium, and the cornea became hazy from infiltration of its substance or from swelling of the epithelium Ectropion was frequently present, leading to opacity or ulcer of cornea. But in many cases the eyes were open and light was well tolerated The optic nerve and intraocular structures were affected only late, if at all Massage of the eyeball, especially by the use of calomel ointment, served to empty the superficial blood vessels Dr A Whitfield had much improved one such case by applying X rays During the past year Mr Cross had had under observation two cases of Kaposi's disease, brother and sister, aged 11 and 9½ years The parents (cousins) were healthy The boy was born in Ceylon, and when coming to England at nine months old he became very sunburnt in the Red Sea, his skin becoming scarlet Later the face, neck, and shoulders were dotted with yellowish brown pigment spots, and the skin became thin and shrunken The girl was born in England and arrived at Ceylon when a few months old , in her voyage she did not encounter excessive sun glare At nine months of age her skin also became bad, and a little later a small nodule appeared on the cheek but fell off, leaving no scar She had implication of the eyelids, causing eversion When four years old the boy had a troublesome papule on the eye, for which he was treated by Sir John Tweedy, who reported that he first saw the patient in April, 1907, when he was under the care of the late Dr Radcliffe Crocker for the skin condition At that date there was subconjunctival ecchymosis at the outer side, and at the inner side of the globe, between the cornea and the caruncle, a truncated conical swelling with some ecchymosis and conjunctivitis There was so much photophobia that a satisfactory view could not be obtained On the following day, under a general anæsthetic, he examined the eye and found an indolent swelling in the conjunctiva and episclera at the inner side of the globe He scraped it with a sharp spoon and applied powdered salicylic acid, and ordered the eye to be washed two or three times a day with a solution of salicylate of soda The eye gradually improved until the seat of the swelling presented the appearance of a small phlycten Eighteen months later, when Sir John Tweedy next saw the case, the eyes were much stronger and were rarely inflamed Two and a quarter years later the patient saw J 2 with correcting glasses When Mr Cross saw the boy 12 months ago he had much photophobia, both winter and summer, and when in the light he was constantly sneezing He found it difficult to read Under chloroform there was found to be a dull hyperæmia of the eyeballs and two small phlyctenular swellings The corneæ were somewhat glassy , the pupils were small, but reacted to light and opened freely to homatropine A few days later he saw 6/18 for a moment and J 6 Improvement was reported after massage of the eye with calomel ointment In November there was acute inflammation of the right eye and a fine infiltration running across the cornea. There was also a haziness of the left cornea and a marginal spot looking like pterygium

Mr R AFFLECK GREEVES showed microphotographs of sections through the conjunctival growth removed from the eye of the boy The growth consisted almost entirely of epithelial cells, mainly prickle cells, and showed evidence of commencing malignancy

Mr AFFLECK GREEVES read a paper on

The Microscopical Anatomy of Syphilis of the Eye,

illustrated by microphotographs of sections taken from three cases In the first case, one of old interstitial keratitis, he pointed to the presence of persistent though empty endothelial channels in the cornea, the remains of former blood vessels The second case was one of gumma of the iris, the structure of which was peculiar in that the pigment epithelium had proliferated into the inflammatory tumour and given clinically a pigmented appearance, causing to be made the erroneous diagnosis of melanosarcoma The third case illustrated the pathological appearances of syphilitic scleritis and of a proliferative form of choroido retinitis characterised by the presence of dense tissue between choroid and retina This tissue, he considered was probably produced by the proliferation of the retinal pigment epithelium

Mr GREEVES also read a paper by Mr G KOMOTO on

The Pathological Anatomy of the Retina and Choroid after the Complete and Partial Cutting off of their Respective Blood supplies

It was based upon the pathological examination of an eye which was excised ten days subsequent to the cutting-off of the retinal and posterior choroidal blood supplies by the removal of a lymphangioma from the posterior part of the orbit, along with a portion of the optic nerve While the retina was completely necrotic posteriorly, all its layers were well preserved anteriorly It was argued from this that the whole of the anterior part of the retina is probably almost entirely dependent on the choroidal circulation The chromatophores of the choroid and the pigment epithelium of the retina showed peculiar changes in form, caused by their being deprived of normal blood supply The paper was illustrated by microphotographs.

Mr TREACHER COLLINS read a communication on

Apparent Accommodation with Aphakia

The case was described of a boy who had lamellar cataracts removed from his eyes when 7 years old by repeated discission operations When he was 14 it was discovered that he was using only one pair of glasses for both distance and reading On testing his sight it was found that he saw right with + 13, 6/6 , left with + 13, 6/9 , and with the same glasses in the same position on his nose, looking straight through the centre of them, he read J 1 fluently Any alteration in curvature of the cornea while he adapted his eye for the near point was excluded by examination with the ophthalmometer, and by the use of Batten's eyebath Any lengthening of the antero-posterior axis of the globe was watched for by ophthalmoscopic examination He could see just the same when the eyelids were held away from contact with the globe When the pupils were semi-dilated with cocaine he could still read J 1 with + 13 in ordinary daylight with the right, but only J 2 with the left When the pupils were fully dilated with atropine he could only read J 10 with + 13 in ordinary daylight, but in the dark room with a strong light concentrated on the test-type he still read J 1 better with the right eye than with the left When examined with the pupils well dilated it was seen that in the right eye there was a membrane with a sharply defined central circular aperture in it 3 5 mm in diameter In the left eye the aperture was larger and more oval in shape , the membrane in it, moreover, did not occupy the entire pupillary area, a space being left at the circumference between it and the pupillary margin Both pupils were regular free from any adhesions, and acted very briskly to light Mr Treacher Collins considered that the evidence he had collected in connexion with this case went to show that there was not any true accommodation , that the boy's power of seeing clearly at different distances was due to the cutting off of circles of diffusion, partly by the contraction of the pupils, but mainly by the small central openings in the membranes He quoted several other cases which had been recorded, in which apparent accommodation was present after the removal of the lens, and advocated trying to adopt the technique in operations for soft cataract so as to produce a condition similar to that in the case here described

Mr TREACHER COLLINS described a case in which an

Epibulbar Epithelioma Completely Disappeared after the Application of Radium Bromide

A man, aged 80 had a new growth about 10 mm in diameter at the limbus in his left eye It had formed in two years, and was gradually increasing in size A small piece was cut off, and microscopical examination of it showed it to be an epithelial growth, which was extending into and infiltrating the episcleral areolar tissue At the Radium Institute the patient had 10 mg of radium bromide on a circular disc 1 cm in diameter, unscreened , it was held continuously over the growth for 60 minutes by a relay of assistants After this the growth gradually disappeared At the end of a fortnight only a thickening at the margins was left It was now five months since the treatment and all that could now be seen at the site was a smooth greyish scar The way in which epibulbar epitheliomatous growths permeate the lymphatic channels and spaces in and about the eye was then demonstrated by a series of lantern slides It was shown how, for a long time, the sclerotic resisted adopted recommending that the following Portuguese Universities be added to the list University of Coimbra, University of Lisbon, and University of Oporto

Another report from the Committee of Management, dated April 21st, referred to a letter received from the Dean of St Bartholomew s Hospital Medical School suggesting that during the war it might be possible to shorten the curriculum for medical students, and a letter had also been received from the Director General of the Army Medical Service expressing the hope that the Royal Colleges would give the matter their most earnest consideration The Committee of Management were of opinion that it was not desirable that the two important requirements of the regulations—(1) a minimum curriculum of 57 months, and (2) a minimum period of clinical study during two winter and two summer sessions after passing in anatomy and physiology—should be relaxed at the present time The committee desired to point out, however, that under the regulations of the board they had power to grant exceptions to the regulations and that they had already exercised this power in cases where the two important principles above referred to had not been involved They were prepared to antedate the commencement of the curriculum in cases where students had pursued medical or scientific study before passing the Preliminary Examination, or before entrance at a medical school, and they believed, from inquiries which had been made, that this procedure would enable the majority of the students referred to by the Dean in his letter to enter for the Final Examination three months earlier than would otherwise have been possible, and yet with a full curriculum of 57 months The report was adopted

After some further formal business the PRESIDENT dissolved the Comitia

ASYLUM REPORTS

Roxburgh Berwick and Selkirk District Board of Lunacy (Annual Report for the Year ending May 15th, 1914)—The total number of patients under treatment during the year was 398, the average daily number resident being 321 1. The patients admitted during the year numbered 71, and of these 15 had been previously under treatment in this asylum Hereditary predisposition to mental disorder was ascertained to exist in 25 cases, and more than half of the cases suffered from some form or other of bodily disease for which medical treatment was required In 18 3 per cent of the total admissions the age was over 70 years The discharges numbered 40, with a recovery rate of 33 8 per cent, calculated on the total number of admissions The rate of mortality calculated on the average number resident was 7 6 per cent. Pulmonary tuberculosis was ascertained to be present in an active form in 20 per cent of the deaths

East Sussex County Asylum Hellingly (Annual Report for the Year ending March 31st, 1914).—The total number of cases under treatment during the year 1913 was 1374, the average daily number resident being 1122. There were 228 direct admissions With regard to these the most noticeable features were the diminution in the number of those suffering from what may be called the more obvious forms of insanity—i e, acute mania and acute melancholia, and the increase in the number of patients suffering from dementia præcox (primary dementia) and those forms of insanity due to toxic causes such as confusional insanity acute and chronic hallucinatory insanity there was also an increase in the number of patients suffering from delusional insanity more especially the paranoid form It would appear that the prognosis so far as complete recovery is concerned is in many of these latter forms of insanity not very favourable and, moreover that the type of insanity in this district seems to be gradually changing The discharges numbered 141 with a recovery rate on the direct admissions of 41 66 per cent A considerable proportion of patients were sent out at first "on trial" and the After Care Association has recently decided to assist these patients in the same way that they do those discharged recovered. There were 102 deaths making a rate of 9·09 per cent on the average daily number resident Tuberculosis was the cause of death in 10 7 per cent. of the total number The causes of death were verified by post-mortem examination in 74 per cent The number of post-mortem examinations has considerably decreased since the Commissioners expressed the opinion that before any examination is made the consent of the friends must be obtained after the death of the patient.

Govan District Asylum, Hawkhead, Paisley (Annual Report for the Year ending May 14th, 1914)—The total number of cases under treatment during the year was 956 the daily average number resident being 654 3 The total number of admissions was 309 of whom 261 were first admissions and 48 were readmissions There were 176 patients discharged, with a recovery rate calculated on the total admissions of 27 5 per cent This is a low recovery rate, but it is accounted for to a large extent by the fact that the Govan parish authorities have to take charge in the first instance, of many patients who fall ill within their district, although they have not a settlement in the parish (deports from Canada and America included) Many of these are afterwards transferred to the asylums of their own districts before recovery has taken place The deaths were at the rate of 19 1 per cent of the average daily number resident Among the factors found to be associated with the outbreak of the mental disorders there stand pre-eminent (1) Physical debility and disease, and (2) alcoholic excess Of the patients admitted, over 78 per cent were in an unsatisfactory state of health In a considerable proportion of cases the patients on admission were suffering from the terminal stages of bodily diseases, and this is reflected in a high death rate and a low recovery rate Alcoholic excess was present as the predominant causative agent in no less than 25 2 per cent of the men and 7 6 per cent of the women As a rule, alcoholic excess was found to be associated with a reduced physical condition or actual bodily disease. In 28 per cent of the male alcoholics, however, the general physical condition was fair, and no evidence or history of previous bodily disease was obtained The figures given above relate exclusively to patients admitted for the first time When this is considered in conjunction with the fact that a considerable proportion of individuals suffering from acute forms of alcoholic mental disorder (e g delirium tremens) are not now sent to the asylum, but are treated in the observation wards of the parish hospital, it can hardly be denied that excessive drinking habits are largely responsible for the prevalence of mental unsoundness in the community

Stirling District Lunacy Board for the Counties of Stirling, Dumbarton, Linlithgow, and Clackmannan (Annual Report for the Year ending May 15th, 1914)—The total number of cases under treatment during the year was 1073, the average number resident being 794 The total number of admissions amounted to 294, which is the largest number during any year since the opening of the asylum Fifty eight of those admitted had been under treatment before Alcoholic excess was found to be the cause in 75 cases, or 25 per cent of those admitted In 69 cases, or 23 per cent, an inherited predisposition was admitted and in 106 cases the mental breakdown had occurred at one of the critical periods of life. There were 182 patients discharged, with a recovery rate calculated on the total admissions of 39 4 per cent The deaths during the year numbered 105, making a death-rate calculated on the average number resident, of 13 2 per cent This is the largest death rate in any one year since the asylum was opened and is entirely due to the large number of cases admitted in a weak and exhausted condition

Lanark District Asylum Hartwood (Annual Report for the Year ending May 31st 1914)—The average daily number resident in the asylum during the year was 1001, and the total number of admissions was 220 With regard to the causes of insanity, intemperance appeared in 26 cases heredity in 15 epilepsy in 15, and senility in 25 The number of cases discharged was 106 and there were 65 deaths The recovery rate was 37 per cent, reckoned on the certified admissions, and the death rate 6¼ per cent on the average number resident. This is the lowest death rate since 1903 Of the 65 deaths, 10 were due to general paralysis of the insane 13 to morbus cordis, and 12 to phthisis pulmonalis Great attention continues to be paid to the industrial employment of the patients. The levelling of the site of the new hospital was carried out wholly by the labour of the patients eyelid

that reduction in the numbers of patients credited to each practitioner should follow upon the enlistment of a proportion of those patients, many of whom might never return, was inevitable To lose income in respect of "removal" thus brought about would rank as a necessary hardship inflicted by the war, corresponding to the hardship in the form of loss of earnings endured by many of the medical man's fellow citizens To lose income and to have the loss assessed arbitrarily and without reference to the question whether the work performed among insured patients is correspondingly diminished, stands upon quite another footing A medical man in one district might witness the departure of 20 per cent of his patients, and as they would be the healthiest and those giving him least trouble he would see them go with regret He would not, however, have the same sense of injustice as would a brother practitioner deprived of 20 per cent of his income in a district where the percentage of recruiting was very small, and in which, perhaps, on account of the presence of manufactories supplying munitions of war, the pressure of work was raising the percentage of illness among insured workers

There is a further element in the matter also to which the attention of the London Panel Committee was called with some justice by Dr Hogarth, who invited the Panel Committee to protest against the proposed reduction in so far as it was due to the failure of the London Insurance Committee to produce a correct register Mr R J Farman observed, in support of this point, that if the lists had been kept up to date the Insurance Committee would have been able to say at once the number of insured persons on each practitioner s list, and the number of men who had left to join the colours, thus arriving at the exact amount due to each medical man It will be freely admitted that the amount of clerical work laid by the Insurance Acts upon the London Insurance Committee is very heavy, and that now, with the depletion of clerical staff through enlistment, its weight may be yet more heavily felt, but the criticism expressed above refers to arrears in the compilation of records and statistics which arose before the war, and medical men who themselves suffer severely if they allow the clerical work imposed upon them as members of the panel to get into arrears can hardly be expected to sympathise when the fact that the Insurance Committee has fallen behind in its office work is brought into prominence They are rather inclined to argue that a committee should place itself or be placed by the legislature, by means with which they are not concerned, in a position to keep abreast of its routine duties, and they do not forget the difficulty and illwill which arose, markedly in London, but in other areas as well out of delay in the allocation of patients, and the consequent creation of "unallotted funds"

Dr Hogarth called attention also to another aspect of the case in protesting against any reduction being made at all as the result of enlistment Medical men, he pointed out, undertook their work in normal times of peace, now they were asked to see themselves deprived temporarily of patients who were healthy and strong when the bargain for their treatment was struck, but of whom many would come back before long maimed and broken in health They were left at present with an increased proportion of the worst of the insured, the best having gone They were going to receive back a large number of the latter as ailing persons, and so to suffer severely as a body from the aftermath of war

The position briefly summarised above is undoubtedly a difficult one for the medical practitioners upon the panel in London and in other areas as well It is also by no means an easy one for the Insurance Committees, especially in the metropolis To place the matter on a business footing, for such is the proposal of the London Panel Committee, and to pay each practitioner his agreed remuneration in respect of each patient whom he is liable to be called on to treat, would apparently in the present circumstances be a clerical operation of considerable magnitude The urgency of the matter increases the difficulty and also the inevitable hardship to medical men, for the question has arisen over advances—that is to say, over the payment of instalments of income which is not strictly speaking due till the end of the year The question was asked at the meeting of the London Panel Committee as to the position created by a refusal to agree to the proposed reduction, and the chairman frankly said that it would "hang the money up" of which the constituents of those present might be in urgent need It is unfortunately too late now to point out that the capitation system adopted, after deliberation and discussion in normal times of peace has not proved the best adapted for the emergency of war, and has produced a state of affairs which would not have arisen under a system of payment by fees for work done

London Insurance Committee

The report of the Medical Service Subcommittee laid before the London Insurance Committee at its last meeting showed that the subcommittee had only had before it in the period March 26th to April 16th seven complaints made against medical men by their patients, and that these did not even allege any serious ground of complaint In three instances the case was met by the transfer of the patient to the list of another medical practitioner, the first medical man either asking for, or acquiescing in, the change In another a charge of failing to provide adequate treatment was found not to have been substantiated In two there had been irregularity in the matter of certificates of incapacity, and the medical man was recommended to be so informed, and in the seventh, the practitioner having been informed that he was not entitled to a fee which he had been paid had returned it to the patient, and the matter was allowed to rest there In this last instance the question was whether there had been a miscarriage on the part of the complainant, for which the medical man on the panel should have given his attendance as for an illness, or a birth, for which he would have been entitled to make a charge. The conditions necessary to constitute a confinement as contemplated by Clause 2 (1) of the practitioner s agreement are the issue of a living child, or labour after 28 weeks' pregnancy whether the issue be alive or dead The complainant alleged four months' pregnancy and a miscarriage. The practitioner was of the opinion that his patient had been pregnant for six months and thought himself entitled to charge, but the subcommittee pointed out that he was wrong as to this upon his own showing, as there had not been the birth of a living child In another case in which a medical man was concerned he was the complainant and secured the transfer of one of his patients to another practitioner's list

ROYAL COLLEGE OF PHYSICIANS OF LONDON

MEETING OF COMITIA

A COMITIA was held on April 29th, Dr FREDERICK TAYLOR, the President, being in the chair

The following candidates having passed the required examination were admitted Members of the College — Cyril Dudley Kely Corbett, M D Oxon, L R C P, and Joseph Strickland Goodall, M B Lond

Licences to practise physic were granted to 101 candidates who had passed the necessary examinations

The following Members were elected Fellows of the College —Archibald Donald, M D Edin (Manchester), George Gavin Morrice M D Cantab (Weymouth), Thomas Beattie, M D Durh (Newcastle-on Tyne), Noel Dean Bardswell, M D Edin (Midhurst, Sussex), Frank Cecil Eve M D Cantab (Hull), John Hay, M D Vict (Liverpool), George William Watson, M D Lond (Leeds), Reginald Charles Jewesbury M D Oxon, Edwin Greaves Fearnsides, M D Cantab, Thomas Renton Elliott, M D Cantab, and John George Adami M D Cantab (Montreal Canada) Grafton Elliot Smith M D Sydney F R S (Manchester) was also elected a Fellow of the College under By law LXXI

The President was re elected a representative of the College on the Senate of the University of London

Two communications were received from the Secretary of the Royal College of Surgeons of England, dated March 12th and April 9th, 1915 respectively, reporting proceedings of the Council of that College on March 8th and April 8th

A report from the Committee of Management was received and adopted dated March 8th, recommending that the University of Illinois be added to the list of foreign universities recognised by the Examining Board in England, another report, dated March 15th, was also received and

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned have been appointed Surgeons for temporary service in His Majesty's Fleet —Dated April 23rd Jack Rupert Law Willis and William Hunter Kay Dated April 24th John Cadzow Sinclair

The following appointments have been notified —Temporary Surgeons E F Fox to the *Victory*, additional, for Engineering Unit, R N Division, Deal, H G Moser to the *Neptune*, J R L Willis to the *Vivid*, additional, for disposal, W S Lynd, J S Kennedy, and D S Falconer to the *Victory* additional, for Haslar Hospital, J C Sinclair and W H Kay to the *Pembroke*, additional, for disposal, and W E Goss to the *Vivid*, additional, for disposal

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Charles Devereux Marshall has been promoted to the rank of Staff Surgeon (dated March 31st)

ROYAL ARMY MEDICAL CORPS

Major Arthur W Mayo Robson, C V O, to be temporary Lieutenant-Colonel (dated March 1st) Alexander George Pemberton Gipps, late Fleet-Surgeon, Royal Navy, to be temporary Major (dated March 18th, 1915)

The undermentioned to be temporary Majors William Pearson (dated April 7th) and James Laidlaw Maxwell (dated April 8th)

The undermentioned temporary Lieutenants to be temporary Captains —Dated May 5th Francis Hernaman Johnson, late Surgeon, Royal Navy, Ernest W Witham late Surgeon-Captain, Assam Valley Light Horse Dated May 4th Albert T Duka, D S O

The undermentioned to be temporary Captains —Dated April 7th John Heatly Spencer Charles Edward Murphy, Gerald Theodore Sylvester Sichel. Dated April 9th Hector Munroe. Dated April 14th John Aldington Gibb and Sir Vincent Nash

The undermentioned to be temporary Lieutenants —Dated Feb 27th George Norman Lorimer and Cletus McShane Dated March 9th Matthew Edward Robinson, Hugh Noel Murray Puckle, Reginald Morley Clarke, John William Farrar, Alan Thomas Roberts, George Dibbs King Waldron, James Ian Munro Jamieson, William Eric Giblin, William Angwin Edwards, Donald Francis Finlay, Leslie John Jarvis Nye Lionel Braim Daly, Francis Esmond Keane, George Alexander Birnie, and Oswald Barton Dated March 22nd Henry Reynolds Brown Dated March 23rd William Arthur Rees Dated March 25th Herbert Ernest Clutterbuck and Sydney Williams Dated March 27th Thomas Paterson Noble Dated March 30th Theodore Henry Whittington Dated March 31st Ernest Harold Drinkwater Dated April 1st Bernard Hugh Stanley Aylward and Ernest Augustus Aylward Dated April 7th David Riddell, Ernest Emrys Isaac Cuthbert John Nicholson, Frederick Talbot Driffield Clindening, Ninian McIntire Falkiner Reginald Torriano Cooke James Wodderspoon Bennett, Adolphe Abraham Max Hershel Edward Richard Montesole, Hubert Vere Leigh, Roger Llewellyn Williams John William Heekes Thomas Dinnen Jago, Cecil Hutchinson Hopwood, William Frederick Abbott, Ernest Wardlaw Milne, Arthur James Henry Boyton Clarence Brian Dobell Frederick Aylmer Hort, Ian Campbell, Harry Crichton, Thomas Fearnhead Charles Launder Chalk, Frank Louis Underwood, Everard M le Poer Power, Martin Remers George Burrows Brown, Duncan MacNab Callender, Lauchlan Rose John Brown, William Douglas Knocker, John Murdo MacPhail, George Aubrey Jelly William Kirk Charles Fortescue Pricham Robert Michael Forde, Thomas Paul Gray, John Ross Hoare Ross Anthony Ashley Cooper, John Musgrave Twentyman Ernest Morley Pooke Charles Augustus Farrell Marshall Hall Alfred Ernest Carsberg, Reginald Wilton Trevor Clampett George Howard Strettell Letchworth Francis Sidney Mitchell, Claude Ernest Willington Wilmot Edward Chapman Wallace Robert Morrison Clarke Robert Maxwell Chance, Harold Arthur Upward Henry Herbert Clarke and George Muir Adam Dated April 8th Ernest Villiers Hunter John Black Mason, Cuthbert John Butler Benjamin Sweeter, Henry Hope Knox Sparrow William Leggett John Thomas Hurst Benjamin Banks Ferrar Robert Buchanan William Wilfred Banham John Henry Blakeney Robert Scott Dewar Cyril Herbert Thomas Ilott, George Maxwell Elliott James Arthur Richard Lee Alexander Charles Profeit Robert Alexander Garden Whiting Fife Slater Isaac Alexander Davidson and Norman Grenville Walsh Davidson Dated April 9th Robert Mitchell Mackay Stanley James Annear Peale Edward Alban Evans William Macdonald and Thomas Arthur Fuller Dated April 10th Ralph Christopher Fuller Frederick Michael Kirwan William Edmund Cooke, William Henry Hooton, George Frederick Holt, Frank Jerome Dunne, Alexander John Campbell, Finlay Stewart Campbell, Andrew Adams Rutherford, David McKinlay Reid, Henry Harold Robinson, Gerald Irving Moriarty Hugh Tennant Prince, Augustus William Tabuteau, Cyril William Jenner, John Harold Mason, and William Walter Dickson. Dated April 12th John Stephen Herbert Lewis, Redcliffe Nathan Salaman, John Travers McConkey, Charles Alfred Whiting Pope, Wallace Tynemouth Hedley Edward Henry Pollock Brunton, Thomas Strain, Andrew Graham Ritchie Ritchie, George Albert Simpson, Daniel Cowin, and William Southmead Langworthy Dated April 13th Robert Richards, William Christopher Gavin, John Milnes Pooley, and Edmund William Lynch Dated April 14th William Alister Alexander, Percy Ellwand Middleton, Wilfred Edgcumbe Burrows, Walter Salisbury Herbert John Hickin, Frank Brickwell, Alexander Elmslie Campbell, Charles James Armstrong Dash Ernest George Klumpp Victor Harold Mason Ian Macfarlane, and Henry Edward O'Brien

Temporary Lieutenant Charles Gibson having ceased duty with the British Red Cross Hospital, Netley, relinquishes his commission (dated April 19th)

Temporary Lieutenant Raymond J Jones relinquishes his commission (dated Feb 28th), as does also Temporary Lieutenant Edward M Hime (dated April 27th)

INDIAN MEDICAL SERVICE

The King has approved the promotion of the following officer —Temporary Lieutenant to be Temporary Captain. Thomas Henry Bishop (dated April 18th

The promotion of Major William Reith John Scroggie is antedated from Jan. 29th, 1914, to July 29th, 1913

The King has approved of the retirement of Lieutenant-Colonel Robert Henry Elliot

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

The undermentioned ex Cadets of the Officers Training Corps to be Lieutenants (on probation) Austin Basil Clarke, James Gordon Wilson, and Alfred Thomas Logan

Captain Philip N Button resigns his commission on appointment as temporary Surgeon, Royal Navy

TERRITORIAL FORCE

Royal Army Medical Corps

3rd East Lancashire Field Ambulance Lieutenant William J Reid to be Captain, and to remain seconded.

Highland Mounted Brigade Field Ambulance George Munro McLeod to be Lieutenant

1st East Anglian Field Ambulance Lieutenant Gilbert C Gray to be temporary Captain

1st Home Counties Field Ambulance Henry George Lynwood Allford (late Captain, Territorial Force Reserve, General List) to be Captain (temporary)

1st East Lancashire Field Ambulance Captain Charles Roberts is restored to the establishment

5th London Field Ambulance Captain John H Dixon, from the London Mounted Brigade Field Ambulance, to be Captain

1st North Midland Field Ambulance Lieutenant Kenneth B Clarke from the Eastern Mounted Brigade Field Ambulance to be Lieutenant.

2nd Northumbrian Field Ambulance James Gill Hill to be Lieutenant

4th London General Hospital Francis Whittaker Tunnicliffe to be Captain, whose services will be available on mobilisation

1st Northern General Hospital The undermentioned to be Lieutenants Sydney Havelock, Charles Henry Keay (late Cadet Lance-Corporal, Durham University Contingent, Senior Division Officers Training Corps)

5th Northern General Hospital Captain Bernard Stracey from the North Midland Casualty Clearing Station to be Captain whose services will be available on mobilisation

2nd Scottish General Hospital James Miller to be Captain whose services will be available on mobilisation

2nd Western General Hospital Captain Wilson H P Hey is seconded for service with No 18 Field Ambulance, Royal Army Medical Corps Special Reserve Captain Charles Roberts from 1st East Lancashire Field Ambulance to be Captain

1st London (City of London) Sanitary Company Daniel McPherson Taylor to be Lieutenant

Lowland Casualty Clearing Station Lieutenant Geoffrey B Fleming to be Captain

South Midland Casualty Clearing Station Major Peverell S Hichens, from Attached to Units other than Medical Units to be Major

Northumbrian Casualty Clearing Station Harold Muir Evans (late Surgeon Captain 1st Norfolk (Volunteers) Artillery) to be Major (temporary). Second Lieutenant Colin Mearns from the Durham Light Infantry, to be Lieutenant

West Riding Casualty Clearing Station Peter McEwan to be Lieutenant

REPORT ON THE CONTAGIOUS DISEASES OF ANIMALS[1]

THE report by Mr A. W Anstruther, presented to both Houses of Parliament by command of His Majesty, gives a good idea of the work the Board of Agriculture and Fisheries is doing in regard to the prevention, eradication, and control of the contagious diseases of animals It marks an advance on any previous report yet issued, from the point of view both of the more exact methods used against disease in the light of experience gained in past years and of the pliability of scientific procedure in dealing with a scourge that in this country has baffled all preventive and curative measures for many years and has resulted in a great and largely unproductive expenditure of public money We refer to sheep scab and swine fever

An assurance that in a number of cases the ophthalmic test for glanders had been applied would have further rounded off some of the scientific features of this report. On the whole, however, it may be said that the record is a progressive and gratifying one and if military operations had not checked and hindered the work of the Board it would have been still more gratifying The war has necessitated the local authorities and their police being temporarily relieved of some of their duties, and some of the Orders, notably those against tuberculosis and mange, have been for a time suspended, whilst others have been somewhat modified

Foot and Mouth Disease —Tuberculosis

Foot and mouth disease has caused the authorities much trouble and anxiety, especially on the administrative side, and since Jan 31st, 1914, it has needed almost constant attention Here the prompt measures taken against 29 suspected cases and 27 confirmed outbreaks have been quite effective The fact that a good position has been maintained in regard to this disease, notwithstanding military operations and the consequent disorganisation of control methods, is very praiseworthy, whilst the value of nipping outbreaks of the epizootic in the bud cannot be over estimated Failure to secure early control of the disease is invariably disastrous in its consequences, as witness the outbreaks in America during the late months of last year Preventive measures included a special order in regard to the landing of animals from Ireland, and in connexion with this it is to be noted that the report mentions that "the arrangements for the detention of animals under veterinary supervision at the port of landing have undoubtedly been useful from the point of view of reducing the risk of the spread of the disease in Great Britain as well as beneficial to the animals themselves"

Advance has been made in regard to tuberculosis, and improvements in the new Order operative from July 1st to August 6th (the date of the suspension) include the obligation of notification of those animals suffering from a chronic cough and showing definite clinical signs of tuberculosis fixing the basis of animal valuation at the market rate, and allowing a refund from the Imperial Exchequer to the local authorities of three fourths of the gross compensation (i e, without any deduction in respect of the proceeds of the sale of carcasses) computed on the market value of the animal as ascertained by the valuer The new Tuberculosis Order remains in abeyance until Oct 1st 1915 The notifications in July were 766 as compared with a monthly average of 568 animals under a 14 months application of the old Order It is assumed, therefore that there will be a marked increase in the subjects to be dealt with when the Order is revived on the same date that the Milk and Dairies Acts come into force—viz, Oct 1st, 1915

Swine Fever

Gloomy to read is the statement that since 1896 the total number of cases of swine fever in Great Britain has never been higher than in 1914, and 4356 outbreaks have been confirmed The increase in cases is ascribed chiefly to virulent outbreaks in Suffolk, Essex, and West Sussex, to the pressure on the inspectorate indirectly due to the war, and to the exceptional conditions existing in the eastern and southern counties owing to military operations The comparatively mild winter and the great amount of wet and humid weather, combined with the increase of pig breeding operations, probably also had their influence in augmenting the number of outbreaks. The total increase of swine in Great Britain, at the count taken in June, was 400,394, a very gratifying advance from both an economic and a zootechnical point of view

We now come to one of the most important and valuable points in the report—important because a commencement has been made with a method of dealing with the disease long since adopted in other countries, and valuable because we shall soon know what a changed plan of action is likely to accomplish in this country We have travelled too long on the old well-trodden way without getting any nearer to our journey's end

On Jan 28th, 1914, the Swine Fever Committee reported rather adversely on hitherto known methods of artificial immunisation against swine fever, but it indicated that existing modes of inoculation might be serviceably employed in controlling the disease, and it advised further experimenting to discover a trustworthy form of vaccination A Departmental Committee recommended field observations upon selected premises with regard to serum treatment These have been undertaken in a district round Colchester, where a virulent form of the disease was present and the committee will soon be in a position to make a final report on the value of the method Of course, any judgment to be useful presupposes that adequate administrative and hygienic measures will accompany the serum and virus treatment American and German authorities assert that the double method of treatment by serum and virus blood bestows immunity for life

Sheep Scab, Anthrax, Glanders, &c

The double dipping Sheep Order is the result of lessons learnt from experience, and it is rather surprising that it has not been adopted earlier Sheep scab is now to be seriously combated, and we may look to its decrease in the future It is a pity the operation of the Order has had to be suspended, but it will be reimposed at an early date

The outbreaks of anthrax were 128 more than in 1913 There appears to be an intimate connexion between them and the importation and use of artificial feeding stuffs These are legion and multiply every month Several outbreaks on the continent have been traced to infected fish meal We shall never improve on natural methods of feeding by artificial ones, but labour on the land never seems so productive as manufacturing operations, at any rate it is not so well organised The perspiration of the body seems rapidly giving way to the sweat of the brow

Glanders shows a steady decline, there being a drop of 65 in the number of outbreaks as compared with last year A healthy result and very creditable to the Board The trade in Russian ponies which previously caused some outbreaks of glanders, has been suspended

Parasitic mange shows a decrease of 279 outbreaks, but the Order is now suspended, which is unfortunate We should have liked to read the opinion of the Board as to the reason why the disease is far and away most prevalent in London, Lancashire, and the West Riding of Yorkshire

The dogs imported into Great Britain numbered 1250 which exceeds all previous records They were all subjected to the Quarantine Order

The trade in old horses materially improved under veterinary supervision up to August 3rd, 1914, when the Royal Proclamation with respect to the export of animals put an end to it

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ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE CASTLE HOSPITAL —The students of the Royal College of Surgeons, with the aid of Licentiates and Fellows are endeavouring to maintain one ward in the Dublin Castle Red Cross Hospital A concert in aid of this undertaking was held recently in the hall of the College, and a satisfactory sum was realised A chief feature of the concert was a prologue written for the occasion by Mr Oliver Gogarty, F R C S Irel

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[1] Annual Report by the Assistant Secretary of the Animals Division Board of Agriculture of Proceedings under the Diseases of Animals Acts the Markets and Fairs (Weighing of Cattle) Acts for the Year 1914 London: Darling and Sons Limited Bacon street E Wyman and Sons Limited 29, Breams Buildings Fetter lane, E C Price 5½d

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1915

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS	Estimated population in the middle of 1914	NOTIFIED CASES OF INFECTIOUS DISEASE.												DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.									Deaths from all causes.	Death rate per 1000 living.†
		Small pox.	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever	Other continued fevers	Puerperal fever	Erysipelas	Cerebro-spinal meningitis.	Poliomyelitis.	Total	Annual rate per 1000 persons living	Small pox	Measles.	Scarlet fever	Diphtheria.*	Whooping cough	Enteric fever	Diarrhoea and enteritis (under 2 years)	Total.	Annual rate per 1000 persons living		
LONDON	4 516 612	2	1474	787	2	59	—	21	341	164	4	2844	6·6	—	666	38	71	188	12	98	1073	2·5	9181	21·2
West Districts																								
Paddington	142 655	—	37	22	—	—	—	—	12	3	—	74	5·4	—	47	2	3	1	2	4	59	4·3	317	23·2
Kensington ..	170 817	—	40	17	—	2	—	1	7	8	—	75	4·6	—	54	2	3	5	—	4	68	4·2	337	20·5
Hammersmith	121 750	—	64	13	—	—	—	—	6	16	—	98	8·2	—	17	3	—	5	—	3	28	2·3	260	21·4
Fulham ..	158 849	—	58	21	—	1	—	1	5	6	—	92	6·0	—	36	2	2	2	1	2	45	3·0	261	17·7
Chelsea ...	63 791	—	13	9	—	—	—	—	5	1	—	28	4·6	—	4	—	1	1	—	1	7	1·1	162	25·2
City of Westminster	152,346	—	63	26	—	1	—	—	5	4	—	99	6·8	—	11	1	1	2	—	2	17	1·2	294	21·2
North Districts																								
St. Marylebone	112,892	—	47	15	—	—	—	—	5	3	—	70	6·5	—	20	—	2	3	—	3	28	2·6	220	20·7
Hampstead	86 731	—	19	10	—	—	—	—	5	2	—	36	4·3	—	8	—	1	—	—	1	10	1·2	132	16·8
St. Pancras	212 497	—	61	36	—	3	—	1	14	12	—	127	6·2	—	12	3	6	6	—	6	33	1·6	413	20·2
Islington	324 704	—	89	57	—	5	—	2	16	8	2	179	5·7	—	43	2	6	20	—	4	75	2·4	694	21·7
Stoke Newington	50 454	—	19	11	—	1	—	—	6	1	—	38	7·9	—	10	—	1	—	—	—	11	2·3	97	10·0
Hackney	223 724	—	43	34	—	1	—	2	27	6	—	113	5·3	—	8	—	5	4	—	2	19	0·9	390	18·3
Central Districts																								
Holborn	45 861	—	23	11	—	—	—	1	2	2	—	39	8·9	—	7	1	2	4	—	2	16	3·6	102	23·3
Finsbury	83 212	—	29	12	—	—	—	1	6	—	—	48	6·0	—	2	—	1	7	—	2	12	1·5	203	25·1
City of London	17 129	—	4	6	—	—	—	—	1	—	—	11	6·7	—	—	—	—	—	—	1	1	0·6	41	26·1
East Districts																								
Shoreditch	108 869	—	35	21	—	1	—	1	14	8	—	80	7·7	—	6	1	—	4	—	1	12	1·1	212	21·0
Bethnal Green	127 662	—	63	41	—	1	—	—	16	4	—	125	10·2	—	32	1	5	10	—	5	63	4·3	284	24·1
Stepney	273 265	—	101	91	2	3	—	1	22	3	—	223	8·5	—	18	3	6	1	—	4	32	1·2	509	20·2
Poplar	160 222	—	27	22	—	—	—	2	17	5	—	73	4·8	—	33	—	4	11	2	7	57	3·7	386	24·8
South Districts																								
Southwark	180 941	—	43	32	—	4	—	1	22	3	—	105	5·9	—	37	1	3	8	1	7	57	3·2	472	26·5
Bermondsey	124 213	—	24	17	—	4	—	2	9	2	—	58	4·9	—	30	1	—	26	—	4	61	5·1	348	29·1
Lambeth ..	296 724	—	89	45	—	3	—	1	22	5	—	165	5·8	—	29	4	4	6	—	6	49	1·7		21·6
Battersea	167 338	—	61	31	—	3	—	—	17	4	—	116	7·2	—	41	3	3	20	1	4	72	4·5		
Wandsworth	338 998	—	96	68	—	5	—	2	21	12	2	196	6·0	—	68	3	3	12	—	7	93	2·9		
Camberwell	262,020	—	74	33	—	—	—	2	11	8	—	128	5·1	—	33	2	2	8	—	3	48	1·9		
Deptford	109 182	—	39	27	—	12	—	—	12	3	—	93	8·9	—	16	—	4	10	2	2	33	3·2		
Greenwich	96 037	2	76	11	—	1	—	—	9	5	—	104	11·3	—	18	1	1	9	1	3	33	3·0		
Lewisham	172,433	—	64	29	—	3	—	—	6	3	—	105	6·4	—	11	—	1	2	1	3	18	1		
Woolwich ..	122 836	—	73	29	—	4	—	—	21	18	—	145	12·3	—	16	2	1	1	1	5	26	2		
Port of London	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—			

* Including membranous croup. † The death rates are corrected for variations in sex and age constitution of the populations of the several boroughs, the population of England being taken as the standard.

London Mounted Brigade Field Ambulance Captain William B Thomas to be temporary Major

3rd East Anglian Field Ambulance John Norman Robins to be Lieutenant

3rd Lowland Field Ambulance Lieutenant Archibald C McMaster to be Captain

2nd Eastern General Hospital Harold Harris Elborough Scatliff (late Captain, Sussex Royal Garrison Artillery) to be Captain, whose services will be available on mobilisation (temporary)

Attached to Units other than Medical Units —Lieutenant Louis B Stringer resigns his commission

INDIAN MEDICAL SERVICE COMMISSIONS

An examination for not less than 10 Commissions in His Majesty's Indian Medical Service will be held in London on July 12th, 1915, and the five following days Particulars and forms of application can be obtained from the Military Secretary, India Office, London, S W

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS

The current number of this journal, dated January, gives first place to a preliminary note on the treatment of anaerobe-infected wounds with lactic acid While engaged in the study of the flora of septic wounds it occurred to Major L W Harrison, D S O , the author of the note, that since anaerobes of the gas brand and malignant œdema series degenerate, fail to spore, and do not liberate toxin in a distinctly acid culture medium, wounds might be treated in a manner which would make the discharge distinctly acid to litmus Two severe cases are described in which wounds were treated with lactic acid, and, although one patient died, Major Harrison believes that the activity of the anaerobes was hampered more than by other modes of treatment He has no evidence, however, that lactic acid is of any use against cocci In a joint paper by Major E A Bourke, Lieutenant Idris D Evans, and Lieutenant Sydney Rowlands on Preliminary Observations on the Use of an Autogenous Living Vaccine in the Treatment of Enteric Fever the authors describe six cases in which the employment of autogenous living vaccine produced satisfactory results, and the writers hope that the method of treatment will be given a more extensive trial Major M F Foulds has an interesting note on the use of tincture of iodine in the prevention of venereal diseases Among other contents of the journal is the description of the conversion of a railway porter's truck into a carrying chair for the wounded and of a form of folding trestle for the conversion of a stretcher into an improvised bed, both useful devices

VITAL STATISTICS

VITAL STATISTICS OF LONDON DURING MARCH, 1915

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the 10 diseases specified in the table was equal to an annual rate of 6 6 per 1000 of the population, estimated at 4,516,612 persons , in the three preceding months the rates were 9 2, 7 4, and 7 4 per 1000 respectively The lowest rates last month were recorded in Kensington, Chelsea, Hampstead, Poplar, and Bermondsey , and the highest rates in Bethnal Green, Holborn, Deptford, Greenwich, and Woolwich Two cases of small pox, both belonging to Greenwich, were notified during the month The prevalence of scarlet fever showed a marked decline from that recorded in other recent months, this disease was proportionally most prevalent in Hammersmith, Holborn, Bethnal Green, Greenwich, and Woolwich The Metropolitan Asylums Hospitals contained 2514 scarlet fever patients at the end of the month, against 4431, 3609, and 2989 at the end of the three preceding months , the weekly admissions averaged 278, against 445, 317, and 324 in the three preceding months Diphtheria was less prevalent than in the previous month, among the several boroughs the greatest proportional prevalence was recorded in Holborn, the City of London, Bethnal Green, Stepney, and Deptford The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals, which had been 1663, 1621, and 1562 at the end of the three preceding months, had further declined to 1362 at the end of the month the weekly admissions averaged 142, against 177, 160 ,and 172 in the three preceding months Enteric fever was very much less prevalent than it had been in the preceding month , the greatest proportional prevalence was recorded in Southwark, Bermondsey, Deptford, and Woolwich The Metropolitan Asylums Hospitals contained 46 enteric fever patients at the end of the month, against 68, 50, and 64 at the end of the three preceding months , the weekly admissions averaged 8, against 10, 6, and 13 in the three preceding months Erysipelas was proportionally most prevalent in Hackney, Shoreditch, Bethnal Green, Southwark, and Woolwich The 21 cases of puerperal fever notified during the month included 2 each in Islington, Hackney, Poplar, Bermondsey, Wandsworth, and Camberwell The cases of cerebro-spinal meningitis numbered 154 this disease being proportionally most prevalent in Hammersmith, Shoreditch Greenwich, and Woolwich The 4 cases of poliomyelitis included 2 in Islington and 2 in Wandsworth

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided , the death rates from all causes are further corrected for variations in the sex and age constitution of the populations of the several boroughs During the five weeks ending April 3rd the deaths of 9181 London residents were registered, equal to an annual rate of 21 2 per 1000 , in the three preceding months the rates were 16 7, 19 6, and 20 7 per 1000 The death rates during the month ranged from 15 5 in Lewisham, 16 8 in Hampstead, 17 7 in Fulham 18 1 in Wandsworth and 18 3 in Hackney, to 25 1 in Finsbury, 25 2 in Chelsea, 26 1 in the City of London, 26 5 in Southwark, and 29 1 in Bermondsey The 9181 deaths from all causes included 1073 which were referred to the principal infectious diseases , of these, 666 resulted from measles, 38 from scarlet fever, 71 from diphtheria, 188 from whooping-cough, 12 from enteric fever, and 98 from diarrhœa and enteritis among children under 2 years of age The lowest death rates from these diseases in the aggregate were recorded in Chelsea, Hackney, the City of London, Shoreditch, and Lewisham , and the highest rates in Paddington, Kensington, Bethnal Green, Bermondsey, and Battersea The 666 deaths from measles were more than double the corrected average number in the corresponding period of the five preceding years, this disease was proportionally most fatal in Paddington, Kensington, Fulham, Bethnal Green, Bermondsey, and Battersea The 38 fatal cases of scarlet fever were 17 in excess of the corrected average number, and included 4 in Lambeth and 3 each in Hammersmith, St Pancras, Stepney, Battersea and Wandsworth The 71 deaths from diphtheria were 19 above the corrected average number, this disease showed the greatest proportional mortality in Paddington, St Pancras, Hackney, Holborn, Bethnal Green, Stepney, Poplar, and Deptford The 188 deaths from whooping cough exceeded the corrected average by 22 , the highest death rates from this disease were recorded in Holborn, Finsbury, Bethnal Green, Poplar Bermondsey, Battersea, Deptford, and Greenwich The 12 deaths referred to enteric fever were 4 above the corrected average, and included 2 in Paddington, 2 in Poplar and 2 in Deptford. The mortality from diarrhœa and enteritis among children under 2 years of age was proportionally greatest in Holborn, Bethnal Green, Poplar, Southwark, Bermondsey, Greenwich, and Woolwich In conclusion, it may be stated that the aggregate mortality in London during the month from the principal infectious diseases, excluding diarrhœa, was nearly 79 per cent above the average

HEALTH OF ENGLISH TOWNS

In the 96 English and Welsh towns with populations exceeding 50,000 persons at the last Census, 8952 births and 6022 deaths were registered during the week ended Saturday, May 1st The annual rate of mortality in these towns, which had been 19 9, 19·0, and 17·4 per 1000 in the three preceding weeks, further fell in the week under notice to 17 3 per 1000 of their aggregate population, estimated at 18,134,239 persons at the middle of last year During the first four weeks of the current quarter the mean annual death rate in these towns averaged 18·4, against a corresponding rate of 19 6 per 1000 in London Among the several towns the death rate last week ranged from 8 4 in Blackpool 8 9 in Carlisle, 9 2 in Norwich 9 3 in Southend on Sea and 10 2 in Enfield to 23 8 in St Helens 23·9 in Sunderland, 24·0 in West Bromwich, 25 6 in Wigan, and 30 5 in Middlesbrough

The 6022 deaths from all causes were 41 fewer than the number in the previous week, and included 711 which were referred to the principal epidemic diseases, against numbers declining from 826 to 689 in the four preceding weeks Of these 711 deaths, 392 resulted from measles, 142 from whooping-cough, 73 from infantile diarrhœal diseases, 56 from diphtheria, 34 from scarlet fever, 12 from enteric fever, and 2 from small pox. The mean annual death rate from these diseases was equal to 2·0 per 1000 and coincided with that recorded in the previous week. The deaths attributed to measles, which had declined from 495 to 389 in the four preceding weeks

Correspondence.

"Audi alteram partem.

THE MENTAL TREATMENT BILL

To the Editor of THE LANCET

SIR,—The letter of Dr Edwin Ash in THE LANCET of May 1st emphasises the long felt public want which the Voluntary Mental Treatment Bill introduced into the House of Lords last spring by the Earl Russell completely meets

Both this Bill and that of Mr *Cecil* Harmsworth aim at precisely the same object, for both enable early mental symptoms "in whatever case and from whatever cause ' to be "*treated*" *for a limited* period without the usual legal certificate The only difference is that Mr Harmsworth s Bill provides no safeguards against abuse and in the opinion of a great number who realise the danger it is felt there should be some guarantee that this power should be used solely in the interests of the sufferer

In this Bill there is a complete disregard of such an assurance, and this omission may amount to the legal sanction of licence in the name of liberty

I am, Sir, yours faithfully,

ROBERT ARMSTRONG JONES, M.D Lond

Claybury May 4th 1915

To the Editor of THE LANCET

SIR —Will you permit me to make reference in your influential columns to a few points in relation to the Bill ' to facilitate the early treatment of mental disorder of recent origin arising from wounds, shock, or any other cause , which definition makes it *applicable to any* case of slight mental loss of balance of whatever nature, among civilians as well as among soldiers

The first announcement of the Bill *described* it as a "War Emergency" measure and gave it to be understood that it was introduced for the benefit of the soldiers, but, as admirably pointed out in your leading article of last week, it has no application to soldiers as soldiers at all The soldier while he remains in the army, is not certified, the strict military control in which he is there held being quite sufficient as a form of detention The plea of emergency on the soldier s behalf therefore falls to the ground It is when the soldier, after discharge from the army, returns to civilian life that he runs the great risk, as a civilian if still unrecovered, of being placed under detention (should this Bill pass) without the safeguard of any legal procedure or appeal to a magistrate This is a very serious matter, since it applies to the whole civil population, and introduces a most dangerous innovation, under the specious plea of temporary urgent necessity The real necessity at all times is that the individual alleged to be of unsound mind should have his case fairly and impartially sifted and be heard in self defence Before the passing of the Lunacy Act, 1890 the public had been sharply roused to a realisation of the subterranean perils to which any of them might be at any time insidiously exposed

A Bill is now brought in of retrograde tendency allowing a person of slight mental instability to be ' taken charge of for profit and without penalty for a period of six months provided only that the person taking him in charge complies with certain regulations to be subsequently made by the Home Secretary and Lord Chancellor who represent the Executive of the Lunacy Commission The Lunacy Commission is thus to be given the prerogative of substituting its permission or prohibition in this matter for the stringent provisions of the Lunacy Act, 1890 It is to make its own rules as to the conditions under which free British subjects may be "taken charge of" by "nursing homes' or other institutions run *for profit*, the legal safeguards of the Lunacy Act being meanwhile in abeyance The House of Commons is asked, by endorsement of this extraordinary principle of the Bill, to "shut its eyes and swallow"

The Memorandum prefixed to the Bill gives us to understand the passing of the Bill is urgent on behalf of all kinds of patients suffering from nervous breakdown It states that the law, as it now stands, prevents residential treatment of such cases unless they are certified as insane and sent to an institution under the Lunacy Acts But there is no provision in English law which prohibits such cases being treated on medical lines in hospitals or homes so long as the patients are not 'certifiable, ' and so long as compulsory detention is not exercised

It would be well if the promoters of this Bill would give it clearly to be understood whether detention is included in Section 1 or not, the term "to take charge of being extremely vague If detention is not intended why bring in the Bill, since the law, as it stands, allows of treatment in hospitals or homes provided the patient is not *detained The leading article in the British Medical Journal* of May 1st is more explicit It speaks quite unreservedly of curative detention and of the folly of insisting on the patient s freedom, where detention is necessary for cure That is exactly the point If detention has become necessary, the patient has become certifiable—i.e it has become dangerous to leave him free—consequently his liberty must be restricted, and at the same moment, in consequence of the risk of unscrupulous dealings towards one unable to help himself it is acknowledged on all hands, and has been strictly embodied in the Lunacy Act 1890, that legal procedure is in this case obligatory, and appeal to judicial intervention necessary

In the Memorandum prefixed to Mr Harmsworth s Bill much stress is laid on the "stigma" which attaches to an individual who has been certified It has even been asserted that if there were no legal procedure, there would be no stigma This is a fatal confusion of ideas It is not the provision for strict legal procedure that causes the stigma. It is the fact of the existence of a dangerous condition of mind necessitating detention. This necessity for detention originates the stigma and not the law The function of the law is protective, and we run into great danger if we allow detention to be exercised in contravention of the safeguards of the law

The author of the article in the *British Medical Journal* speaks of a *possible* amendment to Mr Harmsworth s Bill to the effect that a patient may "accept the treatment But it does not need a Bill to oblige the patient to "accept. If the patient s mental state is such that he is uncertifiable, he can make the choice for himself without being obliged to do so by a Bill It is a *contradiction* in terms to compel a so called "*voluntary*' patient to accept treatment in an institution for the insane The *Bill brought* in by Earl

Lond Willi 3rd Ro

ntly rose to 392 last week, and caused the highest annual death rates of 3 4 in Sunderland, 3 7 in Edmonton, 3 8 in Wolverhampton, 4·0 in Barrow in Furness, 4 1 in Middlesbrough, 4 3 in Merthyr Tydfil, 5 0 in Walsall, 5 3 in West Bromwich, and 6 9 in Northampton The deaths referred to whooping cough, which had been 167, 151, and 149 in the three preceding weeks, further fell to 142 last week, the highest recorded death rates from this disease were 1 3 in Southampton, 1 5 in Walthamstow, 1 6 in Middlesbrough, 1 8 in Great Yarmouth, 2 0 in Wakefield, 2 4 in Rotherham, 2 6 in St Helens, 3 5 in Stockton-on-Tees, and 5 7 in Wigan The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 67, 63, and 65 in the three preceding weeks further rose to 73 last week, and included 17 in London, and 4 each in Leicester and Middlesbrough The deaths attributed to diphtheria, which had been 49, 55, and 49 in the three preceding weeks, rose to 56 last week, of which 12 were registered in London, 5 in Stoke-on Trent, 3 each in Leyton, Birmingham, and Bradford The deaths referred to scarlet fever, which had increased from 16 to 29 in the four preceding weeks, further rose to 34 last week, and included 9 in London, 3 each in Manchester and Sheffield, and 2 each in Willesden, Stoke-on Trent, Birmingham, Bradford, and Gateshead The fatal cases of enteric fever, which had been 7, 11, and 8 in the three preceding weeks, rose to 12 last week, and included 3 in Salford and 2 each in London, Stoke on Trent, and Leeds The 2 deaths from small pox belonged to Bristol

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily declined from 5036 to 2369 in the 22 preceding weeks, had risen to 2377 on Saturday last, 316 new cases were admitted during the week, against 275, 263, and 259 in the three preceding weeks These hospitals also contained on Saturday last 1230 cases of diphtheria, 274 of measles, 62 of enteric fever, and 16 of whooping-cough, but not one of small pox The 1575 deaths from all causes in London were 44 fewer than in the previous week, and corresponded to an annual death rate of 18 2 per 1000 The deaths referred to diseases of the respiratory system, which had been 466, 469, and 392 in the three preceding weeks, further fell to 347 in the week under notice, but were 162 in excess of the number in the corresponding week of last year The deaths from influenza numbered 30, against 46, 39, and 27 in the two preceding weeks

Of the 6022 deaths from all causes in the 96 towns 215 resulted from different forms of violence and 408 were the subject of coroners' inquests, while 1703 occurred in public institutions The causes of 35, or 0 6 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in London and in 13 of its 14 suburban districts, in Leeds, Bristol, Bradford, Hull, Newcastle on Tyne and in 56 other smaller towns Of the 35 uncertified causes of death, 5 were registered in Birmingham, 4 in Liverpool 3 each in West Bromwich and Gateshead, and 2 each in Stoke-on-Trent, Preston, and Sheffield

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2,345,500 persons at the middle of this year, 1285 births and 909 deaths were registered during the week ended Saturday, May 1st The annual rate of mortality in these towns, which had been 20 8, 20 9, and 18 5 per 1000 in the three preceding weeks, rose to 20 2 per 1000 in the week under notice During the first four weeks of the current quarter the mean annual death rate in these towns averaged 20 1 against a corresponding rate of 18 4 per 1000 in the large English towns Among the several towns the death rate last week ranged from 12 8 in Kirkcaldy, 12 9 in Clydebank, and 14 9 in Hamilton, to 21 3 in Coatbridge, 23 3 in Leith, and 25 0 in Dundee

The 909 deaths from all causes were 75 in excess of the number in the previous week, and included 150 which were referred to the principal epidemic diseases, against numbers declining from 181 to 128 in the four preceding weeks Of these 150 deaths, 82 resulted from whooping cough, 36 from measles, 12 from diphtheria, 11 from scarlet fever, and 9 from infantile diarrhœal diseases, but not one from enteric fever or from small pox The mean annual death rate from these diseases was equal to 3 3, against a corresponding rate of 2 0 per 1000 in the large English towns The deaths attributed to whooping cough, which had been 75 90, and 75 in the three preceding weeks, rose to 82 last week, and included 42 in Glasgow, 14 in Dundee, 8 in Edinburgh, and 4 each in Paisley and Greenock The deaths referred to measles, which had been 41, 19, and 26 in the three preceding weeks further rose to 36 last week, of which 25 were registered in Glasgow and 9 in Aberdeen The fatal cases of diphtheria, which had been 11, 7, and 6 in the three preceding weeks, rose to 12 last week, and included 2 each in Glasgow, Leith, and Motherwell The deaths attributed to scarlet fever, which had been 6, 7, and 7 in the three preceding weeks, further rose to 11 last week, of which 3 occurred in Glasgow, and 2 each in Leith and Clydebank The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 18, 10, and 12 in the three preceding weeks, fell to 9 last week, and included 2 in Leith and 2 in Kilmarnock

The deaths referred to diseases of the respiratory system, which had been 182, 178, and 145 in the three preceding weeks, rose to 153 in the week under notice, and were 63 in excess of the number in the corresponding week of last year The deaths attributed to violence numbered 25, against 21 and 30 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland, with an aggregate population estimated at 1,212,380 persons at the middle of this year, 658 births and 444 deaths were registered during the week ended Saturday, May 1st The annual rate of mortality in these towns, which had been 23 8, 22 1, and 22 4 per 1000 in the three preceding weeks, fell to 19 1 per 1000 in the week under notice During the first four weeks of the current quarter the mean annual death rate in these towns averaged 21 9, against corresponding rates of 18 4 and 20 1 per 1000 in the English and Scotch towns respectively The death rate last week was equal to 19 0 in Dublin (against 18 2 in London and 21 1 in Glasgow), 19 8 in Belfast, 17 7 in Cork, 24·0 in Londonderry, 19·0 in Limerick, and 17 1 in Waterford, while in the 21 smaller towns the mean death rate was 17 8 per 1000

The 444 deaths from all causes were 77 fewer than the number in the previous week, and included 35 which were referred to the principal epidemic diseases, against 30 and 41 in the two preceding weeks Of these 35 deaths, 11 resulted from measles, 10 from infantile diarrhœal diseases, 9 from whooping cough, 3 from diphtheria, and 2 from scarlet fever, but not one from enteric fever or from small pox The mean annual death rate from these diseases was equal to 1 5, against corresponding rates of 2·0 and 3 3 per 1000 in the English and Scotch towns respectively The deaths attributed to measles, which had been 16, 5, and 13 in the three preceding weeks fell to 11 last week, and included 7 in Belfast and 2 in Dublin The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 3, 5 and 5 in the three preceding weeks further rose to 10 last week, of which 4 were registered in Dublin and 2 each in Belfast and Lisburn The fatal cases of whooping cough, which had been 15, 11, and 20 in the three preceding weeks, fell to 9 last week and included 5 in Belfast and 2 in Dublin Of the 3 deaths attributed to diphtheria, 2 occurred in Dublin and 1 in Newtownards The 2 fatal cases of scarlet fever were recorded in Belfast and Waterford

The deaths referred to diseases of the respiratory system, which had been 158, 119, and 104 in the three preceding weeks, further declined to 84 in the week under notice Of the 444 deaths from all causes, 131, or 30 per cent, occurred in public institutions, and 8 resulted from various forms of violence The causes of 10, or 2 3 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the large English towns the proportion of uncertified causes did not exceed 0 6 per cent

GLASGOW LOCK HOSPITAL—The 109th annual report of this institution (for the year 1914) shows that 300 patients were admitted to the hospital as against 240 in 1913 and 251 in 1912 The number of patients who left irregularly, or before their cure had been completed, was 15 Of the total number of patients admitted during the year 205 were received for the first time, 69 for the second, 23 for the third, 2 for the fourth, and 1 for the eighth time The 384 out-patients made 1070 visits, as compared with 217 out-patients with 501 visits in 1913 The out-patients of 1914 had all at one time been in patients. The average period of sojourn in the hospital was 42 days and the average age of the patients 24 years The patients included infants and girls of most ages between 2 and 16 The financial statement shows the ordinary income to have been £1301 19*s* 6*d*, and the ordinary expenditure £1500 7*s*, leaving a deficiency of £198 7*s* 6*d*, which compares with a deficit of £4 10*s* 3*d* in 1913 The extraordinary income consisted of legacies amounting to £131, and after deducting special expenditure there is a debit balance of £390 15*s* 10*d* to be carried to capital.

shaken vigorously until the powder dissolved (latterly saline was used and the powder dissolved in it equally well). Caustic sodium hydroxide solution 15 per cent. was then added, until the precipitate first found cleared. Sterile saline solution was next added up to 250 c.c., the solution often became cloudy on adding the saline, and then caustic sodium hydroxide was added drop by drop until after vigorous shaking the solution remained clear. The quantity of 15 per cent. solution needed varied considerably, 14 minims being the least used, 34 minims the most, for a 0·4 gramme dose. In all cases the solution was tested with litmus paper, and never gave more than a faintly alkaline reaction. The solution was always given côld and intravenously, and in no case was a vein cut down upon.

In every case saline or distilled water was run in before and after the kharsivan. The addition of saline to run in after the injection caused the last part of the solution to become cloudy. Distilled water had not this effect to the same extent. In seven cases our own doubly distilled water was used with *no* after effects at all. The dosage given never exceeded 0·45 gramme. In a large majority the dose was 0·4 gramme. All the patients were females.

Billon.

This drug was first prepared by one of us with unsatisfactory distilled water, in that the still was old and useless, and it was found that the water was seldom doubly distilled.

Billon with Unsatisfactory Water.

No. of cases.	Headache.	Vomiting.	Temperature.	Other ill-effects.
19 (secondary 15, late secondary 4).	36·8%	15·7%	5·2% Maximum 103° F.	Rigors 15·7%

In the three patients who suffered from rigors these occurred ½ hour, 1½ hours, and 5 hours after injection. In two of the cases too large a dose was given—viz., 0·6 gramme to children of 15 years.

Billon with Satisfactory Water.

No. of cases.	Headache.	Vomiting.	Temperature.	Other ill-effects.
31 (primary 12, secondary 12, tertiary 7).	6·4%	3%	Nil.	Nil.

Of the 26 cases given at the Lock Hospital (18 secondary and 8 late secondary), 10 had had no previous arsenical treatment.

Novarsenobenzol Billon is the dioxydiamido arsenobenzol (monomethylene) sulfoxylate de soude —viz., '914. It is of French preparation, the manufacturers being Poulenc Frères. It consists of a yellow powder, darker and more yellow than the original 914, very soluble in water forming a perfectly clear yellow solution. To prepare the powder for use it was dissolved in 20 to 30 c.c. of doubly distilled water and given intravenously, a small quantity of the water being introduced before and after the drug. The dosage given was from 0·45 gramme to 0·6 gramme, the patients being both male and female. One of us gave 24 injections of Billon to private cases, mostly male patients, who received 0·6 gramme, but one female patient with the same dose vomited and suffered from headache; she had no temperature. She was suffering from two alveolar abscesses at the time. The others had no after symptoms whatever. All had had no previous arsenical treatment.

Neokharsivan.

No. of cases.	Headache.	Vomiting.	Temperature.	Other ill-effects.
36 (10 had had no previous arsenical treatment). Primary 3, secondary 21, late secondary 12.	14%	2·6% (1 case).	2·6% (1 case—i.e., 1 case of 102·4°).	Rigor occurred in the 1 temperature case.

In the one case of rigor, pyrexia, and vomiting, the rise in temperature occurred about four hours after injection. The patient was perfectly well 24 hours later. There was no reaction with a previous and a later dose of kharsivan.

Neokharsivan is prepared by Burroughs, Wellcome, and Co., and is declared to be identical in essential particulars with "914." It is a yellow powder, a little darker than "914," very easily soluble in water, yielding a clear solution. For intravenous injection the powder was dissolved in from 30 to 60 c.c. of doubly distilled water, doubly distilled water being introduced before and after the drug. The dose given ranged from 0·45 to 0·6 gramme.

General remarks.—The intervals between the injections varied in different cases from one to five weeks, there being two routine treatments used: (*a*) at intervals of seven to ten days, (*b*) at intervals of one month, all patients receiving full doses of mercury.

The hospital patients had the following preparation:—Pil. col. cum hyosc., 4 grs., at 6 P.M., mist. alb. at 2 A.M., en. sap. at 5 A.M., glass of hot milk at 10 A.M., and nothing more for four hours before injection. These patients remained in bed until the afternoon of the following day and took no solid food for about 24 hours after injection. The preparations were always given cold and as soon after mixing as possible, the bottle being kept well stoppered and tightly corked until the drug was used. Ether was rubbed over the vein before the insertion of the needle.

An aperient was administered to private patients on the preceding day; no breakfast, but a cup of tea and a piece of toast at 8 A.M., the injection being given at 10 A.M.; this was followed immediately by an ordinary breakfast, after which the patient remained in bed from two to six hours only.

Results.—The results of these three drugs were entirely satisfactory when we were using doubly distilled water of assured purity. All the patients (164) were improved in health and increased in weight. The disappearance of symptoms seemed to be much the same as in Ehrlich's last preparations. Some cases which had failed to respond to mercury responded readily to arsenic. This was very noticeable in three cases of iritis. Four of the patients were suckling and the babies suffered no ill effects. No local disturbance was noticed in the vein of the arm. All were perfectly well 48 hours after the injections and to the present date. The Wassermann results in private cases were negative. The urine was free from albumin except in one case—slight for two days only.

Headache is the only symptom which is more marked in these drugs than in Ehrlich's preparations, notably in female patients; in the male patients it very seldom occurred. The severity of

Russell on July 22nd, 1914, had this aim. He himself explained at a Medico-Legal meeting on June 30th, 1914, that the patient would have no choice when sent in by a doctor, but the initial detention could not be continued against his will—i.e., in the event of his discovering that he had the right to leave. This would seem an anomalous arrangement. The writer in the *British Medical Journal* sums up his remarks by a suggestion which, he says, commends itself for its simplicity—viz., to adopt the last clause of Section 13 of the Scotch Lunacy Act, 1866, by which any doctor can send anyone to an asylum for six months on his own sole authority.

This measure, much as it may possibly commend itself to many doctors, will scarcely meet with the same unqualified approval from the great majority of British subjects. The writer says that for years the organised body of English alienists and expert opinion on lunacy has been calling for the incorporation of this measure into English law. It remains to be seen whether the public will also call for it. It is maintained that with the march of progress the question of disorder of the mind begins to be "regulated by scientific considerations"[1]. This new consideration is, however, still in its extreme infancy. What we require above everything else is that all mental affections should be genuinely taken into account as a branch of medicine. Insanity is not and cannot be checked by the present methods of treatment. It is both unnatural and unscientific to regard mental treatment as a speciality, secluded from the light which might be thrown on it by every other branch of medicine. Mental treatment has often been of the crudest description, and has failed signally in reducing the prevalence of this worst of mortal ills. The reason of this is that its beginnings have been overlooked. The dread of the prison bars of detention has stood in the way of every early effort at success. The only method by which the painful sense of indignity and utter insecurity can be removed, is to treat the earliest stages differently. We want places where early cases will not be afraid to come of their own accord for treatment—hospitals where prevention and common sense will come into action much earlier. We want not more detention, but far less. We want free air and sunshine to penetrate into obscure recesses, and all the skill of medical care, therapeutic resource, and the best all-round intelligence to be brought to bear upon the treatment of derangement of our highest faculties, and this at its very earliest stage. How this can best be facilitated I must leave, with your kind permission, to a future occasion.—I am, Sir, yours faithfully,

S. E. WHITE, M.B. Lond.

Upper Montagu-street, W., May 4th, 1915.

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[1] See article in Times.

THE MANUFACTURE OF SALVARSAN PRODUCTS IN ENGLAND AND FRANCE

To the Editor of THE LANCET.

SIR,—I have read in your issue of last week Dr. David Watson's criticisms on my letter of April 3rd, in which he suggests that my diagnosis of arsenical poisoning following an injection of novarsenobenzol "Billon" was incorrect, and that the symptoms might have been "partly or entirely" due to "a mercurial dermatitis." I can only say that it is unprecedented for a case of mercurial dermatitis to persist for nearly four months, and notwithstanding treatment to still show symptoms of that condition, the patient referred to is still in hospital, and the skin over his whole trunk and lower limbs is at the present moment of a brick-red colour and is covered with branny desquamation. If this is Dr. Watson's experience of mercurial dermatitis I am happy to say that that condition is not met with in this metropolis.

In his apologia for Burroughs and Wellcome's preparation kharsivan Dr. Watson states that he has produced sufficient evidence to warrant the conclusion that a dose of 0.6 grm. of that substance is inadvisable, but that firm, in one of their leaflets with which the medical profession is not altogether unfamiliar, states that "kharsivan is to be used in precisely the same manner and dosage as the German product." Dr. Watson further states "that salvarsan is not less toxic than kharsivan in similar dosage is proved by our records," and therefore I presume there is nothing more to be said, though I have given some thousands of injections of salvarsan without having met with any such untoward symptoms as those described in your issues of April 3rd and May 1st.

It is perhaps somewhat *mal à propos* that immediately preceding Dr. Watson's letter in THE LANCET last week there appears my communication of two further cases of arsenical poisoning following injections of kharsivan, one of which unhappily proved fatal. Possibly Dr. Watson will be able to explain this case to his own satisfaction, but the position is this: a healthy young man contracts syphilis, he is given two intravenous injections of kharsivan, he develops symptoms of arsenical poisoning from which he dies one month later, and as to the diagnosis of death there can, unfortunately, be no mistake.

I am, Sir, yours faithfully,

J. ERNEST LANE,
Surgeon to the London Lock Hospital.

Queen Anne-street, W., May 2nd, 1915.

CLINICAL RESULTS OF KHARSIVAN, BILLON, AND NEOKHARSIVAN

To the Editor of THE LANCET.

SIR,—The following results of the injection of these drugs may be of interest at the present moment.

Kharsivan.

No. of cases	Headache	Vomiting	Temperature	Other ill-effects
78 (25 with no previous arsenical treatment). Primary 2, secondary 50, late secondary 24, tertiary 2.	10%	5%	12.5%, maximum 100.8° F. No temperature in 7 cases with our own re-distilled water.	Nil except 1 case of bronchial pain lasting 2 days.

Kharsivan is an arsenical preparation made by Messrs. Burroughs, Wellcome, and Co., having a formula exactly similar to salvarsan ("606")—$C_{12}H_{12}O_2N_2As_2(HCl)_2 2H_2O$. It is a yellow acid powder dissolving with some difficulty in water and rather darker than "606." To prepare the drug for intravenous injection 250 c.c. of 0.5 per cent. saline solution made with doubly distilled water and a 15 per cent. solution of caustic sodium hydroxide are required.

According to directions 30 c.c. of doubly distilled water were put in a narrow graduated stoppered flask, to this the powder was added, and the whole

THE TREATMENT OF CALLOUS ULCERS

To the Editor of THE LANCET

SIR,—Mr H. Beckwith Whitehouse, in his report on gunshot and shell wounds in THE LANCET of April 24th, speaks of the use of glucose in causing osmosis and promoting rapid healing Strangely enough, for many years I have used cane sugar in medium sized crystals to soften callous ulcers on account of the free passage of lymph over the surface of the ulcer when the crystals are dusted over it This is a wrinkle that I picked up from an old woman who was curing an ulcer on her leg in this manner How or where she got the idea I never learned, and I never saw anyone but herself use it

Progressive gangrene with a tough yellow slough continually increasing in depth and thickness may possibly, as far as I know, be found in some wounded in this war A case that came under my care in civil life caused me great worry and anxiety All I could do was unavailing, until I allowed steam direct from a kettle spout to play on the slough, this rendered it friable, and I was able to clear it away down to the raw, living flesh, the blood vessels and nerves which were dead remaining as strings hanging from the surface Rapid healing followed the use of antiseptic dressings

I am, Sir, yours faithfully,

Bradford Yorks April 27th 1915 P M O'BRIEN

TREATMENT OF "INCRUSTED CYSTITIS" BY SUPRAPUBIC DRAIN AND INTRAVESICAL INJECTION OF LACTIC BACILLUS

To the Editor of THE LANCET

SIR,—I agree with Dr David Newman, in your issue of May 1st, that Dr Caulk cannot claim priority in regard to the action of the lactic acid bacillus on other infections I fancy the credit should belong to Metchnikoff, for surely he first demonstrated scientifically the effect of this bacillus on bacilli coli I have myself for some years used *lactic acid* for infections of the bladder I first used it in two cases with dense phosphatic incrustations and was delighted with the result. Subsequently I had experiments made as to the bactericidal potency of solutions of different strengths in respect to bacilli coli, and we found that a solution of 1–10 was the minimum strength that was likely to be effectual I also had tested the solvent power of this acid on vesical calculi It was found that in the strength of 1–10 it is a weak solvent, but is able to dissolve small phosphatic spicules within a reasonable time and to soften and so assist the disintegration of larger masses Unfortunately, illness and other circumstances prevented the publication of these observations, but I hope to record them some day

Meanwhile I would advise the use of a 10 per cent solution of lactic acid rather than the lactic acid bacillus for two reasons (1) lactic acid must be in a fairly strong solution if it is to act as a solvent as well as a preventive of phosphatic deposits (2) the stronger the solution the greater the bactericidal potency It will be found that lactic acid in the strength recommended causes considerable pain when injected into the bladder, but if a weak solution of novocaine be first injected into the bladder and allowed to remain there for a few minutes the pain is prevented The solution of lactic acid should be injected into the empty bladder and left there for 15 minutes It should then be washed out with saline These procedures should be repeated as often as is considered necessary In bad cases suprapubic (*not* vaginal) drainage should be employed

I may add that I have used lactic acid in the same strength for intractable leucorrhœa due to bacillus coli infection Some years ago I showed that the lactic acid normally found in the vagina is not necessarily produced by the action of Döderlein s bacillus since this acid is present in sterile hæmatocolpos fluid [1]

I am, Sir, yours faithfully,

Liverpool May 3rd 1915 W. BLAIR BELL

CERTAIN PECULIAR CRYSTALS FOUND IN CEREBRO-SPINAL FLUID

To the Editor of THE LANCET

SIR,—I have read with interest the article of Dr W W D Thomson in THE LANCET of March 27th on the occurrence of peculiar crystals in the cerebro spinal fluid for the reason that shortly before the outbreak of war I encountered a similar case myself. From the clinical side the case was very obscure The only outstanding feature was very marked secondary optic atrophy, together with a slight degree of headache There were no other symptoms of cerebral tumour, and, apart from a slight degree of anæmia, the patient appeared to be in perfect health The Wassermann reaction was negative The cerebro spinal fluid was perfectly clear, under slightly increased pressure, showed no cellular or protein increase, but contained enormous numbers of crystals, which appeared to be identical in appearance with those described and figured by Dr Thomson They refused to take up any stain It was impossible to determine the nature of these crystals until they were put under the polarising microscope, when they were at once seen to be the highly, doubly refracting crystals of a cholesterin ester No crystals of cholesterin could be seen The crystals were present in the cerebro spinal fluid on four separate occasions If Dr Thomson should be fortunate enough to come across another case of this description he might find it of interest to examine the fluid with the polarising microscope and compare the crystals with a known specimen of a cholesterin ester

Mr Ernest H. Shaw s suggestion that the crystals were deposited from the water used for sterilising the tube appears to me a most extraordinary one, and I am glad to see that Dr Thomson has completely refuted it

I am, Sir, yours faithfully,

WILLIAM BOYD,
Lieutenant R A.M C.(T) Professor of Pathology,
University of Winnipeg
1,3rd North Midland Field Ambulance British Expeditionary
Force May 1st, 1915

THE WAR OFFICE NEED FOR DOCTORS

To the Editor of THE LANCET

SIR—Many of us middle aged men would be willing to join the Royal Army Medical Corps, but at our age we have a strong *objection* to being the preparation and the starvation after the injections may be the causes of this headache in the hospital (female) cases

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[1] Proceedings of the Royal Society of Medicine (Obstetrical and Gynæcological Section) 1911 vol. iv., p 234 and Journal of Obstetrics and Gynæcology of the British Empire 1912 vol xxi., p 279, THE LANCET May 13th 1911.

Vomiting and temperature are at a minimum with pure water, only one rigor occurred in all the injections with pure water We are convinced that the high percentage of temperatures in kharsivan injections is due entirely to the use of unsatisfactorily distilled water

Dosage —The general dosage used was 0 4 gramme kharsivan and 0 45 to 0 6 gramme of billon and neokharsivan It will be understood that this moderate dosage was employed because we were dealing with new and untried drugs

In conclusion, it must be noted that these results, although satisfactory, would have been even better if all the water used had been of assured purity Granted that the distilled water is satisfactory, with a good technique and appropriate dosage we are persuaded that the British and French chemists have overcome the main difficulties and have produced drugs of equal utility to those of our more "cultured" enemy

We are, Sir, yours *faithfully*,
Charles Gibbs, F R C S Eng,
Surgeon to London Lock Hospital and to Charing Cross Hospital.
Morna Rawlins,
House Surgeon to London Lock Hospital
May 1st, 1915

ENTERIC FEVER DUE TO A URINARY CARRIER OF LONG STANDING

To the Editor of The Lancet

Sir,—The following small outbreak of enteric fever, due to a carrier, appears to me to be of sufficient interest to place on record It occurred last autumn at the Alexandra Palace while that building was being used for the reception of Belgian refugees Between the commencement of October and the end of November five members of the staff developed this disease The first to fall ill was a clerk working in the trustees' office, the second was a waiter in the staff dining room, the third waited on the better class refugees, the fourth on the general body of refugees, while the fifth and last was the night nurse on duty in the hospital ward where there had been no case of enteric fever for six weeks These five individuals, consequently, were all working in different parts of the building They had only one thing in common, and that was the preparation of their food by the cook who was in charge of the staff kitchen On being questioned this man stated that he had suffered from enteric fever 18 years ago, and was in St Mary s Hospital for six months I obtained specimens of his excreta, which were bacteriologically examined for me by Dr G E Cartwright Wood, who reported that the bacillus typhosus was present in the urine but was not found in the fæces In answer to my inquiries, the man informed me that he had never at any time suffered from pain or discomfort in the region of the bladder, nor from frequency of micturition, nor had he ever noticed anything unusual in the appearance of his urine I was not able to make any inquiries of previous employers of this man because for the last 16 years he has had no fixed employment, but has moved about the country acting as temporary cook at race meetings, *during manœuvres*, and at hotels.

The points of interest in this case are (1) The long duration of infection in a urinary carrier, (2) the complete absence of bladder symptoms After the cook's departure no further case of enteric occurred among the staff I might add that there were only six cases of this disease among the 32,000 refugees who passed through the Alexandra Palace

I am, Sir, yours faithfully,
Herbert E. Cuff
Principal Medical Officer of the Metropolitan Asylums Board.
April 30th 1915

THE SCOTOMA OF MIGRAINE

To the Editor of The Lancet

Sir,—Mr Charles Higgens's observations in The Lancet of May 1st are of great importance A simple experiment which proves conclusively that the photo chemical stimulus is external to the cones may be made as follows On arising in the morning arrange a mirror so that the sun is reflected from its surface, then whilst one eye is closed and covered with the hand the other eye is opened and closed so that the image of the sun is visible for a fraction of a second, both eyes being now closed and covered with the hands a clear cut after image of the sun is seen on a dark background It will be noticed that there is nothing else visible in the field of vision If the head be now moved rather sharply to one side the after image will be drawn out into a long sausage shaped form with irregular knobs on it If the head be sharply jerked we can obtain several after images, plainly showing that the photo chemical stimulus is movable in the retina and therefore cannot be situated in the cones I find these experiments succeed best in the morning immediately after sleep, probably because the processes of the pigment cells are retracted If any reader find that he cannot see any of the subjective phenomena described by me I would suggest that he select one of the most accurate observers of his acquaintance and ask him to repeat the experiment without giving him the least clue as to what he is to see If he describe the phenomenon as I have described it, it is obvious that we have obtained important confirmatory evidence I find that whilst many older men fail to see various subjective phenomena they are rarely missed by the young

I am, Sir, yours faithfully,
F W Edridge Green
London, May 1st 1915

THE BACTERIAL INFECTIONS OF PROJECTILE WOUNDS

To the Editor of The Lancet

Sir,—In the leading article under the above title in your issue of April 24th, as well as in the illuminating address of Sir Almroth Wright and the "Memorandum on the Treatment of the Bacterial Infections of Projectile Wounds" in the same issue, stress is laid on the importance of free drainage of these wounds and of the necessity of securing "a free outflow of lymph '—and Sir Almroth Wright and the other writers mention the various means adopted to secure these ends But I see that there is no mention of the use of "Bier's method' of evacuating abscesses and sinuses by means of cupping glasses and other forms of aspiration

Are there not cases where this method would be useful—especially when two or three days have elapsed after the injury? By suction or aspiration pent up matter is evacuated and "a free flow of lymph" and an ' active hyperæmia" are induced

I am, Sir, yours faithfully,
R. Ackerley
Llandrindod Wells, April 29th, 1915

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

The Executive Committee

A meeting of the Executive Committee was held on Thursday, April 29th, when good progress was reported A letter was read from Dr Pechère, the President of the Aide et Protection aux Medecins et Pharmaciens Belges, to Sir Rickman Godlee, in which the warmest thanks of that body were returned to the Fund for the donation in money which had been forwarded upon the decision of the committee at the previous meeting To this letter a reply was sent by Sir Rickman Godlee stating the intention of the Fund to continue to help in this way, and asking that details of the distribution should be made known to the committee of the Fund Sir Rickman Godlee also read a letter from Mr Herbert Hoover, saying that for the moment it would not be possible to communicate with Belgium or to receive from Belgium the information sought

A letter was also read from the Under Secretary of State for Foreign Affairs explaining the circumstances in which His Majesty's Government decided that they would not be able to make a monthly contribution out of public funds to the benevolent department of the American Commission for Relief in Belgium It was decided that a copy of this letter should be sent to the chairman of one of the American Funds having similar objects to those of the British Fund, because the position of the British Government in the matter might be misinterpreted in the United States

Dr Des Vœux and Dr Squire Sprigge said that their experiences were alike at the present moment with regard to finding situations for Belgian doctors in this country At one time there appeared to be little difficulty in finding the posts, while the applicants were not coming forward. Now there seemed to be many vacant appointments, but for one reason or another the Belgian candidates were not successful in obtaining them

The treasurer's report showed that money was coming in steadily, though many districts had not yet responded to the invitation to subscribe Dr Alfred Cox said that in the forthcoming annual report of the British Medical Association the claims of the Fund would be repeated It was generally felt by the committee that though the outgoings at the time were not large, the call upon the Fund in the future would be very heavy, and that no pains ought to be spared to augment its resources

Messrs Burch Whitehead and Davidsons, 29 Spring gardens, London, S W, have kindly consented to act as honorary solicitors to the Fund

The Week's Subscriptions

The subscriptions received by Dr Des Vœux during the week ending Tuesday last make a total of very nearly £2000, but this handsome sum, of course includes a donation, on account, from the Scottish Committee, Belgian Doctors and Pharmacists Relief Fund of £1000 From the Liverpool Belgian Doctors Relief Fund there was received £400, the sum being earmarked for the relief of doctors, as a separate fund has been instituted in Liverpool for pharmacists A further welcome donation of £400 was received through the Australian Agent General from the Australasian Pharmaceutical Conference

	£	s	d
Mr F Godlee ..	10	0	0
Liverpool Belgian Doctors Relief Fund (subscribed entirely by Doctors)	400	0	0
Warrington Division B M.A. (per Dr J A Murray Hon Sec) ..	16	0	0
Birmingham Local Committee (per Dr R Saundby) (seventeenth donation total £387 17s 3d)—			
Dr and Mrs. Stonehewer (proceeds of Whist Party) ..	10	5	0
Dr G D H Carpenter	1	0	0
Dr Barrs (Leeds) collected by—			
Dr Hawkyard	3	3	0
Mr F H Mayo ..	2	2	0
Furness Division B M.A. (per Drs Alexander and Thompson Hon Secs)—			
Dr Cook ..	2	2	0
Dr Mallagh	1	1	0
Dr Fawcett	1	1	0
Dr Lowther	1	0	0
Dr Gwatkin.	1	1	0
Dr Collins ..	5	5	0
Dr Harper ..	1	1	0
Dr Daniel	1	1	0
Dr Livingston	1	1	0
Dr Wilson ..	1	1	0
Dr Bowman.	5	5	0
Dr Brown	0	10	6
Dr J A. Reed	3	3	0
Dr Carmichael	1	1	0
Dr Ashburner	3	3	0
Dr Kendal	0	10	6
Dr Alexander	1	1	0
Dr Johnston	1	1	0
Dr Blacklee	1	1	0
Dr Cross	1	1	0
Dr Forster	1	1	0
Dr Stoney ..	0	10	0
Dr Ware ..	1	1	0
Dr Menzies ..	1	1	0
Dr Hawkesworth	1	1	0
Dr Sinclair	1	1	0
Dr Pratt ..	1	1	0
Dr Sansom and Dr Bayne ..	2	2	0
Dr Magill ..	0	10	0
Dr Thompson	1	1	0
Scottish Committee Belgian Doctors and Pharmacists Relief Fund (per Dr Norman Walker Treasurer Royal College of Physicians of Scotland)	1000	0	0
Dr G. Lestock Thornton recruiting fees &c (second donation total £3 3s) ..	2	2	0
Bucks Division B.M A (per Dr A. E Larking)—			
Dr Johnstone Harris	1	1	0
Dr Lysander Maybury	1	1	0
East Sussex Medico-Chirurgical Society (per Dr F W S Culhane Hon Treas)	30	0	0
North of England Branch of Belgian Doctors and Pharmacists Relief Fund (per Dr James Don and Mr A. S Perceval Hon Secs) ninth donation total £349 19s)—			
Dr T A. B Kane	3	3	0
Dr A. Wilkinson	1	1	0
Dr W J Baty	3	3	0
Dr J R. Burn ..	1	1	0
Dr James McConnell	1	1	0
Australasian Pharmaceutical Conference (per the Agent General)—			
Victoria	300	0	0
Queensland ..	65	0	0
Tasmania	35	0	0
Mr P L. Ridge	0	5	8
Northants Pharmacists Association (per Mr R H Robinson)	2	2	0
Mr T H Powell ..	0	5	0
Wimbledon and District Pharmacists Association (per Mr F T Bowen) ..	2	2	0
Mr J W Venters ..	0	5	0
Mr F A. Williamson (proceeds from weighing machine)	0	7	3
Mr A. Chapman ..	0	11	7
Mr R Fouracre ..	0	5	0
Dr A W Sanders.	1	0	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H A Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd

The Appeal for Surgical Instruments

The Master of the Society of Apothecaries begs to acknowledge the receipt of surgical instruments kindly contributed by the following donors —

Dr Flora Butcher Tanakpur, U P, India, Dr J C Eames Stoneclough Manchester, Dr W H Hargreaves, Dr R G S Orbell Dr J Whitton and Dr Scott (per Mr W H Rose, chairman, Oamaru Hospital New Zealand)

Donations and Bequests—By the will of the late Dr Arthur Wigelsworth-Orwin the Central London Throat Hospital will receive £[illegible] —The late Alderman John Royle of Manchester, bequeat[illegible]d £1000 each to the Ancoats Hospital Manchester He[illegible]haw's Blind Asylum, Old Trafford and the Manchester Ro[illegible] Infirmary Subject to certain gifts of shares the testato[illegible]ft the residue of his property as to three fifths to the [illegible] David Lewis Epileptic Colony Sandle Bridge Cheshire [illegible]and as to two-fifths as his trustees may see fit among char[illegible]es mentioned in his will.—King Edward's Hospital F[illegible]nd will receive £60 000 under the will of the late Mr Edward Berman, in the event of certain legacies and a life interest failing —A sum of £250 part of the fund placed at the disposal of the Queen by the wives of Freemasons, has been given by Her Majesty to pay for the training and expenses of a medical student at the London School of Medicine for Women —Sir Joseph Jonas chairman of the Applied Science Committee of the University of Sheffield has given £5000 to found endow and equip a testing laboratory in connexion with the Applied Science Department of the University under the orders of a captain aged 28 or so I know it is impossible for the War Office to explain to each individually as to the nature of the duties expected of us, but it would be very helpful to some of us who are wavering if the authorities were to publish a general description of the kind of man they want, what his duties would be, and what would be the nature of the discipline which he would have to submit to

I am, Sir, yours faithfully,

May 1st, 1915 "52"

Obituary.

ALEXANDER MAXWELL ADAMS, F R C S EDIN, L R C P EDIN, L F P S GLASG,

SURGEON COLONEL (RETIRED), 3RD AND 4TH BATTALIONS SCOTTISH RIFLES MEDICAL OFFICER OF HEALTH OF LANARK.

THE death of Surgeon Colonel Alexander Maxwell Adams took place, after a somewhat long illness, at Friarsfield, Lanark, on April 9th

Alexander Maxwell Adams, who was the son of Alexander Maxwell Adams, M D, professor of medicine at Anderson's University, Glasgow, was born at Berwick on March 30th, 1837, and qualified L F.P S Glasg in 1857 He became L R C P Edin in 1860, F R C S Edin in 1875, and D P H in 1890 He was Surgeon Lieutenant Colonel of the 3rd and 4th Battalions Scottish Rifles and served in the South African campaign He was medical officer to the Lady Hozier Convalescent Home and the Smyllum Orphanage, surgeon to the Lanark Poor house and to the Lockhart Hospital, and medical officer of health of Lanark

His all round professional capacity made him an outstanding practitioner in the district in which he lived, he enjoyed for many years one of the largest practices in the neighbourhood, and his kindly manner gained him immediate acceptance among those who called upon him for aid He was the first medical officer of health of the borough of Lanark, and held the position for 30 years His term of office was marked by great sanitary reform, and he lived to see a decided improvement in the health of the district occasioned by his exertions He was a member of the Lanark school board from 1885 to 1903, and served the office of chairman for two periods, from 1889 to 1891 and again from 1894 to 1903

Dr Adams leaves a wife and large family to mourn their loss, one son, Dr D A V Maxwell Adams, at present in the Royal Army Medical Corps, being with the British Expeditionary Force in France

FREDERICK LAWRANCE, M R C S, L S A

Mr Frederick Lawrance, who died in his eighty fifth year on May 1st, was perhaps the oldest practising medical man The son of the Rev Robert Lawrance, rector for 21 years at Bleadon, near Weston super Mare, he was born at Kington St Michael, near Chippenham He received his medical education at St Bartholomew's Hospital, qualified as M.R C S in 1857 and L S A in 1859, and became a partner of Dr Loadman, of Hammersmith, going to reside in a house in Chiswick lane, in which the poet Pope and his parents had at one time lived

Mr Lawrance was widely known, and at one time his practice was among all classes He always enjoyed good health until about a year and a half ago, but he continued to practise almost until the day of his death, attending his last case of midwifery this year His energy was such that he continued in active practice until he went into a nursing home two months ago for an operation, from which he made a good recovery Indeed, he insisted upon giving directions about his patients to within three or four days of his death, notwithstanding the impairment of his speech due to the partial hemiplegia of which he had two strokes during the last month

His activities were numerous and varied He was chairman of the Conservative Association of Hammersmith, member of the board of management of the West London Hospital, a churchwarden, and was associated with very many local charitable and other institutions He was also an ex president, an original member, and one of the most regular attendants of the West London Medico Chirurgical Society Mr Lawrance was initiated into Freemasonry in the Lodge of Harmony, and was a founder member of several Lodges and Chapters He was a director of ceremonies at the Grand Lodge of England for the year during which King Edward VII, when Prince of Wales, was installed Grand Master He was fond of all kinds of sport, and of riding and driving, was a good judge of a horse and in his younger days enjoyed fishing, shooting, and hunting One of the most unselfish of men, he endeared himself to several generations of families that he had attended

Mr Lawrance married Miss Matilda Clark, youngest daughter of the late Dr Clark, of Twickenham, by whom he had one child, a daughter Both predeceased him by some years

THE LATE DR PANTLAND HICK

A further appreciation has reached us of Dr Pantland Hick, whose untimely death has left so deep an impression on his friends —

"Life is short, and the Art long " Men must strive to achieve even though they live not to see the fruits of their endeavours and achievements Thus did Hippocrates in his wisdom inscribe the epitaph of the many physicians, cut off in the vigour of youth, who were to follow him with devotion and faith through the long ages. Pantland Hick was such a man He was absorbed in his work, he spared neither his energies nor his health Indeed, he died serving his country with that same unselfishness that he lavished on his friends and patients in their hours of need. In these times memory is short and hopes are high Men whose death would cause a stir in ordinary times pass almost unnoticed. But to those who knew him Hick will always be a living memory—the memory of a physician whose powers of observation and whose frank and noble disposition would have placed him among the great physicians of the country had he been spared to accomplish in his own modest but unswerving way that to which he had set his hand

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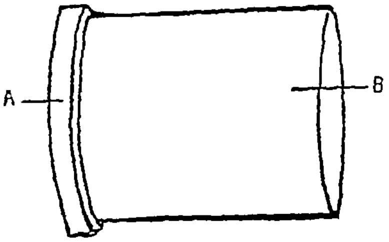
MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND —The next quarterly (or general) meeting of this association will take place on Tuesday, May 18th, at 11, Chandos street, Cavendish square, London, W, under the presidency of Dr David G Thomson, at 3 P M On the same day and at the same place will meet Nominations committee, at 10 A M, educational committee at 11 A M, Parliamentary committee, at 12 noon, council at 1 30 P M, and research committee, at 5 15 P M Papers will be read by Dr T B Hyslop on Anger, and by Dr David Orr on Research.

The results of this treatment, especially since the salt solution has been used, are most striking The limb is left in the bath from 24 to 48 hours, the solution being changed at intervals, and kept at a comfortable temperature It is then fomented for 12 hours before it is again put in the bath. The relief to the patient is very great, and they often beg to have their legs left in the bath. It is better to increase the strength of the salt slowly, and then the patient does not feel the stinging sensation for more than a few minutes At the end of 24 hours the leg is often very swollen as the result of the saline, as can be proved by comparing it with other solutions The patients drink large quantities of fluid during this treatment, and it is found that the discharge from the wound is greatly increased for several hours after removal of the limb from the bath, the sloughs coming away easily

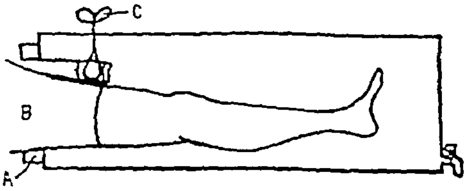
FIG 2.



The collar A and rubber sleeve B through which the limb is passed. The rubber sleeves can be obtained from Messrs Cow Cheapside, London

This bath (Fig 1) is made of zinc or galvanised iron with the following dimensions Length, 3 ft, width, 10 in, depth, 1 ft, it has a circular hole at one end 30 in in circumference On the outer side is a metal collar or a flange which projects 1½ in On to this collar a rubber sleeve (Fig 2) is fitted, the other end of the sleeve being clamped on to the thigh after the leg has been introduced into the bath (Fig 3) There is no need for the rubber to be very much stretched, as the pressure of the water helps to keep it watertight The dimensions of the rubber sleeve are length, 12 in, circumference, 26 in with a thick band over one end to fit over the collar

FIG 3



The limb immersed in the bath The rubber sleeve B which is attached to the collar A is drawn taut on the limb by the clamp C preventing trickling of water from the bath

I am much indebted to my engineering friend, Mr H Wingfield, for helping me to design the bath'

VACANCIES FOR MEDICAL OFFICERS —We are asked to state that there are still a few vacancies for medical men wishing to take commissions in the 1st London (City of London) Sanitary Company As the duties of this company consist in organising and supervising the sanitary work of the army at the front and at home it is desirable that applicants for commissions in this company should have a knowledge of sanitation The posts are especially suitable for men in the Public Health or Education Service who can be released by their councils for military work Those joining at once may expect to be ordered abroad at an early date Applications for commissions should be made to the Officer Commanding, 1st London (City of London) Sanitary Company, Room B 6, Duke of York's Headquarters, Chelsea, S W

MEDICAL RELIEF FOR SERBIA —The second hospital which was being despatched to Serbia by the British Farmers' Red Cross Fund to combat the spread of typhus fever, as well as the Serbian unit of the Scottish Women's Hospitals, has been temporarily detained at Malta on the requisition of the Governor, its services there being urgently required

The Wounded Allies Relief Committee have appointed Dr R Fleming Jones as head of their Serbian typhus hospital at Kragujevac, where during the month of March there were over a thousand cases of recurrent or enteric typhus Dr Jones has had exceptional experience in this kind of work, not only in the Spanish American War, but also in New Guinea where for the past three years he has been chief medical officer The Wounded Allies Relief Committee's No 2 Home for Disabled Belgian Soldiers, 45, Courtfield gardens, Kensington, which accommodates about 50 men, will be formally opened at 4 P M on Monday, May 10th by Her Imperial Highness Princess Napoleon (Princess Clementine of Belgium)

THE CARE OF THE WOUNDED IN IRELAND —The hospital ship *Oxfordshire* arrived in Dublin from France on Friday, April 30th, with 13 officers and 826 men wounded in the fighting round Ypres Of these rather less than half were distributed among the Dublin hospitals, the remainder being sent some to Belfast, some to Cork, and some to various other centres The patients were for the most part not so gravely wounded as the last party that arrived in Dublin Those despatched to Belfast travelled by the Great Northern Railway Company's hospital train and were distributed as follows 22 were sent to the Royal Victoria Hospital (of whom 20 were severe stretcher-cases), 24 were sent to the Mater Infirmorum Hospital, 22 to the Samaritan Hospital, and 53 to the Ulster Volunteer Force Hospital Of the remainder, 25 were sent to the Waveney Hospital, Ballymena, and 6 to Dumbarton House, Gilford, where a hospital has been established, under the auspices of the Ulster Volunteer Force Complete arrangements have been made for the reception, comfort, transport, and treatment of the wounded soldiers On May 1st another draft of 126 sick and wounded soldiers were sent from Dublin (where they disembarked) to the north of Ireland, and were divided among the above hospitals, as well as the county infirmaries at Omagh and Londonderry and at Downpatrick.

ST MARYLEBONE WAR HOSPITAL SUPPLY DEPOT —This depot, to the establishment of which through the generosity of Mr James Boyton, M P, brief reference was made in our issue of May 1st is now open to inspection at 32, Queen Anne-street, Cavendish square, W, between 10 A M and 6 P M It contains rooms allotted severally to the following purposes Bandages, surgical dressings splints, pine dressings needlework, slippers, linen stock and sorting, and carpenter's work All the articles are sent out in response to a direct appeal from some hospital abroad that is urgently in need The weekly subscription of 1s each contributed by all the voluntary workers covers the running expenses, so that the whole of any donation received passes direct to the purchase of material required for making supplies Donations of money, also of blankets, socks, rubber hot-water bottles and old linen will be gratefully received by the hon sec, Mr F A Juler, at the above address

WAR EMERGENCY COURSES FOR CIVIL PRACTITIONERS —A Glasgow correspondent who signs himself Emergency," writes as follows "In THE LANCET of March 27th and April 3rd there are paragraphs to the effect that the Russian and Italian Governments have requested the medical authorities to give to senior students and practitioners short courses in practical emergency surgery and field hygiene Is anything being done in this country in this direction? Many civil practitioners will feel uncertain of themselves when faced with work they are unaccustomed to A short course in the essentials of these subjects would dispel this uncertainty and immensely increase the efficiency and usefulness of these practitioners"

The War.

THE CASUALTY LIST

THE casualty lists published since our last issue contain the following names of medical officers —

Killed Fleet Surgeon Adrian A Forrester, R N

Wounded Captain J L Duval, Captain R H McGibbon (both of 1st Field Ambulance, Canadian Forces), Captain C A Wood (attached to 1st Battalion, 4th Gurkha Rifles), I M S , Lieutenant H S de Boer, Lieutenant G L K. Findlay, Lieutenant J A MacMahon (attached to 1st Battalion, Somerset Light Infantry), all of the R A M C , Major W M Mackay, Major F G Proudfoot, Captain J M Bowie, Captain D H Weir, Lieutenant R E Barnsley, Lieutenant V H Wardle, all of the R A M C (T F)

Missing Lieutenant C Stenhouse, R A M C (T.F)

THE HONOURS LIST

The Indian Distinguished Service Medal, in recognition of their gallantry and devotion to duty whilst serving with the Indian Army Corps, British Expeditionary Force, has been conferred on the following native medical officers First-class Senior Sub Assistant Surgeon Gaurie Shankar (112th Indian Field Ambulance) and Third class Sub Assistant Surgeon Zafar Husain (129th Indian Field Ambulance)

WHAT ANTITYPHOID INOCULATION HAS DONE FOR THE ARMY

In our parliamentary columns will be found a statement by Mr Tennant of the number of cases of typhoid fever that have occurred in the Expeditionary Force from the outbreak of the war to the beginning of May, which shows that the case mortality among those protected was between 6 and 7 per cent, while among those unprotected it amounted to over 20 per cent We cannot, of course, in the absence of a statement as to what proportion of the entire army was fully protected, what partly protected, and what entirely unprotected, draw indisputable conclusions as to the immunity conferred in regard to case incidence, but seeing that the environment and other modifying conditions, so far as these several classes were concerned, must have been practically identical, it is obvious that the effect on the mortality of the disease was very great indeed Sir Berkeley Moynihan, speaking recently to a professional audience at Leeds from his own observations at the front, expressed the conviction, based on his own experience, that antityphoid inoculation had clearly reduced the incidence of typhoid fever, mitigated its severity, and, above all, considerably diminished its mortality

THE GERMAN USE OF ASPHYXIATING GASES

Under date of May 4th Sir John French has issued the following report on the use of asphyxiating gases in warfare and on deadly and cruel effects upon those exposed to them —

The gases employed have been ejected from pipes laid into the trenches, and also produced by the explosion of shells especially manufactured for the purpose The German troops who attacked under cover of these gases were provided with specially designed respirators which were issued in sealed pattern covers This all points to long and methodical preparation on a large scale

A week before the Germans first used this method they announced in their official communiqué that we were making use of asphyxiating gases At the time there appeared to be no reason for this astounding falsehood, but now, of course, it is obvious that it was part of the scheme. It is a further proof of the deliberate nature of the introduction by the Germans of a new and illegal weapon and shows that they recognised its illegality and were anxious to forestall neutral, and possibly domestic, criticism

Since the enemy first made use of this method of covering his advance with a cloud of poisoned air he has repeated it both in offence and defence whenever the wind has been favourable

The effect of this poison is not merely disabling or even painlessly fatal, as suggested in the German press Those of its victims who do not succumb on the field and can be brought into hospital suffer acutely, and in a large proportion of cases die a painful and lingering death Those who survive are in little better case, as the injury to their lungs appears to be of a permanent character and reduces them to a condition which points to their being invalids for life These effects must be well known to the German scientists who devised this new weapon and to the military authorities who have sanctioned its use

I am of the opinion that the enemy has definitely decided to use these gases as a normal procedure and that protests will be useless

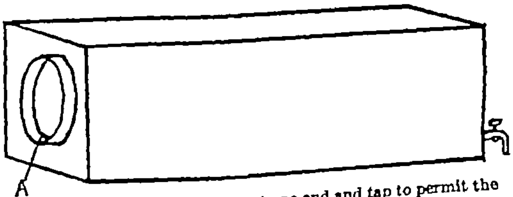
CONTINUOUS BATHS FOR SEPTIC WOUNDS OF THE LEG

Mr Malcolm Donaldson, F R C S Eng , Temporary Lieutenant, R A M C , has sent us the following description of the apparatus which he has designed for the treatment by continuous baths of septic wounds of the leg —

"In looking through the medical journals for the last few months it at once becomes obvious what a variety of opinion there is concerning the treatment of the intensely septic wounds of the leg which are a feature of the present war Such controversies tend to show that up to the present no royal road to cure has been found

The base hospital to which I am attached is the furthest from the front, consequently some of the casualties arrive with wounds in a state of sepsis, therefore it may be of interest to mention the treatment which, in my limited experience, has proved most beneficial, and to describe a leg bath which can be used with the patient in the horizontal position, without the water finding 'its own level' in the mattress and bedding

FIG 1



The box bath with collar (A) at one end and tap to permit the flow of water at the other

It is obviously useless to put a limb in a bath if there is not free drainage A few hours after the patient is admitted, and when he has recovered from the fatigue of the journey, he is taken to the theatre and the limb thoroughly opened up Like most people, since the beginning of the war I have been forced to realise more and more that large incisions and multiple counter drains are absolutely essential A few hours later, when all hæmorrhage has ceased, the limb is put into the bath (described below) At first various antiseptics were tried, but lately, hypertonic solution of salt (from 4 per cent to 10 per cent) has been used

London D P Thomas, St. Bartholomew's D C Thomas St. Thomas's R. C Thomas Cardiff and Westminster H Q F Thompson Guy's R. R. Thomson, London A. P Thomson, Birmingham J R. Tibbles Aberdeen and London E. J Tyrrell Durham J E A. Underwood University College W E. Wade Charing Cross P Wallice, Cambridge and London M. J T Wallis, Guy's A. H Warde, St. Thomas's A. R. S. Warden, Cambridge and St Thomas's, A. J F Westman, Guy's E. S White, Bristol B Whitehead St. Bartholomew's H A. B Whitelocke Oxford and King's College G L. Wilkinson, Birmingham J D Wilkinson St. Thomas's C M Williams Cardiff and St Mary's W B Wilson, St Bartholomew's G W Woodhouse, St. Thomas's

Midwifery.—A. Z Abushady Cairo and St George's J S Alexander University College W G E Allen St. Bartholomew's H K. Alton Royal Free P W L. Andrew Middlesex J Aydon Cambridge and St Bartholomew's B T Bailey Charing Cross *G C G Baldini St Bartholomew's* E. G Barker St Mary's J N Bates. Cambridge and University College K. L. Bates Guy's *J J O Beven, Cambridge* and Middlesex K. S Bhat, Madras and *St. Bartholomew's* E. Biddle, Cardiff and Guy's J A. Binning University College D A. Blount St Bartholomew's *H F Brice-Smith* Cambridge and Middlesex J Brooks Manchester C M Brophy University College L. F Buckle Royal Free A. S Carter Middlesex L. A. Celestin, University College M. Chadwick Cambridge and Guy's F B Chavasse Oxford and Liverpool G E Chiswell Middlesex H M. Cohen Manchester *S J Cowell* Cambridge and University College E S Cuthbert, St. Bartholomew's E I Davies Cardiff and Charing Cross R. O Eades University College N G El Gawly Cairo and St. Bartholomew's H Ellis St George's W J Evans Cardiff and University College B C Fairbairn Oxford and St Bartholomew's R K. Ford London A. M. C *Forster* Royal Free H. Gardiner Hill, Cambridge and St Thomas's P C Gibson, London G T Gimlette St Thomas's O Gleeson Westminster E A. Green and F H S Greenish Cambridge and London G H Haines, University College H W Hales Cambridge and St. Bartholomew's R. C Hewitt Cambridge and St. Thomas's R B Hick St. Mary's F E. Higgins Cambridge and St Thomas's N H Hill, St. *Bartholomew's* R. W Hodgson-Jones Manchester L. S Holmwood, Cambridge and Middlesex H L G Hughes University *College*, S C W Iredale St Bartholomew's G M Jackson Bristol L. G Jacob Cambridge and London V C James Middlesex H C Jennings St. Thomas's R B John Cardiff and Westminster L. P Johns, King's College C S J Kearney St Bartholomew's C H Keay Durham F A. Knott Guy's R. D Langdale-Kelham University College M E A. Latif Cairo and Middlesex E E. D Lau, Durham J B Leather Cambridge and Birmingham J C Lee McGill S J L. Lindeman St Bartholomew's G C Linder St Bartholomew's E M Litchfield New Zealand and Guy's V E. Lloyd, Guy's M L. Loveless and W B Loveless Middlesex H J McCurrich Bristol and St Bartholomew's W G McKenzie Bristol S A. S Malkin University College C J Marshall and G S Marshall Charing Cross B R L. Mayman King's College F Mohamed Cairo and Westminster F Molina, St Thomas's A. H Morley London I Mortada Cambridge and *University College* J K. Muir Middlesex N S Nairne St Thomas's F W Noble Aberdeen and Middlesex H M *Oddy* Oxford and St Thomas's T Owen Cambridge and St. Bartholomew's L. G Phillips Middlesex H D Pickles Leeds R F Pinson Birmingham A. E A. Poulier Ceylon and Middlesex E. A. *Prichard* Evans Middlesex R. A W Procter Cambridge and St Thomas's J N Purl London A N *Purkis* Guy's G J Randell Cardiff and Westminster R. Ratnarajah Ceylon and St Mary's T H Rhys Cardiff and Charing Cross E D Richardson Charing Cross R L. Robinson University College L C S *Roche* St Thomas's S K. *Sanyal London* F J P Saunders Cambridge and St. Thomas's C H Savory Cambridge and St Bartholomew's N A. Scott St. Bartholomew's W W S Sharpe St Mary's L. G Sherwood Royal Free R. Sinha, Punjab and London T H Somervell Cambridge and University College H G *Sparrow* St *George's* and Durham G S Stathers, St Bartholomew's R Stowers University College B F Sturridge Middlesex T C Summers London T J Taunton St Bartholomew's I R. H O Tha Cambridge and *University College* J W T Thomas Cardiff and Middlesex W L. Thomas Middlesex R R Thompson London I S Tirard Cambridge and King's College I S Topham Leeds E. J Tyrrell Durham E Underhill Birmingham H J Wallace University College H J Wallace Royal Free A. A. Watkinson Charing Cross J W Wayte St Thomas's E S White (Bristol) E M White Royal Free W P White-Cooper St. Bartholomew's H Whyte London N J Wigram Sheffield C M Williams, Cardiff and St. Mary's G P C Wilson St Thomas's and G C N Younger Middlesex.

VICTORIA UNIVERSITY OF MANCHESTER.—At the Final M B and Ch.B examination, held recently the following candidates were successful:—

J C Bramwell and J E Brooks

Medicine and Surgery.—S G J Dowling

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.—The sixty seventh annual report of this institution shows a reduced income and a larger expenditure for the year 1914 as a result of the war. Fortunately however, substantial legacies have been received by the hospital during the past two years. For the year under notice 162 beds were in daily occupation the average length of stay of each patient being nearly ten weeks. The number of new cases received in the out patient department was 7473 the total number of attendances being 31 193. With the *report* is included the reproduction of a scroll commemorative of the foundation, one bearing a coloured picture of the grounds of the hospital and illustrations of different departments of the [illegible]

ROYAL MEDICAL BENEVOLENT FUND.—At the last meeting of the committee 39 cases were considered and grants amounting to £365 10*s* were voted to 35 of the applicants. The following is a summary of the cases relieved:—

Daughter aged 59 of M.R C S Eng who practised at Long Sutton *Had worked as governess and housekeeper for many years* but owing to recent death of employer is now out of employment. Only income *an investment bringing in* £5 per annum and age against obtaining *fresh situation*. Voted £12 in 12 instalments.—Daughter aged 45, *of* M R.C.S who practised at Burgh le Marsh. Lives with mother who has only a very small income. Applicant earned *living as a teacher of* music until the war commenced, but practically all her pupils have now given up. Voted £10 and referred to the Professional Classes War Relief Council.—Widow aged 40 of M.B Ch M. Aberd. who died in 1914 and who practised at Manchester. Applicant left with seven children ages 3 to 14 years one son suffering from spinal disease. Only income a little from the sale of the practice. Requires help for the education of the children. Voted £5 and referred to the Guild.—Daughter aged 57 of M.D who practised at Kirkdale. Had earned a living at dressmaking until health became bad. Rent is paid by friends but no income at present. Voted £12 in 12 instalments.—Widow aged 44 of M.B C M Glasg who practised at Lenton and died in 191[illegible] after a long illness and was unable to provide for his widow. Earns a little a collector for a society but not sufficient to keep her. Two children 10 and 12. Voted £10 in two instalments.—Wife aged 53, *of* M R.C S Eng *who* practised at Retford but is now totally incapacitated *from* work and is in a home. One son who is being educated by a relative. Only certain income £3 per annum. Voted £5 with leave to apply again and referred to the Guild *for report*.—Daughter aged 65, of L.S.A. who practised at Christchurch. Has earned a living as an artist but *owing to failing eyesight* unable to follow her profession and sell the few pictures she has on hand. Voted £18 in 12 instalments.—Widow aged 42, of L.S.A. who died this year and had practised at Padstow. Husband was ill with general paralysis for four years before death. Has tried to keep *her home together for* some time by taking in boarders but has had none since the war commenced. One *daughter* who is being educated at St. Ann's School. Voted £10.—Daughter aged 33 of M R C S Eng who practised at Whitechapel. Lives with mother who has an Epsom pension. Applicant worked in one situation for many years, but has been discharged owing to war. Wants help to be trained as midwife. Training to be provided free but outfit required. Appointment promised at end of training. Voted £12 through the Guild.—Daughter aged 60 of M.R.C S Eng who *practised* at Leeds. Applicant lives with her mother who is a confirmed invalid. Lost all her capital in the Franklin *frauds*. Only income about £6 10*s* per annum and help from the Guild and the Fund. Previous help three times, £36. Voted £12 in 12 instalments.—Daughter aged 53 of M.R C S Eng. who practised at Rickmansworth. Suffering from arthritis and fibrosis. Only income £39 per annum from a relative. Quite unable to work. Relieved twice £20. Voted £10 in two instalments.—Daughter aged 58, of M.R.C.S Eng who practised at Peckham. Health very bad indeed. *Only income £19* per annum from a sister. Relieved 17 times £197. Voted £12 in 12 instalments.—Widow aged 59 of M R.C S Eng who practised at Maida Vale. Was left entirely without means and suffering from chronic rheumatism and weak heart. Relieved 12 times £118. Voted £15 in 12 instalments.—Daughter aged 65, of M R.C.S Eng who practised at Cranbrook. Very delicate and requires someone to look after her. Has an annuity from another benevolent fund but not sufficient to maintain herself. Relieved 16 times £163. Voted £12 in 12 instalments.—Widow aged [illegible] of M.B C.M Edin who practised at Ballindalloch. Left totally unprovided for at husband's death in 1910. Has four children, three of whom are at school. Tries to earn a little by letting rooms but has been unsuccessful lately. Relieved four times £[illegible]. Voted £10 in two instalments.—Widow aged 67 of M R.C S Eng who practised at Sheffield. Has made a little by teaching German in private schools but cannot obtain any work at present. Has an Epsom pension. Relieved 15 times £112. Voted £10 in two instalments.—Daughter aged 59 of M R.C S Eng who practised at *Blackheath*. Has suffered since childhood with a nervous complaint and never been able to work. Her sister helps as much as possible. Relieved 10 times £91. Voted £10 in two instalments.—Widow aged [illegible] of M.R C S Eng who practised at Great Marlow. Has three daughters two of whom along with one son are deaf and dumb. None are able to earn much and all live at home. Relieved 12 times £[illegible]. Voted £18 in 12 instalments.—Widow aged 60 of M.R.C S *Eng* who practised at North Shields. Has five sons three of whom have joined the army consequently her income is very much reduced. One son too ill to work and the other abroad unable to help. Relieved once £5. Voted £15 and advised to apply to the National Relief Fund.—M.D of Dublin aged 81 single, who practised in Lancashire. Old age prevents him from following his professional work. Has an *Epsom* pension. *Relieved* once £18. Voted £18 in 12 instalments.—M R.C S Eng aged 77 a widower *who* practised at *Rainham*. Gets a little locum work occasionally but health and age will not allow him *to do* much. Relieved once £12. Voted £18 in 12 instalments.—Widow aged 60 of L.F.P.S Glasg who practised at [illegible]. Endeavours to obtain a living by letting rooms but at present has none le[illegible]. Suffers from rheumatism. Has a pension of £12. Relieved once £12. Voted £12 in 12 instalments.—Daughter *aged 7[illegible] of M.D* who practised at *Leominster*. Has no income and is an inmate of a home for incurables. Requires a little help *for* clothes and a few necessary comforts. Was an annuitant of the Fund until she went into the home. Relieved 17 times £200. Voted £5 in 12 instalments.—Widow aged [illegible] of L.R.C P Edin who practised at Blackburn. Earns a little by day nursing children. Health not good. Has one daughter who is now beginning to earn a little as a shop assistant. Relieved once £12. Voted £12 *in* 12 instalments.—Daughter aged 60 of M D Edin who practised in London. Suffering from varicose veins and only able to earn very little by sewing. Lives with a sister who has also been helped by the Fund. Relieved nine times £50. Voted £12 in 12 instalments.—Widow aged [illegible] of M R.C S Eng who practised at Streatham. Only *income* £[illegible] per annum. Has an invalid daughter and her children unable to help. Too old and not strong enough to work. Relieved once £12. Voted £12 in 12 instalments.—Daughter aged 53 of M.R.C.S Eng who practised at Newport Mon.

"FLAG DAY" IN BELFAST —The Belfast Rotary Club is to be congratulated on the phenomenal success of an undertaking originated by them, the object of which was to aid Belfast's wounded sailors and soldiers All over the city on April 30th ladies were active in selling flags of the Allies in the present war—English, French, Russian, Japanese, Belgian, and Serbian The nominal price of each flag was 1*d* , but as much as £5 were cheerfully paid. As a result the sum of £2667 2*s* will be available, and it is to be distributed through "The Soldiers' and Sailors' Help Society" Over £90,000 have already been subscribed in Belfast to special funds in connexion with the war, a sum far beyond that contributed in any other city (or two cities) in Ireland.

A HANDBOOK FOR WAR TIME —A useful reference book, with the title "All Can Help" and the subtitle of "A Handbook for War Time," has been issued by the Duty and Discipline Movement of 117, Victoria street, London, S W , at the price of 6*d* It was first published in November, 1914, and revised and reprinted in March of this year Its 95 pages contain a quantity of useful information such as How to Join the Forces, Pay, Separation Allowance, Territorial Forces, Reserve and Volunteer or Voluntary Corps, and a long list of naval, military, and social help agencies and societies, divided into sections of (1) For Sailors and Soldiers of the Allied Nations , (2) Funds for Relief of Civilians suffering through War , (3) Funds and Agencies for Helping Distressed Foreigners In this last section is included the Belgian Doctors' and Pharmacists' Relief Fund (where, it may be pointed out, the chairman is incorrectly described) There are also special chapters treating generally of the Family in War Time and the War and the Sentimentalists Another edition would in our opinion, be improved by a short alphabetical index of the whole contents, although some sections are more or less alphabetical in themselves

NEWCASTLE SURGICAL AID SOCIETY —The annual meeting of the Armison Surgical Aid Society was held at the Royal Infirmary, Newcastle, on April 29th, when the report showed that during the year 1914 assistance had been given to 171 applicants The amount paid for appliances was £260, towards which the patients had contributed £125 The working men of Newcastle had collected £70 Although the number of appliances supplied to poor people had not been so great in recent as in past years owing to the work of the Insurance Committee and a School Teachers Fund for supplying spectacles to school children, it was pointed out in the course of the proceedings that during and after the war a large number of soldiers and sailors would apply to the society for aid For this reason an earnest appeal was made for increased subscriptions

"TUCKED SHEETS" FOR HOSPITAL USE —If a sheet is turned it is obvious that it will transfer to the bedding what it should carry to the wash to be removed Mr D H Shuttleworth Brown, of Wimbledon, has devised a "tucked sheet" the tuck serving to obviate the possibility of a sheet becoming accidentally turned, and we are informed that its adoption at the King George Hospital and by the Red Cross Society is being supported by high surgical authority

FLIES IN WARFARE —Professor R Newstead, of the Liverpool School of Tropical Medicine, has been commissioned by the War Office to prosecute entomological investigations in France from the standpoint of military sanitation He accordingly left for France on April 27th

AN ATHLETIC GROUND FOR THE ROYAL NAVAL DIVISION —Football and sports grounds at the Crystal Palace have been allocated by the naval authorities for the use of the Royal Naval Division, and the equipment will be undertaken by the Young Men's Christian Association

THE BEAUFORT WAR HOSPITAL —The Bristol Lunatic Asylum at Fishponds is to be used for the reception of wounded soldiers It will provide 1040 beds, and is to be called the Beaufort War Hospital

A MUNIFICENT BENEFACTOR —It was reported at the annual meeting of the Nottingham Hospital on April 28th that the contributions of the late Sir Charles Seely to that institution had exceeded £100,000 in the last 20 years

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND —At the Final Examination of the Conjoint Examining Board, held from April 6th to 22nd, the following candidates were approved in the under mentioned subjects —

Medicine —A C Ainsley, Cambridge and London D W J Andrews, Middlesex T Anwyl Davies St Thomas s C Backus St. Mary s C W W Baxter Guy's M Bayumi Cairo and London W K. Bigger, Cambridge and St. Thomas s S C Biswas Calcutta and St Mary's C V Boland St Bartholomew's; J P Bracken, University College H. F Brice-Smith Cambridge and Middlesex A. D Brooks, Royal Free C M Brophy University College J K. J Chambry Amsterdam and St Mary's F B Chavasse Oxford and Liverpool J B Clark Guy's M C Clark, Royal Free E C Clino and R Curle Guy's; R M. Dannatt St Bartholomew's E I Davies Cardiff and Charing Cross L. ap I Davies, University College T H Edey and C H Edwards Guy s M Fahmy Cairo and London N Fahmy Cairo and King's College R C Fairbairn Oxford and St Bartholomew's A. M C Forster Royal Free S C Ghose Calcutta and St. Mary's C Gleeson, Westminster B H Greensill, Birmingham W T Gwynne-Jones London G Habgood Cambridge and London G H Haines, University College S A. Hall and C E Harrison Middlesex H S Hensman Madras and London W Hillbrook Cambridge and St. George s R W Hodgson Jones Manchester R A. Holmes Guy's G J P Huddleston Birmingham and University College S Hutchinson University College S W Isaacs, St. Bartholomew's G M Jackson, Bristol V C James, Middlesex H C Jennings St. Thomas s R B John Cardiff and Westminster D R Jones Guy's D P Karaka, *Bombay and London* C H Keay Durham N E Kendall Guy's; J S Kennedy Cambridge and St George s R D Langdale-Kelham University College E B D Lau Durham C G Learoyd St Thomas s J S Leslie London P K Liang Cambridge and London G S B Long Guy s M L. Loveless and W B Loveless, Middlesex H J McCurrich Bristol and St Bartholomew's A. J V McDonnell London A. McInnis Toronto and London W G McKenzie, Bristol J E C Maguire, St Bartholomew's G Mallya, Madras and St Bartholomew's A H Manfield, London C J Marshall Charing Cross R G Michelmore London D C Ogilvie Middlesex W L Partridge, Guy s S V *P* Pill St. Mary's; C L G Powell St. *Thomas s* R A. W *Procter* Cambridge and St Thomas s A. L Punch Guy's R. W Rammell and C R Reckitt London A E. Richmond St. Thomas s E S Rowbotham Charing Cross J T Samuel University College, C H Savory Cambridge and St. Bartholomew s H M Scarborough Royal Free E H S Scarr Manchester N A. Scott St Bartholomew s , J M Shah Bombay and St Bartholomew s , T W Sheldon Cambridge and Guy s S Simons Cardiff and St. Mary's T H Somervell Cambridge and University College H G Sparrow St George s and Durham G S Stathers Cambridge and St Bartholomew s R G Sterling London J G Stevens and A H Taymour Guy's R C Thomas Cardiff and Westminster A P Thomson Birmingham J R Tibbles, Aberdeen and London, E Underhill Birmingham J E A Underwood University College S K. Vaidya *London* H C Viehoff Liverpool T T B Watson London E S White Bristol C M Williams Cardiff and St. Mary's and *G R C* Wilson St Thomas s

Surgery —A C Ainsley and U G Ainsworth Cambridge and London D R Alexander St Mary's W G E Allen St Bartholomew s D W J Andrews Middlesex F L. Apperly *Oxford* and Dublin J H Bayley London C M Brophy University College J B Cavenagh, Oxford and St. Thomas s J K. J Chambry Amsterdam and St. Mary's F B Chavasse Oxford and Liverpool P Cheal London Y J Cleh St Thomas s V M Coates Cambridge and Bristol H M Collins London W L. Cox Middlesex R Curle, Guy's E I *Davies Cardiff* and Charing Cross J K Davies St. Bartholomew's W A. Easton and C H Edwards Guy's H H L. Ellison *St Bartholomew s* I Feldman jun London I Feldman sen London P J Follinsbee Western University A M *C Forster* and C I Fox Royal Free G C Gell Middlesex C C G *Gibson* Guy's B Graves Charing Cross G D Gripper and *H S Groves* Guy's G Habgood Cambridge and *London* S A. Hall Middlesex R Hargreaves University *College R C Hewitt*, Cambridge and St Thomas s R A. Holmes Guy's H R W Husbands and G M Jackson Bristol L. G *Jacob* Cambridge and London R B John Cardiff and Westminster C H. Keay Durham N E Kendall Guy's J B *Leather Cambridge* and Birmingham S J L Lindeman St. Bartholomew s H J McCurrich Bristol and St. Bartholomew s ; A J V McDonnell London J B McFarland St Bartholomew s S Mallinick *Halle and London* C J Marshall Charing Cross *R P S* Mason Middlesex B Mitra Calcutta and Guy's A H Morley and C G T Mosse London N F Norman St. Bartholomew's D C Ogilvie Middlesex T Owen Cambridge and St Bartholomew s C F O Pandithesekere Ceylon and Middlesex O Parry-Jones *London* E W Paul Calcutta and Royal Free E C Peers Guy's W S J Peiris Ceylon and London *L. D Phillips* University College H D Pickles Leeds R. F Pinson Birmingham G W Pool C L. G Powell and T L Price St *Thomas s D O* Richards Guy s A E Richmond St Thomas s R M Riggall Manchester A I *Rihan* St. Bartholomew s *G W R Rudkin* University College S K Sanyal London F J P Saunders Cambridge and St. Thomas s C H Savory *Cambridge and St* Bartholomew's H M Scarborough and E A Shaw Royal Free J G B Smith *St Bartholomew s* J A. B Snell *Cambridge* and University College T H Somervell University College: H G Sparrow St *George s* and Durham G S Stathers *Cambridge* and St Bartholomew s R G Sterling

ROYAL INSTITUTION —The annual meeting of members of the Royal Institution was held on May 1st, James Crichton-Browne, Treasurer and Vice-President, ng in the chair The annual report of the committee visitors for the year 1914, testifying to the continued sperity and efficient management of the institution, was d and adopted The report of the Davy Faraday Research oratory committee was read Forty four new members e elected in 1914 Sixty two lectures and 19 evening ourses were delivered in 1914 The books and pamphlets sented amounted to about 338 volumes, making with 652 umes (including periodicals bound) purchased by the managers, a total of 990 volumes added to the library in the year Thanks were voted to the president, treasurer, and secretary, to the committees of managers and visitors, and to the professors, for their valuable services to the institution during the past year The following gentlemen were unanimously elected as officers for the ensuing year —President The Duke of Northumberland Treasurer Sir James Crichton Browne Secretary *Colonel Edmond H Hills Managers *Sir Thomas Barlow, Dr Horace T Brown, *Dr J H Balfour Browne, Dr Andrew Carnegie, Mr Charles Edward Groves Sir Robert Hadfield, *Mr Charles Hawksley the Hon Richard C Parsons, *Mr Edward Pollock *Sir James Reid Lord Rothschild, Mr Alexander Siemens, Mr Alan A Campbell Swinton, Mr Harold Swithinbank, and *Lord Wrenbury Visitors Rev Edward S Dewick Lieutenant-Colonel Henry E Gaulter, Mr Joseph G Gordon, Dr William J Gow, Dr J Dundas Grant Mr John W Jarvis, Mr James Y Johnson, Mr H R Kempe, Mr Francis Legge, Mr Francis K McClean, Mr Ernest R Moon, Mr Richard Pearce, Mr Henry G Plimmer Mr Arthur J Walter and Sir Henry J Wood At a general meeting held on Monday last, May 3rd, the Duke of Northumberland, K.G the President in the chair, special thanks were returned to Dr Thomas Dewar for a donation of £15 15s to the Fund for the Promotion of Experimental Research at Low Temperature The managers whose names above are marked with an asterisk were elected vice presidents

NORFOLK AND NORWICH HOSPITAL —The report of the board of management of this hospital for the year 1914 records a deficit of £1857 10s 8d The total income was £12 429 6s 9d and the total expenditure £14 286 17s 5d Without encroaching on the ordinary accommodation of the hospital, provision was made for the treatment of the sick and wounded from the seat of war 937 men were received up to Dec 31st 1914 Since that time further accommodation has been provided

Her Majesty the Queen has sent £250 to the London (Royal Free Hospital) School of Medicine for Women to pay for the training and expenses of a woman medical student The money formed part of a fund placed at the disposal of the Queen by the wives of Freemasons The council will make known shortly the conditions for the award of the Queen's gift

ROYAL SANITARY INSTITUTE —A sessional meeting of the institute will be held in the Guildhall Shrewsbury on Friday May 28th when a discussion on the Value of Mechanical Filters in the Purification of Water will be opened by Dr Thomas Orr, medical officer of health of Shrewsbury On Saturday, May 29th, visits will be made to Shrewsbury Housing Scheme Ditherington Mechanical Filters Chester street, and the Public Abattoir

A GOLDEN WEDDING —Mr Alfred Grace, M R C S L S A of Chipping Sodbury Gloucestershire a brother of Mr W G Grace celebrated the fiftieth anniversary of his wedding on April 26th and received the congratulations of his friends and patients Mr Grace like his brother has been a noted sportsman but his keenness for hunting eclipsed his interest in cricket

A CENTENARIAN —Rach[illegible] Wootton Fitzpaine near Charmouth, has recently died in her 101st year

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Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

The Government and the Drink Problem

PARLIAMENT has now been informed of the measures which the Government propose as a means of checking the excessive consumption of alcoholic beverages in war time, particularly in districts where munitions of war are being produced The scheme is twofold—control of the licensed trade in the munition areas, and heavy additional taxation on beer and spirits The necessary Parliamentary powers to enable the control to be exercised is taken by the Defence of the Realm (Amendment No 3) Bill, which was introduced by the Chancellor of the Exchequer in the House of Commons on Thursday, April 29th That control goes the length of having power to close any public house, the presence of which for the moment is considered injurious On the same evening resolutions were passed in Committee of Ways and Means for the purpose of imposing very heavy additional taxation upon spirits and also upon beers containing more than 7 per cent of proof spirit The duty upon spirits is practically doubled, the surtax being at the rate of 14s 9d per gallon In the original resolution submitted to the House it was proposed that a proportionate increase of duty should be imposed on the following articles in which spirit is contained, or in the manufacture of which spirit is used—chloral hydrate, chloroform, collodion, ether acetic, ether butyric ether sulphuric, iodide of ethyl, ethyl bromide and ethyl chloride These articles were, however, omitted from the resolution imposing the surtax, on the motion of the Attorney General The wine duty is quadrupled and an additional charge of 15s put on sparkling wine in bottle The additional duties on the heavier beers are on a sliding scale which is as follows —For every 36 gallons of beer brewed at a gravity of more than 43° and not exceeding 48°, 12s, of more than 48° and not exceeding 53°, £1 4s, of 53° and over, £1 16s

These resolutions had provisional effect as soon as they were passed, but in order that a more permanent character should be given to them they require to be embodied in a Finance Act

A good deal of criticism has been made of the Government proposals to place heavy taxes on beer and spirits The Chancellor of the Exchequer has been meeting deputations from the licensed trade, and the opinion is strongly held at Westminster that considerable modifications in the scale of the duties will be made But the whole subject at present is under negotiation

Local Government Board Report

The forty third annual report of the Local Government Board (Part III) for the year 1913-14 has been issued as a Parliamentary Blue book It deals with public health and local administration

HOUSE OF COMMONS

WEDNESDAY, APRIL 28TH

Vaccination in the Central Provinces

Mr SNOWDEN asked the Under Secretary of State for India whether it was proposed to introduce legislation into the Central Provinces for the enforcement of vaccination, and, if so whether a conscience clause would be introduced into the Vaccination Act as in the case of the English and Scotch Vaccination Acts of 1907 —Mr CHARLES ROBERTS replied Compulsory vaccination is already enforceable in municipalities at the request of the municipal commissioners and cantonments in the Central Provinces under an Act of 1880 An amending Bill is now proposed extending the power of enforcing compulsory vaccination to certain quasi municipal areas It is specified both in the Act and in the amending Bill that it is open to any inhabitant of the area to object to the extension, but in neither case is there a conscience clause

THURSDAY, APRIL 29TH

Anti Inoculation Leaflet

Mr RONALD MCNEILL asked the Under Secretary for War whether his attention had been called to the circulation by some person or persons unknown of a leaflet suggesting that a Territorial died last November, at Lytham, as the result of antityphoid inoculation and that the death certificate falsely alleged a different cause of death and whether he would take steps to prevent the dissemination of incitements to soldiers to endanger their own and their comrades' lives by refusing to undergo inoculation —Mr TENNANT said in reply Reports have been received that this leaflet has been distributed both with and without the statement that the [illegible] ascribed to a different cause on the death certificate Such steps as were considered necessary have been

Applicant is blind, and recently has had an internal operation Income only a few pounds a year from other charities Relieved four times £48 Voted £12 in 12 instalments —Widow aged 52, of M B Aberd who practised in Warwickshire and Australia Has been confined to her bed with severe illness for some months Children only able to help very slightly also obtains a little help from sister but not sufficient to provide necessities Relieved seven times £73 Voted £12 in 12 instalments —Widow aged 75 of L R C P Edin who practised at Birmingham Has recently met with an accident and has had to obtain help in the home Has eight children two of whom live at home but only able to contribute 10*s* each week, and the other children married and only able to give very little. Relieved three times, £30 Voted £18 in 12 instalments —Emergency grants amounting to £15 10*s* were also given to six applicants and their cases were deferred for future consideration.—Four vacancies of £20 each among the annuities were also filled at this meeting

The grants detailed above involve the Fund in an expenditure of £365 10*s*, to meet which there is only an available balance of £49 The claims on the Fund arising out of the war are increasing month by month, but the resources show a decrease Immediate support is essential unless the reserves are to be seriously depleted Subscriptions may be sent to the honorary treasurer, Dr Samuel West, 11, Chandos street, Cavendish square, London, W

USE OF PRESERVATIVES IN CREAM APPEAL TO THE LOCAL GOVERNMENT BOARD —With the view of putting pressure on the Local Government Board to secure the appointment of the long promised Departmental Committee to consider the question of a standard quantity of preservative to be used in cream, the coöperation of Mr Mead, the Marlborough street police court magistrate, has been secured by Mr F W Beck, who represented the defendants at the hearing of summonses against two dairymen at the court recently Proceedings were instituted by the Westminster City Council against Champion's Dairy, Limited, for having on March 1st sold preserved cream mixed with a preparation of boric acid equivalent to 0 42 per cent —i e, 29 grains per pound of crystallised boric acid, so as to render it injurious to health, and against David John Morgan, trading as J Morgan and Son, for having on Feb 17th sold preserved cream mixed with 0 40 per cent by weight of boric acid (H_3BO_3) equivalent to 28 grains of boric acid per pound of cream, so as to render it injurious to health Mr Rotten represented the council Mr Beck, on the case of Champion's Dairy being called, said the magistrate would remember that these summonses had been adjourned in order that he might communicate with the Local Government Board his worship's intention to proceed that day with the hearing He had communicated with the Local Government Board accordingly, and had received a reply that it was contrary to their practice to intervene in cases which were the subject of proceedings, at the same time referring him to a reply by the President to a question in the House of Commons in which he said that in consequence of the war it had been impossible to proceed with the appointment of the promised Departmental Committee, that there was difference of opinion as to the use of preservatives but that it was inadvisable under present circumstances for authorities to institute proceedings In view of that answer he suggested that Mr Mead should adjourn the summonses *sine die*, thus following the course pursued by his colleagues in other metropolitan courts In support also of his proposal he mentioned that 17 summonses issued against other defendants by the Westminster City Council had already been adjourned with the consent of Mr Rotten Mr Mead decided to adjourn the summonses for two months and in the meantime to intimate to the President of the Local Government Board that he considered it most urgent that the Board should fix a standard as speedily as possible, as not only the authorities and the trade but also the magistrates experienced great difficulty in dealing with the matter

MEDICAL SOCIETY OF LONDON —The general meeting for the election of officers and council will take place on Monday next May 10th, at 8 P M Mr D Arcy Power will give a short demonstration, illustrated by the epidiascope, on Early Books on Naval and Military Surgery from the society's library After the meeting a selection of some of the society s old and rare medical works will be on exhibition Owing to the absence of Sir William Osler on military service the annual oration and conversazione fixed for May 17th will not take place

POOR-LAW MEDICAL OFFICERS' ASSOCIATION —A council meeting was held on April 27th, Surgeon General G J H Evatt, the President, being in the chair Dr Major Greenwood, honorary secretary, reported the action taken on the attempt of the Paddington guardians to appoint, subject to a determination of office at three months' notice, a district medical officer residing in the district A letter was addressed to the Local Government Board in November drawing attention to this as an infringement of the Medical Appointments Order (the reason given by the board being their desire, at an opportune time in the future, to organise their medical relief after the manner of the Bermondsey guardians) and urging the Local Government Board to refuse consent, unless a proper scheme were laid before them. The Local Government Board had finally given consent to the appointment of a district medical officer, but only for a limited period If at the end of the time the guardians had no scheme ready they would be required to appoint a medical officer in accordance with the Medical Appointments Order Had the Paddington guardians been permitted to appoint a medical officer for an indefinite time, subject to a three months' notice, the security of tenure of all district medical officers would have been seriously threatened The honorary secretary was directed to watch carefully any further developments in the Paddington union A letter was read from Dr E R Fothergill *re* the Federation of Medical Societies with the British Medical Association It was unanimously agreed that some kind of federation was desirable but that any concrete scheme must be examined very closely Independence was needful for the Poor law Medical Officers' Association, and hitherto they had endeavoured to work as much as possible in conjunction with the Public Health and Poor law Committee of the British Medical Association The financial bearing also was important, as present subscriptions were really inadequate for their present work. Letters were then considered from Dr A Drury (Halifax) dealing with important Poor law questions (1) As to the right of a lady visitor to order the attendance of a medical officer, (2) whether it was part of the duty of a medical officer to diagnose refraction and prescribe spectacles, (3) whether a lady visitor could demand a report on a case from the medical officer and (4) whether the clerk could require of a medical officer a report as to the sanitary condition of a house The council answered all these questions in the negative, adding with regard to (4) that while the medical officer ought to draw the attention of the guardians to any serious sanitary defect that interfered with proper attention to a Poor law patient, the general sanitary state of the house should be reported on by the medical officer of health The council unanimously confirmed the appointment of the honorary secretary, Dr Major Greenwood, to act as their representative on the Council for District Nursing The honorary secretary said that the report of the Association on the Poor law Institutions Order, 1913 had been considered by the Public Health Committee of the British Medical Association and on their recommendation had been endorsed by the central council In regard to the situation of Poor law medical relief at Burnley a letter was read from Dr A P Agnew, in which it was stated that on April 9th at a meeting of the Burnley Division of the British Medical Association, a resolution was passed that no member should accept a post as district medical officer under the guardians in the existing conditions The profession refused to consider any setttlement till the late public vaccinators were reinstated, and then the other difficulty seemed insuperable The council thought it was a matter for a Local Government Board inquiry The honorary secretary was directed to ask Dr Agnew to furnish any instance of neglect or deficient attendance on Poor law patients The council then considered complaints of Poor law medical officers employed on military duties that they did not receive the same consideration as was given to other civilian practitioners The following resolutions were unanimously carried —

1 That in all cases where military duties are discharged by Poor law medical officers the salaries paid to whole-time officers should be on a scale not less than that paid by the War Office to members of the Royal Army Medical Corps discharging similar duties

2 That where the duties are part time only an addition should be made to the medical officer s salary in proportion to the extra labour involved

It was decided that the annual meeting should be held early in July, preceded by a council meeting and that only formal or urgent business should be transacted.

Scottish Undergraduates in the Army

Mr MCCALLUM SCOTT asked the Secretary for Scotland whether he had considered the position of the students of Scottish Universities who were now serving in His Majesty's forces and with regard to whom the universities had no power to modify their curricula, and whether he had received representations from any of the university courts with regard to this question —Mr MCKINNON WOOD answered I have received a representation from the Glasgow University Court on this subject, which is receiving consideration

WEDNESDAY, MAY 5TH

Consultant Surgeons for the Navy

Commander BELLAIRS asked the Secretary to the Treasury whether he was aware that the Board of Admiralty made an arrangement during peace time with eight members of the Royal College of Surgeons under which these gentlemen were each drawing £5000 per annum though the circumstances of the war had not up to now interfered with their private practice, and whether this total expenditure of £40,000 per annum was reviewed by the Treasury before it was sanctioned —Mr ACLAND answered I understand that these appointments were made in the first instance under a general authority given by the Treasury in 1908 for the appointment in the event of the outbreak of war of consulting surgeons for hospital ships at a remuneration not then specified On August 14th the Treasury were informed of the appointments and also that for administrative reasons five distinguished surgeons and one physician (with remuneration at the rate of £5000 a year each) were being employed at the Royal Naval Hospitals instead of being sent out on hospital ships Upon representations from the Admiralty that it was essential that the services of these specialists should be available at the respective hospitals for the performance of operations at a moment's notice, the Treasury sanctioned the arrangements which had been made The total number of appointments at £5000 a year is six and not eight as stated in the question As regards the conditions of employment I am informed by the Admiralty that five of the six reside at and are performing daily duties at Haslar Plymouth and Chatham and the sixth has to visit and perform surgical work in all the naval and auxiliary hospitals in Scotland In addition the five who are resident at the English hospitals visit for consulting purposes other hospitals in which naval sick and wounded are being treated It is only in any casual spare time that private practice can be followed

Spirit Taxes and the Manufacture of Medicine

Mr FOSTER asked the Chancellor of the Exchequer whether he proposed in the suggested increased taxation of spirits to include in such taxation spirit used in the manufacture of medicine.—Mr LLOYD GEORGE wrote in reply I am considering this matter The Board of Customs and Excise are in communication with the Pharmaceutical Society

BOOKS, ETC RECEIVED

ALLEN GEORGE, AND UNWIN LIMITED London.
Perpetual Peace By Immanuel Kant Translated with Introduction and Notes by M Campbell Smith, M.A. with Preface by Professor Latta Price 2s net

CHURCHILL J AND A. London
A Manual for Midwives By C Nepean Longridge M D Vict F.R.C.S Eng M R C P Lond and John Bright Banister M D B C Cantab M R C P Lond. F R C S Edin. Second edition Price 3s 6d net

FORMIGGINI A F, Genoa.
Significato e Filosofia della Guerra. By Dr William Mackenzie. Price Lire 2.

GREEN W AND SON Edinburgh and London
Encyclopædia Medica Edited by J W Ballantyne M D C M. F R C P E Second edition Vol I Price 20s net.

LAURIE T WERNER London
Painless Childbirth in Twilight Sleep By Hanna Rion Price 6s net

LEWIS H K London
Leper Houses and Mediæval Hospitals (FitzPatrick Lectures 1914) By Charles A Mercier M D F R C P Price 1s net
Swanzy's Handbook of the Diseases of the Eye and their Treatment [illegible] by Louis Werner M B F R C S Irel Eleventh edition Price 12s 6d net
War Surgery By Edmond Delorme Translated by H de Meric Surgeon to In-patients French Hospital London Price 5s net

LIPPINCOTT J B COMPANY Philadelphia and London
The Common Diseases of the Ear their Causes and [illegible] By Dr Leopold and [illegible] Authorised English translation by William [illegible] M D Assistant Professor in Columbia University Price [illegible]

LIVINGSTONE E AND S Edinburgh
[illegible] Index of Diseases and [illegible] arranged according to their [illegible] By W Craig [illegible] F R C S Edin. Fourth edition Price

MACMILLAN AND CO London
Human Physiology By Professor Luigi Luciani Translated by Frances A Welby With a preface by J N Langley F.R.S Professor of Physiology in the University of Cambridge Vol III., Muscular and Nervous Systems. Edited by Gordon M Holmes M.D Price 18s net

METHUEN AND CO LIMITED London.
Health for the Middle Aged. By Seymour Taylor M.D F R C P, &c. Price 1s net.

PHARMACEUTICAL PRESS London.
Supplement to the British Pharmaceutical Codex 1911 including Additions Alterations and Corrections. Price 1s net.

ROUTLEDGE, GEORGE, AND SONS London.
A Chaplet of Herbs Gatherings from the Early Herbals By Florence Hine Price 2s 6d. net

UNIVERSITY PRESS Cambridge
A Campaign against Consumption Papers relating to Tuberculosis By Arthur Ransome M D F.R.C P., F.R.S Price 10s 6d net.

UNIONE TIPOGRAFICO-EDITRICE TORINESE, Corso Raffaello 23, Torino
Guida per il Medico-Chirurgo in Guerra. By Dott Pietro Sisto Aiuto e docente di Patologia speciale medica dimostrativa and Dott. Ottorino Uffreduzzi Aiuto e docente di Clinica Chirurgica Operativa, Regia Università di Torino Two volumes Price Lire 5.

WILEY JOHN AND SONS New York CHAPMAN AND HALL, London.
Œdema and Nephritis A Critical, Experimental and Clinical Study By Martin H Fischer Doctor of Medicine Eichberg Professor of Physiology in the University of Cincinnati Second and enlarged edition Price 21s net

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication.*

NASH, L. C L.R C.P & S Edin. L.F.P S Glasg., has been appointed Medical Officer to the Shildon Urban District Council.

OVEREND H. F M.R C S L.R C.P Lond has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Irlam District of the county of Lancaster

RIORDAN WILLIAM L.R C S Irel. L.K.Q C.P Irel. has been appointed Medical Officer for the Clonmoyle Dispensary District

TAYLOR, A. J T has been appointed Resident Physician at the Edinburgh Dispensary

TIBBLES SYDNEY G Temporary Lieutenant R.A.M C has been appointed Specialist in Ophthalmology to Devonport Military Hospital.

WIGAN CHARLES ARTHUR, M D Durh M.R C S L.S.A. has been re-appointed Chairman to the Portishead (Somerset) District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

ALTON HANTS LORD MAYOR TRELOAR CRIPPLES HOSPITAL.—Two Assistant Resident Medical Officers Salary as arranged with board residence and laundry

ANGLO-SERBIAN HOSPITAL, Crnjatchka, Benja, Serbia.—Surgeon

BETHLEM ROYAL HOSPITAL, Lambeth road S E.—Assistant Medical Officer unmarried. Salary £275 per annum, with apartments board and laundry

BIRKENHEAD BOROUGH HOSPITAL.—Female Senior and Junior House Surgeons Salary £180 and £150 per annum respectively with board and laundry

BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer unmarried. Salary £250 per annum with apartments attendance, &c.

BIRMINGHAM ROSSLEY HILL SANATORIUM FOR CONSUMPTIVES.—Assistant Resident Medical Officer unmarried. Salary £250 per annum with board apartments and laundry

BOLTON INFIRMARY AND DISPENSARY —Third House Surgeon. Salary £170 per annum with apartments board and attendance

BOURNEMOUTH ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House Surgeon for six months Salary £100 per annum with board lodging washing &c

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £120 per annum with board residence and laundry

BRIGHTON EDUCATION COMMITTEE —Temporary Junior School Doctor Salary at rate of £250 per annum

BRISTOL, BEAUFORT WAR HOSPITAL.—Chief Resident Surgeon. Also Resident Physician and Surgeon

BRISTOL GENERAL HOSPITAL.—Second House Physician House Surgeon Casualty House Surgeon and Resident Obstetric Officer all for six months Salary at rate of £150 per annum, with board residence &c.

BRISTOL ROYAL INFIRMARY —Throat Nose and Ear House Surgeon for six months Salary at rate of £150 per annum with board apartments and laundry

BURNLEY UNION WORKHOUSE.—Resident Assistant Medical Officer or Locum Tenens. Salary £200 per annum with apartments rations washing and attendance

BURNLEY VICTORIA HOSPITAL.—House Surgeon Salary £135 per annum with residence board and washing

BURY INFIRMARY —Senior and Junior House Surgeons. Salary £175 and £150 per annum respectively with board residence and washing

ILL Cannot the right honourable gentleman is matter under the Defence of the Realm Act?—NANT I am advised that proceedings could not be in this case Therefore I am afraid that the answer the honourable Member is in the negative But if he likes to repeat the question I will give him a more definite reply

Medical Officers of the Territorial Force

Mr Falle asked the Under Secretary for War whether he was aware that all lieutenants, Royal Army Medical Corps, had recently been promoted to the rank and pay of captains, and whether a medical officer, however long his service, *attached to a unit other than a medical unit could not attain* higher rank than that of major, while *à la suite* medical officers, who were *not attached to* Territorial or other units before the war, started now as lieutenant-colonels, majors, and captains, and drew the pay of those ranks, that officers *a la suite* were, for the most part, able to remain in their own town and carry on their private practice without passing any *examination for rank*, whether he could see his way to *grant all majors and captains of, say, five years' standing, attached before the war to* Territorial or other units, the rank of lieutenant-colonel or major and the pay of those ranks, and would he remove the disadvantages as to *promotion and pay now* attaching to the medical officer who had served for years before the war attached to a Territorial or other unit—Mr Tennant said in reply The position of Territorial Force *Royal* Army Medical Corps *officers in regard to promotion and pay is now under consideration*

Medical Attendance and Hospital Charges for Soldiers

Mr Wing asked the Financial Secretary to the War Office whether *the weekly charge for insurance covered* all medical attendance and hospital charges for soldiers without further deductions—Mr Tennant answered No, sir Medical attendance is *free*, but *for* hospital *treatment* a stoppage up to, but not exceeding, *7d* a day may be made if the officer commanding so decides

Health of the New Troops in India

Mr Samuel Samuel asked the Under Secretary for India *whether he could* recommend his department *to supply to* the troops in India *mosquito nets to prevent the sickness* amongst the new troops *going out* and *to* ensure economy to the country in extra efficiency—Mr Charles Roberts replied The provision of mosquito curtains has been sanctioned for all men of the Territorial Force who may have to serve on *the* plains in India in the coming summer

Bovine Tuberculosis

Sir John Spear asked the Parliamentary Secretary to the Board *of Agriculture how many* bullocks suffering from tuberculosis were destroyed during the last complete year, and the amount of compensation paid *to the owners* of the animals—Sir Harry Verney answered *The* number of bovine animals in respect of which notices of intended slaughter *under the Tuberculosis Order*, 1913, were received during the *year ended June* 30th, 1914, was 6651, but the actual number of animals slaughtered was probably less Compensation is paid by the local authorities, and only in *part refunded by the Board*

TUESDAY MAY 4TH

Enteric Fever in the Expeditionary Force

Replying to Sir Courtenay Warner, Mr Tennant (Under Secretary *for War*) said The latest information with *regard to the incidence of enteric* fever amongst the British troops *in* the Expeditionary Force is as follows Up to date 963 cases have occurred Of these, 780 have been analysed and 142 cases have occurred in men inoculated fully with two doses of vaccine Amongst *these* 10 deaths have occurred, giving a case *mortality of* 7 *per cent* *157 cases have occurred in* men partially protected by *inoculation*—i e, who have had only one dose of vaccine *Amongst* these there have been 10 deaths, giving a case mortality of 6 36 per cent 481 cases *have occurred in* uninoculated men Amongst these *there have* been 100 deaths, giving *a case mortality* of 20 79 per cent To appreciate the full value of these figures it must be *brought to* notice that 90 per cent of the troops *forming* the Expeditionary Force have been inoculated voluntarily There fore, *amongst* 90 *per* cent of the *force*—i e, inoculated men—*there have* been 299 cases and 20 *deaths* In the *other* 10 per cent—i e, uninoculated men—there have been 481 cases and 100 deaths

Release of Medical Personnel

Sir John Lonsdale asked the Secretary of State for Foreign Affairs whether any agreement had yet been *arrived* at between the belligerent Powers in reference to the mutual release *of* medical personnel detained with *prisoners of* war in the respective countries—*Sir E Grey* replied The answer is in the *negative, and negotiations* on the subject are still proceeding with the German Government through the United States Embassies in London and Berlin

Medical Officers of the Territorial Force

Sir Clement Kinloch-Cooke *asked the Under* Secretary for War whether he was aware that officers *in the Territorial* Force were excluded from obtaining increments *of pay* similar to those given to officers in the Regular Army *that a major* in the Royal Army Medical Corps, Territorial *Force, although having 10* years' service in the ranks received *23s 6d a day, and must render three* years embodied *service before being entitled to draw 26s*, and would he consider the advisability of removing what was regarded to be an injustice throughout the Territorial Force *and grant increments of pay to all* ranks in *respect of* combined *service rendered before* and *after* embodiment—Mr Tennant answered Service in the Territorial Force before embodiment cannot be regarded as *equivalent to continuous* service in the Regulars, but the position of Territorial Force *Royal Army* Medical Corps officers with regard to pay and promotion is now receiving consideration

The Use of Asphyxiating Gases in Warfare

Mr Ronald McNeill asked the Under Secretary *for* War whether his attention had been called to a statement, made by the official eye witness with the British Army at the front on April 6th, to the effect that it had been learnt from German prisoners that the enemy were preparing to asphyxiate our men by means of poisonous gas stored under pressure in *steel cylinders, whether this form of* attack was, in *fact, adopted by the Germans on April 22nd*, whether any, and what, steps had been taken in the interval to protect our men against the effects of poisonous gas, and whether it was intended to allow the enemy to pursue this mode of warfare without employing *similar* expedients against him, *after due notice, by way of* retaliation—Mr Tennant said in reply I regret to have to inform the honourable gentleman that, notwithstanding their engagements under the Hague Convention, the Germans have on more than one occasion used poisonous *gases* in the manner *described and have caused the death of* numbers of *our* men by poisoning In spite of rumours to the contrary, it was not believed that any Power which had signed the Hague Convention could be guilty of so heinous a *breach* of its *solemn undertaking* as *the* violation of *the fundamental principles of that agreement by the introduction* into modern warfare *of such a method* as this which may have far reaching results The latter part of the question is under consideration.

The Production of Morphia.

Mr Theodore Taylor asked *the* President of the Board *of* Trade what were the *total* amounts and values of *morphia* manufactured in the United Kingdom in each of the years *1910, 1911, 1912, 1913, and* 1914, what were the amounts and *values exported to* China, Japan and Hong Kong respectively, and whether any *provisions* were in operation to secure the limitation of its use to medical or other legitimate purposes—Mr Runciman said in reply There are no available *statistics* of the production of morphia in the United *Kingdom, but* I will circulate with the votes a statement *showing the* exports of morphia to China, Japan, and Hong Kong His Majesty's Minister at Peking has *reported* that the Chinese Government have announced their intention of putting the International Opium Convention into *force as from* Feb 11th last but His Majesty's *Government have* no information as to *the intentions of the* Japanese Government in this respect or as to any regulations in force in either *country* as to the use of morphia As regards *Hong Kong, I* understand that the Pharmacy Ordinance *of 1910 imposes certain* restrictions on the importation and *sale of morphine*

The following statement (circulated with the votes) shows *the quantity* and value of morphia and morphia salts exported and re exported from the *United Kingdom to* the countries specified in each of the *undermentioned* years —

		Quantity Ozs	*Value* £
To China	1911	*15*	9
	1912	—	—
	1913	2 270	1,030
	1914	2,329	900
To Japan	1911	58,352	24,071
	1912	125,907*	68,650*
	1913	252 110	118,794
	1914	352 130	143,975
To Hong Kong	1911	17,200	6 347
	1912	—	—
	1913	640	320
	1914	—	—

* *Includes* 1600 ounces valued at £800, *of* morphia, &c, of foreign or colonial origin.

Note—The exports and re-exports of morphia and morphia salts are not separately *recorded* in the trade returns of the United Kingdom *prior to* Jan 1st, 1911

Notes, Short Comments, and Answers to Correspondents.

HOSPITAL ARRANGEMENTS IN THE EIGHTEENTH CENTURY

THE excellence of the hospital arrangements in the present war has excited the admiration of all who are interested in the alleviation of the sick and wounded among those who are fighting our battles at the present time It is a contrast to what prevailed in the end of the eighteenth century Facts may be gleaned from a pamphlet issued by the War Office in 1796 bearing the title of "Regulations for Improving the Situation of Regimental Surgeons and Mates, and for the Better Management of the Sick in Regimental Hospitals"

Up to that date the cavalry and infantry had allowances on account of medicines and hospital expenses, and these, with any other perquisites or gratuities, were to cease, after which medicines were to be supplied by the Apothecary General, and all expenses connected with hospitals were to be defrayed at the public charge Each surgeon was to have 12*s* per day in the cavalry and 10*s* in the infantry He was to have his choice of quarters according to his standing in the regiment, and in the time of war was to have the same baggage and forage money as captains After he had put in 20 years' service he was entitled to an allowance of 5*s* a day for life "upon production of certificates of good conduct from the commanding officers under whom he shall have served"

Surgeons' mates were in future to be designated assistant surgeons, and their pay was to be 5*s* per day, but if on foreign stations or during war it was increased to 7*s* 6*d* per day

Every regular corps was to be furnished with an airy, roomy, regimental hospital In the event of the regiment not being in barracks the duty of providing a place for a hospital fell upon the regimental surgeon During an encampment a tent was allowed in aid of, but not as a substitute for, a hospital Great attention was to be placed as to the pitching of it, and inside straw was to be worked up into mats and laid upon dry sand or gravel under each palliasse The sides and floors of the wards were to be washed regularly, and if any contagious disease prevailed nitrous acid was to be evaporated every day Every man was to be allowed the space of 5 ft for his bed and to have a bed to himself Great care was to be shown in the passing of recruits, and at convenient times and places they were to be inoculated against small pox.

Each regimental surgeon was to be provided with a medicine chest, calculated for a corps of 1000 men, and once a year he had to make a return to the Secretary for War of what had been used during the 12 months, the said return to be accompanied by an affidavit taken before a magistrate that none of the medicines, as far as he knew, had been converted to private purposes or applied to any use but that of the regiment Suppose an epidemic caused a run upon a certain medicine, the extra quantity could not be supplied till the prescribed formula had been complied with If a doctor knew of a particular medicine which in specific cases would be beneficial, if it were not in the "Dispensatory" and he desired to use it he had to procure it at his own expense Wine was only to be given when it was indispensably necessary, and it was only to be administered to the patient by the surgeon or his assistant as medicine or with food

Each surgeon was furnished with four sets of hospital bedding for every hundred men on home service, and with six sets while on foreign service, the other hospital necessities being in proportion However, he was to furnish at his own expense what instruments were required and these were specified as "capital" and "pocket" According to the list the set of the former consisted of amputating saw or amputating saw with spare blade, metacarpal with spare blade 2 amputating knives, 2 tenaculums 24 curved needles 2 Pettit's tourniquets, 4 leather tourniquets 6 ligatures and handle for the same, 2 linen compresses a trephine with 4 crowns or 2 fixed trephines lenticular and rugine elevator and forceps, 1 perforator brush and key 6 scalpels, 4 catheters 2 probangs 1 silver probe 1 bullet forceps 1 polypus forceps 2 trocars with additional canules or with spring canules and the additional ones 1 trocar for the hydrocele, 1 seton needle 1 small razor, 1 small hone 1 syringe 1 key instrument for teeth 1 forceps for teeth 1 punch for teeth 1 strong nippers for bones thread for ligatures The contents of a pocket case consisted of 1 straight [illegible] 1 curved scissors 2 silver probes 1 [illegible] forceps 1 scalpel 1 spatula 1 straight bistoury 1 curved bistoury [illegible] 1 gum lancet, 1 caustic case, 1 director, 12 curved needles

Regarding the "Dispensatory, a final word of caution was given There was to be no "useless and extravagant demands for obsolete, expensive, and inefficacious medicines, and to limit the surgeons to the use of the most approved and powerful a list was drawn up for their observance "By this plan the prescriber sees at one view what means he has to produce the effects he wishes, no time will be lost in looking over every article of medicine in his possession, his decision will be expeditiously made, and his practice will become more rational

The advance of medical and surgical science has enormously altered the medical care of the army, and present-day sufferers are reaping the beneficial results But the pamphlet from which we quote shows that in the army at the end of the eighteenth century provision was made commensurate with the knowledge and experience of the time, while the comparatively small numbers of men engaged made the problems presented far less severe

THE DEFINITION OF A CONSULTANT

To the Editor of THE LANCET

SIR—In reply to your correspondent "Enquirer" in THE LANCET of May 1st, I would remark that a consultant is a professional friend, adviser, and helpmate There is the true consultant—a *rara avis*—who sees patients only in consultation with another medical man, and there is the pseudo-consultant, who has patients of his own and is called into consultation by reason of his experience or on account of a successful reputation, sometimes to assist and advise a friend, but usually at the request of the patient or patient's friends to give a second or independent opinion

The rules that govern the conduct of a consultant are very simple, are well recognised by every member of the profession, but are incapable of strict observance, since patients are unacquainted with the rules of professional etiquette A doctor should not attend a patient as an independent patient whom he has seen in consultation This rule holds good if the introduction to the patient is through the doctor, but if, on the other hand, he is sent for with a view to his taking the place of the other doctor, he is justified in accepting the patient provided he acquaints and receives the consent of the doctor in attendance This man is going to receive his dismissal under any circumstances, and therefore the second man is not doing him any injury A refusal to attend is misunderstood by patients Most medical men know that certain patients constantly are changing their medical advisers I have a patient of many years' standing, and she frequently sees two or three different doctors in the week I have seen her at 9 A.M, another doctor has seen her at noon, and a third doctor in the afternoon Her idea is to have the advice I may give her corroborated by independent opinion In all these years only one doctor has written to tell me of the fact that he had been called to see her It cannot be thought that any of these doctors believed she was without a medical adviser, as she is a chronic invalid and a great sufferer I am, Sir, yours faithfully,

May 2nd, 1915 G SHERMAN BIGG

BUMBLEDOM AND HYGIENE

IN spite of all efforts to popularise the principles of hygienic living ignorance and indifference still pervade, not only the masses, but those who are officially appointed to care for them—viz, boards of guardians A case in point, according to a report in the *Carlisle News*, arose recently out of a complaint that two boys who were being boarded out by the Brampton board of guardians had been supplied with neither overcoats nor nightshirts Lady Carlisle very naturally supposed that the deficiency, so far as regarded nightshirts at any rate had only to be mentioned to be remedied, but apparently to her surprise the suggestion met with opposition on the ground that nightshirts were unnecessary, for people in the country were not in the habit of wearing nightshirts at all Lady Carlisle, who obviously has much to learn about the mental attitude of bumbledom, insisted with praiseworthy tenacity on the hygienic importance of changing the sweat soaked day clothes for fresh and aired garments on going to bed This evoked the silly retort that the soldiers at the front did not change their shirts at night, in disregard of the fact that the soldiers at the front often have to stand for hours up to their waists in water, to go on occasion for long stretches of time without food or sleep, and to expose themselves to injuries and to many dangerous and unhealthy conditions which cannot be avoided under the circumstances, but which, if they were imposed on civilians in peace time would evoke horror at their criminal barbarity It was admitted in the discussion that even the inmates of the workhouse were not supplied with night clothing The attitude of indifference received adequate expression from one of the members who according to the report in question, provoked laughter by the remark, "Give 'em the

Buxton, Derbyshire Devonshire Hospital.—Assistant House Physician for six months Salary £100 per annum, with apartments board, and laundry

Cardiff, King Edward VII s Hospital.—Resident Surgical Officer Salary £160 per annum with board, laundry and apartments

Carlisle Non Provident Dispensary —Resident Medical Officer Salary £200 per annum with apartments (not board)

Carmarthen Joint Counties Asylum —Temporary Second Assistant Medical Officer Salary at rate of £200 per annum, with board lodging washing &c

Cheshire County Council.—District Tuberculosis Officer Salary £350 per annum

City of London Hospital for Diseases of the Chest, Victoria Park, E —House Physician Salary as agreed, with board residence, and washing

Croydon Borough Hospital.—Senior Resident Medical Officer and Bacteriologist Salary £200 per annum with board, residence and washing Also Assistant Resident Medical Officer Salary £150 per annum with board residence, and laundry

Croydon Union —Assistant Medical Superintendent of Infirmary and Assistant Medical Officer of Workhouse and Childrens Homes Salary £225 per annum with usual residential allowances

Denbigh, North Wales Counties Asylum —Second Assistant Medical Officer Salary £220 per annum with apartments board attendance and washing

Derby Mickleover County Asylum.—Medical Superintendent. Salary £550 per annum with house laundry &c

Derbyshire Education Committee.—Temporary Female Assistant School Medical Officers Salary £400 per annum inclusive

East Sussex County Council.—Female Inspector of Midwives and Child Welfare Salary £190 per annum

Essex County —Temporary Assistant Tuberculosis Officer Salary at rate of £350 per annum

Exeter City —Assistant Medical Officer of Health and Assistant School Medical Officer Salary £300 per annum.

Guildford Royal Surrey County Hospital.—House Surgeon Salary £150 per annum, with board residence, and laundry

Hemel Hempstead, Herts West Herts Hospital.—Resident Medical Officer Salary £150 per annum, with rooms board, and washing

Hospital for Consumption and Diseases of the Chest, Brompton —House Physician for six months Salary 30 guineas

Hull Royal Infirmary —House Physician unmarried Salary £105 per annum with board and apartments Also Assistant House Surgeon Salary at rate of £100 per annum, with board and lodging Also Casualty House Surgeon Salary at rate of £80, with board and lodging

Indian Medical Service —Ten Commissions

Inverness, Northern Infirmary —House Surgeon Salary £150 per annum with board &c.

Ipswich Borough Mental Hospital.—Resident Medical Superintendent Salary £400 per annum, with residence, washing &c

Island of Sanday Orkney —Medical Practitioner and Vaccinator Salary £100 per annum

King Edward VII Sanatorium Midhurst, Sussex.—Second Assistant Medical Officer Salary £150 per annum with board lodging and attendance

Leeds General Infirmary —Resident Casualty Officer Salary £125 per annum with board residence, and laundry

Lochgoilhead and Kilmorich Parish.—Medical Officer and Vaccinator Salary £100 per annum.

London Fever Hospital, Liverpool road N —Assistant Resident Medical Officer Salary £250 per annum with residence and board.

Macclesfield Cheshire County Asylum, Parkside —Junior Assistant Medical Officer Salary £250 per annum, with apartments board, laundry &c

Manchester, Ancoats Hospital —Two Residents

Manchester Children's Hospital Pendlebury —Resident Medical Officer unmarried for six months Salary at rate of £100 per annum

Manchester Children's Hospital, Gartside-street —Medical Officer Salary £180 per annum

Manchester Northern Hospital for Women and Children Park place, Cheetham Hill road.—House Surgeon. Salary £120 per annum with apartments and board

Metropolitan Ear Nose, and Throat Hospital, Fitzroy-square W Clinical Assistants

Mile End Old Town Infirmary —Assistant Medical Officer Salary £275 per annum with board lodging and washing

Mount Vernon Hospital for Consumption and Diseases of the Chest, Northwood, Middlesex.—House Physician. Salary £150 per annum with board, residence, and washing

Newport Mental Hospital Caerleon Mon.—Temporary Assistant Medical Officer Salary 5 guineas per week, with board, rooms and attendance

Norwich, 3rd Line Depôt, 2nd East Anglian Field Ambulance, Royal Army Medical Corps (Ter) —Two Medical Officers Pay and allowances as in Regular Army

Nottingham Children s Hospital.—Female House Surgeon for six months Salary at rate of £130 per annum with apartments, board, and washing

Oxford Radcliffe Infirmary and County Hospital —Honorary Surgeon.

Paddington Green Children s Hospital, W —Temporary Surgeon in Charge of Out-patients

Portsmouth Corporation Mental Hospital.—Assistant Medical Officer unmarried. Salary £250 per annum with board, apartments attendance and washing

Queen s Hospital for Children Hackney road Bethnal Green, E —Temporary Assistant Physician. Salary £25 per annum. Also Temporary Surgeon for Ear Nose, and Throat Department Salary £25 per annum

Rotherham Hospital.—Junior House Surgeon. Salary £125 per annum, with board lodging and washing

Royal National Orthopædic Hospital, 234 Great Portland street W —Resident Medical Officer

St Mary's Hospital for Women and Children Plaistow, E.—Resident Medical Officer and Assistant Resident Medical Officer Salary at rate of £110 and £90 per annum respectively, with board, residence, and laundry

St Pancras Dispensary, 39 Oakley square, N W —Resident Medical Officer, unmarried. Salary £300 per annum, with residence and attendance.

Salisbury General Infirmary —House Surgeon and Assistant House Surgeon unmarried Salary £100 and £75 per annum respectively with apartments, board, lodging and washing

Sheffield Municipal Tuberculosis Dispensary —Two Assistant Medical Officers Salary £350 per annum

Sheffield Royal Infirmary —House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

Shrewsbury Royal Salop Infirmary —House Physician Salary at rate of £110 per annum with board and apartments

Somerset County Education Committee.—School Oculist and Medical Inspector Salary £350 per annum

South Shields Ingham Infirmary and South Shields and Westoe Dispensary —Female House Surgeon. Salary £160 per annum, with residence, board, and washing

Taunton and Somerset Hospital, Taunton —Senior House Surgeon. Salary £250 per annum, with board lodging and laundry

Tiverton Hospital Devon.—House Surgeon and Dispenser Salary £80 per annum and all found.

Tunbridge Wells General Hospital.—House Surgeon unmarried. Salary £100 per annum with board, residence &c.

Walsall and District Hospital.—Assistant House Surgeon and Anæsthetist. Salary £150 per annum, with board, residence and laundry

Warrington Infirmary and Dispensary —Junior House Surgeon. Salary at rate of £120 per annum, with board, apartments, and laundry

Warrington, Lord Derby War Hospital.—Resident Physician and Surgeon. Also Resident Pathologist and Bacteriologist

West Bromwich and District Hospital.—House Surgeon and Assistant House Surgeon, unmarried Salary £150 and £120 per annum respectively with residence, board, and laundry

West End Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy 73 Welbeck street, W —Clinical Assistants to Out-Patients' Physicians

West Ham and Eastern General Hospital, Stratford, E —House Physicians Salary £120 and £100 per annum, with board, residence, and washing

Whitechapel Dispensary for the Prevention of Consumption —Temporary Medical Officer Salary £500 per annum.

Wolverhampton and Staffordshire General Hospital.—Resident Medical Officer and House Surgeon for six months Salary at rate of £150 per annum, with board rooms, and laundry

Worcester County and City Asylum.—Assistant Medical Officer Salary £250 per annum, all found

Worcester General Infirmary —Resident Medical Officer Salary £150 per annum with board residence and washing

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The Chief Inspector of Factories Home Office, London S W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Birtley in the county of Durham and at Lurgan, in county Armagh.

Births, Marriages, and Deaths.

BIRTHS

Davies —On April 24th at St. Olafs, Kingston-on Thames, to Dr and Mrs H R Davies a son

Robertson —On April 27th at Clarence-drive Hyndland, Glasgow to Dr and Mrs Berkeley H Robertson a daughter

Stewart —On April 26th at Pinewood, Beckenham, the wife of F W Stewart, M D of a daughter

Woods.—On May 4th at Waldemar-mansions S W, the wife of W W Woods M.R C S of a son.

MARRIAGES

Attwater—Hawkins —On April 29th, at St Margaret s Church, Westminster Harry Lawrence Attwater M.A M.B. M C F R.C S., Temporary Lieutenant R.A.M C to Nora Collingdon Hawkins fourth daughter of Dr and Mrs Hawkins of Hillfield, Broadwey Dorset

Gutteridge—Baxter.—On April 23rd at St Giles in the Fields London, Lieutenant Bernard George Gutteridge R.A.M.C, to Mary second daughter of William Baxter Esq of Hilston

Milne—Brown —On April 24th, at West Coats Parish Church Edinburgh Robert Milne, M D M S F.R C S to Alice May second daughter of John Brown Esq Coltbridge-terrace Murrayfield, Edinburgh

Yorke—Greening —On May 4th at the Wesleyan Church Frodsham by the Rev H Lefroy Yorke, M A. B.D father of the bridegroom assisted by the Rev William Stevenson Professor Warrington Yorke to Elsie only daughter of Mr and Mrs N Greening of Newlands Frodsham

DEATHS

Bell.—William Bell, M R.C S, J P V D son of John Bell, M D., of Uppingham, at Rutland House, New Brighton, in his 77th year

Blakiston —On May 3rd, at Ashington Glastonbury, Arthur Alexander Blakiston, M R C.S aged 63 years

Gowers —On May 4th at Ladbroke-square, W., Sir William Richard Gowers M D F.R S aged 70 years

Lawrance.—On May 1st at his residence Shaftesbury road, Hammersmith Frederick Lawrance, M.R C S Eng, L S.A., in his 85th year

Neely —On April 25th killed in action at Ypres Hugh Bertram Neely L.D S Guy's Hospital Second Lieutenant, 1st Suffolk Regiment, aged 26 years

Simpson —On May 3rd at Heslington House Worthing Walter S Simpson M R C S, L R.C.P aged 63 years

N.B —A fee of 5s is charged for the insertion of Notices of Births Marriages, and Deaths

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY Burlington House London, W
THURSDAY —4 P.M Election of Fellows Papers:—Elizabeth A. Fraser and Prof J P Hill The Development of the Thymus Epithelial Bodies and Thyroid in the Vulpine Phalanger (Trichosurus Vulpecula) —Elizabeth A. Fraser: Some Observations on the Development of the Thymus Epithelial Bodies and Thyroid in Phascolarctos, Phascolomys and Perameles (communicated by Prof J P Hill) —Mr J H Brinkworth Measurement of the Specific Heat of Steam at Atmospheric Pressure and 104 5° C with a Preface by Prof H L. Callendar (communicated by Prof H L Callendar) —Mr C F Jenkin and Mr D R. Pye: Thermal Properties of Carbonic Acid at Low Temperatures II (communicated by Sir A. Ewing)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street W

THURSDAY

SECTION OF NEUROLOGY (Hon Secretaries—T Grainger Stewart, H Campbell Thomson): at 8 P.M

Annual General Meeting —Election of Officers and Council for Session 1915–1916

Clinical Meeting

Members who desire to show cases are requested to communicate as soon as possible with Dr H. Campbell Thomson 34, Queen Anne-street W

FRIDAY

SECTION OF OTOLOGY (Hon Secretaries—W M. Mollison E D D Davis) at 5 P.M.

Annual General Meeting —Election of Officers and Council for Session 1915–1916

Clinical and Pathological Meeting

Cases and Specimens

Will be shown by Mr Richard Lake Dr Dan McKenzie Mr C E. West and Mr W M. Mollison.

Dr Dan McKenzie: Note on Mastoid Grafting

CLINICAL SECTION (Hon. Secretaries—Thomas H. Kellock, David Forsyth): at 8 P.M

Annual General Meeting —Election of Officers and Council for Session 1915–1916.

SATURDAY

SECTION OF BALNEOLOGY AND CLIMATOLOGY (Hon Secretaries—Charles W Buckley J Campbell McClure): at 12.30 P.M

Annual General Meeting —Election of Officers and Council for Session 1915–1916

2 P.M Leave the Society's house for visit to Epsom College &c. for details see special card

MEDICAL SOCIETY OF LONDON, 11 Chandos-street, Cavendish square, W
MONDAY —8 P.M General Meeting Election of Officers and Council for 1915–1916 Session &c. 8.30 P.M Mr D Arcy Power Short Demonstration on Early Books on Naval and Military Surgery from the Society's Library (illustrated by the epidiascope) Exhibition of a Selection of Some of the Society's Old and Rare Medical Works

ROYAL SOCIETY OF ARTS John-street Adelphi W C
MONDAY —8 P.M Cantor Lecture:—Dr D Sommerville Foodstuffs (Lecture III)

SOUTH WEST LONDON MEDICAL SOCIETY Bolingbroke Hospital Wandsworth Common S W
WEDNESDAY—9 P.M Discussion on the Car in Medical Practice (opened by Mr C Ryall)

LECTURES, ADDRESSES DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE West London Hospital, Hammersmith road W
MONDAY —10 A.M Dr Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards 2 P.M Medical and Surgical Clinics X Rays Mr D Armour: Operations Dr Pritchard: Bacterial Therapy Department. Mr B Harman and Mr Gibb Diseases of the Eye
TUESDAY —10 A.M Dr Owen: Demonstration of Cases in Wards. 12 noon Mr T Gray: Demonstration of Fractures &c. 2 P.M Medical and Surgical Clinics X Rays Mr Baldwin: Operations. Dr Davis: Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin
WEDNESDAY —10 A.M Dr Saunders: Diseases of Children Dr Davis: Operations of the Throat Nose and Ear 11 A.M Mr Souttar: Demonstration of Minor Operations 12 noon, Lecture —Mr Souttar Abdominal Diagnosis 2 P.M Medical and Surgical Clinics X Rays Mr Pardoe: Operations Dr Simson: Diseases of Women Mr Gibb: Diseases of the Eye
THURSDAY —[illegible] A.M Dr Bernstein Bacterial Therapy Department 2 P.M Medical and Surgical Clinics X Rays Mr D Armour: Operations Mr B Harman: Diseases of the Eye
FRIDAY — [illegible] A.M Dr Simson: Gynæcological Operations 10.30 A.M Medical Registrar: Demonstration of Cases in Wards 2 P.M Medical and Surgical Clinics X Rays Mr Baldwin: Operations Dr Davis Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin.
SATURDAY —10 A.M Dr Saunders: Diseases of Children Dr Davis Operations of the Throat Nose and Ear Mr B Harman Eye Operations 2 P.M Medical and Surgical Clinics X Rays Mr [illegible]: Operations

THE THROAT HOSPITAL, Golden-square W
[illegible] —[illegible] P.M Special Demonstration of Selected Cases
THURSDAY —[illegible] P.M Clinical Lecture

ROYAL INSTITUTION OF GREAT BRITAIN Albemarle-street, Piccadilly, W
TUESDAY —3 P.M Prof C S Sherrington The Animal Spirits (Lecture II)

For further particulars of the above Lectures &c, see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed " To the Sub Editor "

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager "*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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shirts and let us change the subject" The motion to provide nightshirts put by Lady Carlisle, was negatived by 10 votes to 5 The importance, whenever possible, of freeing the absorbent skin at night from unnecessarily prolonged contact with the toxic products of perspiration is a well-established hygienic principle and forms an integral portion of that cleanliness which is next to godliness, and the fact that individuals under pressure of temporary necessity may not always be able to comply with it is no justification whatever of its neglect as a practice of daily life under normal conditions

AN ATTACK OF SEVERE ILLNESS APPARENTLY DUE TO EATING RHUBARB

To the Editor of THE LANCET

SIR,—Five days ago I was suddenly attacked with acute sickness and diarrhœa Pulse and temperature went up rapidly, and I felt alarmingly ill Next day these had subsided, but I had great strangury with bloody urine, which showed a considerable deposit of albumin The other symptoms are subsiding, but the albumin remains I am 69 years of age, and have had no illness of any kind for many years My bladder and renal functions have always been perfectly normal

In trying to account for this attack the only cause I can think of is that I partook rather largely of rhubarb pudding on two occasions a few days previously The attack was very alarming and may, of course, leave some mischief of a chronic nature behind Can it be due to oxalic acid known to be present in rhubarb? It would be interesting to know if any of your readers have had a similar experience

I am, Sir, yours faithfully,

May 3rd, 1913 M D

SACRED RELICS AS CURATIVE AGENTS

THE desire for relics—i e, for memorials of those whom we love or honour or both combined—is one of the oldest of human passions, and that cures would be wrought by such relics was an instinctive belief Perhaps the earliest instance on record of a cure wrought by relics is that mentioned in the Second Book of Kings where in Chapter 13, v 21, we read that a dead man was cast into the sepulchre of Elisha and revived on touching the prophet's bones In the fourth century A D thousands of pilgrims went to the Holy Land and other places of the East to see the holy paces and such things as the instruments of the Passion, relics of the martyrs, Job's tomb and his dunghill Concerning the last-named we learn from St Chrysostom that many "took a long journey over the sea from the ends of the earth to see it and that from the sight thereof they derive every help and much 'philosophy,'" meaning probably by this last word a method of regular holy life In the later Middle Ages the cult of relics became a scandal in many ways, witness Chaucer's description of the Pardoner with his collection of relics, such as Our Lady's veil and the glass of pigges bones To go back a few centuries states and countries vied with one another as to which of them should own the more important relics, and the State of Venice in particular had a passion for relics It began with the body of St Mark, which was stolen or rescued from the infidels of Alexandria, in about 827, by means of a somewhat unworthy trick, and after the sack of Constantinople in 1204 she acquired, among other relics, the arm of St George the Martyr, part of the body of St John Baptist, and some of the Holy Blood Later, in 1237, the Crown of Thorns, which had been in the sanctuary of Constantinople and had been mortgaged to a Venetian, was redeemed by St Louis of France and deposited in the Sainte Chapelle Numerous instances of cures wrought by relics are on record—for example that performed upon a niece of Pascal on March 24th, 1653 whose ulcer was touched and cured by a thorn from the Crown

Some new and curious details concerning this widespread belief are furnished in a work recently published in Holland by Dr A Eekhof upon the Wandering Missionaries, or *Quaestuarii* who sold indulgences, and during their peregrinations for this purpose wrought many wonderful cures by means of relics These details are compiled from a mass of forgotten documents in the episcopal archives of Utrecht The prophylactic virtues of greatest potency appear to have been those possessed by the relics of St Hubert, patron saint of Utrecht Cathedral One of these, his stole, is said to have been especially efficacious for the cure of rabies This was only to be expected from St Hubert's connexion with the chase The treatment consisted in making a small incision in the skin of the victim's forehead and inserting therein a thread taken from the material of the stole The ecclesiastics of Utrecht also claimed great success in relieving the sick by the use of relics of St Martin of Tours which had been leased by the French clerics to their brethren at Utrecht, who found them a source of revenue Almost equally efficacious were the relics of St Anthony, which in 1079 were brought to Flanders by a Duke Jocellinus and placed in a monastery at Belle Their application was most valued as a remedy for the plague and for "ignis sacer" Dr Eekhof shows from the documents how the frauds practised by the religious in relation to alleged cures were frequently exposed, until the authorisation of such "quests" was forbidden by the Council of Trent in 1563

COMPRESSED DRUGS IN THE GERMAN ARMY

UP to 1897 the German military medical authorities used little packets of powders which had hitherto been supplied to their hospitals and dispensaries but they wished to replace them by something less bulky and more readily conserved during the exigencies of war They accordingly experimented with compressed tablets and with the necessary machinery for making them Several different kinds of tablets were produced as a result, some satisfactory and others not quite so, some being liable to deteriorate and others to melt in hot weather, and there was also the difficulty of controlling the quality and quantity of the active ingredients in the compressed tablets Some kinds of tablets were found too difficult to make and were purchased in the open market A list of 18 different kinds manufactured was published in THE LANCET of March 10th, 1906, p 703 and probably has been largely added to now After the war is over we shall learn more of the success or failure of the treatment of the troops with the new methods and preparations, made not only by Germany but by the Allies The diminution of bulk and weight have been the main considerations, and it will be discovered how far these factors are compatible with efficacy, convenience, economy, and durability

RESPIRATORS

WE have received from Messrs Solport Brothers, of 188 and 190, Goswell road, E C, a model respirator which seems to be suitable for the present emergency among the troops and to fulfil the required conditions satisfactorily The model (which has been submitted to the War Office) is called "Portia" No 104, and is designed to be used wet, so as to cover the mouth and nose and absorb the deleterious gases The towelling material used is specially absorbent, holding a considerable quantity of water, so that frequent renewal is not necessary, and at the same time it keeps perfectly porous so as not to impede the breathing As a great advantage over the cotton wool respirators it is claimed that the latter speedily become clotted into lumps after once or twice wetting and leave open patches through which the air is inhaled without proper filtration The texture of "Portia" No 104 respirators is said to remain uniform and constant, no matter how long the respirator is used or how frequently it is wetted

THE PUBLIC SCHOOLS YEAR BOOK

THE 1915 edition of this useful annual, edited by H F W Deane, M A., F S A., and W A. Evans, M A. (London The Year Book Press Pp 774 Price 5s net), now in its twenty sixth year of publication, is the official work of reference to the Headmasters' Conference, and forms an admirable guide for parents and guardians seeking a suitable school for boys, giving, as it does, the names of the staff, with information as to mode of entrance, fees, prizes, scholarships, and so forth at the different public schools of the country The sections dealing with the navy and army have been brought up to date

COMMUNICATIONS not noticed in our present issue will receive attention in our next

METEOROLOGICAL READINGS

(Taken daily at 9.30 a m by Steward's Instruments)

THE LANCET Office May 5th 1915

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall.	Solar Radio in Vacuo	Maximum Temp. Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks.
April 29	30 090	E		112	67	44	48	53	Fine
„ 30	30 090	E		101	71	45	47	48	Fine
May 1	29·900	S W		110	67	48	51	58	Cloudy
„ 2	29·740	W	0·02	102	59	46	47	50	Overcast
„ 3	30 184	E	0·01	105	56	42	43	43	Cloudy
„ 4	30·020	E		105	60	46	46	48	Overcast
„ 5	29·910	E		101	71	48	52	56	Fine

The following magazines journals &c. have been received — Canadian Medical Association Journal, Therapeutic Gazette Practitioner Journal of Mental Science St Bartholomew's Hospital Journal South African Medical Record Annales de Gynécologie et d Obstétrique Journal of Dental Science Journal of Laryngology, Rhinology and Otology School Hygiene British Journal of Children's Diseases Candid Review Dominion Medical Monthly Journal of Royal Sanitary Institute Canadian Practitioner New Zealand Medical Journal Medical Review Archives of Internal Medicine British Review Middlesex Hospital Journal Interstate Medical Journal, &c.

The Hunterian Lecture

ON

SOME INFECTIONS OF THE TONSILS

Delivered before the Royal College of Surgeons of England on Feb 19th, 1915,

By FREDERICK C PYBUS, M B , M S DURH , F R C S ENG ,

HUNTERIAN PROFESSOR, ROYAL COLLEGE OF SURGEONS OF ENGLAND
SURGEON TO THE HOSPITAL FOR SICK CHILDREN AND SURGICAL
REGISTRAR TO THE ROYAL VICTORIA INFIRMARY
NEWCASTLE-ON TYNE

MR PRESIDENT, LADIES, AND GENTLEMEN,—My first duty is to thank you for the honour you have done me by appointing me one of your Hunterian professors during the present year

INTRODUCTION

In selecting a subject for this lecture I was guided mainly by the fact that for some time I have been studying the pathology of the tonsils, and also because most questions relating to them have been for some time past under discussion Some problems have been satisfactorily dealt with, others are in the process of elucidation, while there remain more which need much further investigation before definite opinions can be stated about them or any conformity of views reached It seemed to me wise at the same time to review, as far as possible, the subject of tonsil infections While some authorities consider that the tonsil is ruthlessly and unnecessarily sacrificed, others are tardy in recognising the part played by that organ as a *focus* of infection, and perhaps err in the opposite direction I hope to be able to give some guidance in this matter, and quote the principles and results of my own practice

ANATOMY

The faucial tonsil which lies between the pillars of the fauces is the most complex part of the lymphoid tissue situated at the entrance of the alimentary canal In structure it resembles a lymphatic gland, *and* is surrounded *for* the *most* part by a tough fibrous capsule, which is connected to the structures forming the pharynx by loose areolar tissue, except at its lower pole, where it receives its main vessels and has some muscular attachments This capsule allows the tonsil to move on the pharyngeal wall and is a potent protection against the spread of infection The remaining surface of the tonsil is exposed in the pharynx its extent varying greatly in degree From this pharyngeal aspect a pocket projects into the tonsil which is in reality a hollow organ, this cavity being intracapsular and known as the tonsillar fossa The pharyngeal aspect of the tonsil is covered by the same epithelium as the general surface and is thrown into folds which surround numerous depressions or lacunæ these extend through the lymphoid tissue so that their blind extremities abut on the capsule Certain folds of mucous membrane pass from the faucial pillars to the surface of the tonsil and may very considerably narrow the entrance to the tonsillar fossa. As the lymphoid tissue grows on the sides and folds, the fossa may be largely obliterated and later the tonsil appears almost solid In its commonest form the tonsil consists of an almost solid lower pole—containing narrow lacuna while the fossa lies above the level of the soft palate and is bounded by fol of lymphoid tissue More or less of the tonsil may project beyond the inner border of the faucial pillars As the tonsil enlarges it tends to project inwards, but it may remain entirely behind the anterior faucial pillar, and I estimated from an examination of 500 tonsils that only in 15 per cent of cases did more project than remain hidden

The main efferent lymphatic vessels pass from the tonsil to a gland belonging to the deep cervical chain, and situated below and behind the angle of the jaw in the interval between the internal jugular and common facial veins Afferent lymphatics have not been demonstrated, but experiments by Lenárt, Henke, and others have shown that pigment injected into the nasal mucous membrane may be found after a short interval in the substance of the tonsil, and they suggest that such afferent lymphatics do exist

The comparative anatomy of the tonsil investigated by Hett in this country, and whose specimens are present in the Museum, demonstrates that in successive grades of animals the tonsil increases in complexity from a mere depression lined by lymphoid tissue to the complicated arrangement found in the higher species The lacunæ, at first solid columns of epithelium, break down and form cavities which remain throughout life As we should expect, the tonsils most nearly corresponding to the human are those of the monkeys and anthropoid apes

PHYSIOLOGY

The tonsil, as already stated, forms part of the ring of lymphoid tissue which guards the entrance to the respiratory and digestive tracts The exact nature of its function is difficult to determine, as extirpation of the organ, so far as can be discovered, causes no defect in the economy No doubt its function can still be carried on by the remaining lymphoid tissue in the vicinity As with adenoid tissue elsewhere it reaches its maximum growth in childhood and gradually atrophies as adult life is reached The maximum activity is correlated to that time of life when infection is most frequent, as with the remainder of the lymphoid tissue, situated along the whole course of the alimentary canal An examination of the tonsil shows it to have a similar structure to a lymphatic gland, and as such it is actively engaged in the production of lymphocytes It may receive lymph from the nasal cavities and act as a filter and protecting agent in infections in this region It has been shown that pigment granules injected into the nasal mucous membrane find their way into the tonsil and in some cases may be extruded from here on to the *free* surface The lymphocytes also are constantly reaching the surface, where they mingle with the oral secretions An examination of the *contents* of the lacunæ shows them to be occupied by lymphocytes leucocytes, and organisms *Many of the latter* are ingested and destroyed in the *lacunæ,* while in some cases they find their way *through* the epithelium—again to be received *in normal* conditions, by leucocytes where *they are* satisfactorily accounted for This *process* may be studied by the application *of* carmine granules to the surface of the tonsils There *thus* appears to be a constant stream of cells wandering to the surface of the tonsil and *finding their* way into the lacunæ and oral cavity *in* which places they may act as phagocytes not only to foreign particles but to organisms *as well* There is no doubt that their function is protective and the tonsil

Communications, Letters &c , have been received from—

A.—Alexandra Therapeutic Institute, Lond. Admiralty, Medical Department Director General of Messrs Arnold and Sons Lond

B —Messrs W Baker and Co, Oxford Messrs Bishop Lond Captain J A. Bennett R A.M C, South Farnborough Messrs W Browning and Co, Lond Messrs Butterworth and Co, Lond. Messrs Burt, Boulton and Haywood, Lond. Bristol Royal Infirmary, *Secretary of* Messrs Burroughs Wellcome and Co, Lond, Messrs W H Bailey and Son, Lond Messrs R and J Beck Lond Mr G Sherman Bigg Lond Mr F W Barker Jhansi Messrs T B Browne, *Lond* Lieutenant J Horatio Baldwin Messrs J Beal and Son Brighton British Fire Prevention Committee Lond. General Hon Secretary of Messrs J Bibby and Sons Liverpool Bootle, School Medical Officer of

C —Dr B G Chatterjee, Kandi Surgeon G Cochrane R N, *Lond.; Cafolin Co, Lond* Messrs R Carruthers and Sons, Inverness, Mrs Craven, Southport Canterbury Mental Hospital, Clerk to the Mr Howard V Cox, Lond. Sir W Watson Cheyne Bart., Chatham, Dr H P Cholmeley Forest Row Dr E M Clarke Truro Dr Herbert E Cuff Lond Dr A K. *Chalmers, Glasgow* Mr W E Crowther, Howden Dr A. Charpentier, Uxbridge Messrs J and A. Churchill, Lond. Major Cale, R.A.M C, Norwich Cheshire County Asylum, Macclesfield, Clerk to the

D —Messrs W *Dawson* and Sons, Lond. Lord Derby War Hospital, Warrington, Clerk to the; *Devon and Exeter Daily Gazette*, Manager of Messrs J Dickinson and Co, Hemel Hempstead, Derbyshire County Council, Derby, Accountant to the Derby Amalgamated Friendly Societies' Medical Association Secretary of Mr T N Darling France; Messrs. Dunville and Co, Lond, Mr R Davis, Lond Mr Percy Dunn, Lond Mr J Dawson, Lond. Mr H *Dickinson, Lond.*; Mr John Dover, Totland Bay Mr E. H Dickson Newcastle; Dowsing Radiant Heat Co, Lond

E —Mr J Howell Evans Lond.; Messrs W Edwards and Son, Lond., Dr N Erian Cairo; Emergency Dr C T Ewart, Woodford Bridge

F —Dr *Leonard* Findlay Glasgow Dr J M Fortescue-Brickdale, Clifton; Fine Art Society, Lond Factories Chief Inspector of, Lond. Mr W D Fowell Lond Colonel F E Ford France.

G —General Life Assurance Co, Lond, *Secretary of* Mr H Giles, Norwich Glasgow Corporation, Chamberlain to the Mr Charles Gibbs, Lond Mr L. Guggenheim, Lond.; Mr H J Gauvain, Alton; Messrs Robert Gibson and Sons Glasgow Mr A. Graham *Lond.*

H —Holborn Surgical Instrument Co Lond. Hampshire County Medical Officer of, Winchester Hove Medical Officer of Health of; Dr Hill Jarrow Messrs Hough, Hoseason, and Co, Manchester Mr *C H Holdsworth Lond* Mr Francis Heatherley Rock Ferry Lieutenant J B Haycroft Lieutenant Arthur Hare R.A.M.C Mr Paul B Hoeber, New York; Dr Walter Haward Lond. Messrs C J Hewlett and Son, Lond. Dr Heilborn, Bradford H S R

I.—International News Co Lond; Imperial Institute Lond Director of

J —Dr *F Wood Jones Lond*; Mr W Jacob Lond

K.—King Edward VII Sanatorium Lond, Secretary of Mr Edmond Knight, Lond. Mr Christopher Kempster, Lond.

L.—Mr H K. Lewis Lond Dr R. Cranston *Low, Edinburgh* Captain T Lyon, Shorncliffe Messrs E and S Livingstone Edinburgh London Dermatological Society Hon Secretary of Dr R. Bruce Low Lond Local Government Board Lond Dr C E Lea, *Manchester* Dr F Langmead Lond Messrs *Lee and Nightingale Liverpool*; Mr John Lomax Lond

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N —Nottingham Children s Hospital Secretary of, Newcastle-upon Tyne Corporation Accountant to the North Ormesby Hospital, *Middlesbrough* Secretary of Messrs R. Neill and Sons, Bangor North Wales Counties Asylum Denbigh, Steward of

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Y —York County *Hospital*, Secretary of

other parts of the mouth It may be conveyed directly in grain, and two cases are reported where the husk of grain was known to have lodged in the tonsil a short time before the symptoms presented themselves Johne also reports a case where he found a barley husk in the actinomycotic tonsil of a pig

A more frequent source of origin must be looked for, however, as in other examples of actinomycosis, for a history of the ingestion of raw grain cannot always be obtained Recent investigations have shown that the organism responsible for the disease occurs in milk, and it has been demonstrated that some cows considered clinically to be suffering from tuberculous udders were found on more careful examination to be affected with actinomycosis Further researches are being carried out on this question.

The disease commences by a swelling which may be mistaken for an inflammation or sarcoma Later ulceration occurs, with the discharge of pus containing the characteristic granules on which the diagnosis depends

TUBERCULOSIS

The tonsil is frequently the seat of tuberculosis, its situation is such that any bacilli entering the mouth and being swallowed pass over its surface and may gain entrance to the crypts, whether dust borne in the air or in the food The unfiltered air in mouth breathers reaches this part directly, and the presence of tubercle bacilli in dust has been abundantly proved An examination of sputa found on the ground was recently undertaken, and it was found that tubercle bacilli were present in 60 per cent Of the food milk is probably the most important vehicle Recent examination of the milk supply of Edinburgh by Mitchell has shown that in 406 samples of milk from 406 shops tubercle bacilli were found in 82, or 20 per cent The tonsil as the first part of the lymph system of the alimentary canal is frequently involved, but the remainder of the intestinal submucous lymph collections do not escape, and both lead to involvement of the neighbouring lymphatic glands

The following table (Table II) of results obtained by Dr Stanley Griffith shows that the conditions can be produced experimentally Feeding with tubercle bacilli infects the tonsil, and from here the cervical glands, in a similar way the same conditions are produced lower down—namely, infection of the lymphoid tissue of the intestine and mesenteric glands This fact emphasises the importance of considering tuberculosis a generalised disease and that if the tonsil is involved it is probable that there are similar and more extensive lesions in the alimentary canal

TABLE II

Species of animal	Number fed.	Tonsils tuberculous	Neck glands tuberculous	Intestines tuberculous	Mesenteric and colic glands tuberculous
Chimpanzees	7	1	4	7	7
Rhesus monkeys	7	1	4	7	7
Baboons ..	14	9*	11	13	13
Calves	21	3	5	16	20
Goats ...	9	1	5	2	8
Pigs	34	8	21	10	32
Total ...	92	23 (25 %)	50 (54 3%)	55 (59 8%)	87 (94 5%)

* A tenth had a tuberculous ulcer on the pharyngeal wall with normal tonsils

Frequency of Tuberculosis of the Tonsil

The frequency of tuberculosis of the tonsil has been variously estimated Amongst tonsils removed for hypertrophy and examined for this disease, the percentage varies about from 3 or 4 to 6, and Table III. gives the figures arrived at by different investigators This percentage is probably too low, for in the first place the tonsil in this disease is often small, and the most reliable observations must be by a combination of methods, histological, cultural, and by inoculation In grosser infections where the lung is involved, and in those dying from phthisis or from tuberculosis in other situations, the tonsil is much more often involved The post mortem record of those dying from phthisis shows that tuberculous infection is present in at least 90 per cent of the cases (Table IV) In tuberculosis of the cervical glands the tonsils can be found to be tuberculous in at least 30 per cent of the cases (Table V)

TABLE III —*Examination of Hypertrophied Tonsils for Tuberculosis*

Name	Number	Tuberculous	—
Lermoyez...	32	5	Inoculation
Broca.	100	0	,
Gottstein	33	4	
Pluder and Fischer ..	32	5	,
Piffl ..	100	2	,,
Goure	200	0	,,
Mitchell	90	9	
Latham	49	7	,
Dieulafoy	61	18	,,
Friedmann	54	1	,,
Total ...	762	51 (6 7 %)	—

TABLE IV —*Examination of the Tonsils in those Dying from Tuberculosis*

Name	Cases	Tonsils tuberculous	Death from phthisis	Tonsils tuberculous
Strassmann ..	21	13	15	13
Kruckmann ..	20	20	20	20
Walsham ..	34	20	20	20
Friedmann ..	40	17	—	—
Total	115	70 (60 8%)	55	53 (96 4%)

TABLE V —*Showing Tuberculosis of the Tonsil in Tuberculous Cervical Glands*

Name.	Cases	Tonsils tuberculous	Operation	Post mortem examination
Carmichael ..	50	7	Yes	—
Kingsford ...	17	7	—	Yes
Mitchell ...	72	24	Yes	—
Hurd and Wright	12	9	—	—
Total	151	47 (31 %)	—	—

Tuberculous Lesions of Tonsils and Cervical Glands

When settled in the tonsil the tubercle bacilli produce their characteristic lesion—the miliary tubercle—which may undergo fibrosis or caseation The tubercles may be situated near the mouth of the lacunæ, round their circumference, or in the ges temporarily beyond normal limits to deal ith increased infection. In addition to this active defence, the lacunæ occupied by organisms of various nature, pathogenic and others, act as culture tubes, and it seems probable that under strictly normal conditions the epithelium is a sufficient protection against the entrance of organisms into the tonsillar tissue, but the balance is so delicate that it is frequently found that organisms do pass into the substance of the tonsil, where in the great majority of cases they are destroyed, and by this process of absorption of organisms or toxins the tonsils may act as immunising agents to the body as a whole

There are some who ascribe some particular internal secretion to the tonsil, but the evidence for this is by no means conclusive In summing up we may state that the tonsils may act as lymphatic glands for certain regions of the nasal cavities They act also as a protection against the constant presence of organisms in this part of the pharynx—either in the mouth, lacunæ, or tonsil substance—should they reach it through some breach in the surface It is also probable that in the exercise of this phagocytosis they confer some immunity against the organisms inhabiting this region.

BACTERIOLOGY

The tonsils are subject to the presence of organisms during almost the whole of life, both on their surface and in the lacunæ which penetrate their substance Under normal conditions no active invasion is apparent, but under the influence of local injury or lowered resistance infection takes place with effects of very varying magnitude

The regular inhabitants of the mouth and throat may be found on cultural examination of the contents of the lacunæ They vary in proportion at different times, and on occasions rarer pathogenic forms can be found or show their presence by causing some lesion Dwyer, in an examination of 72 cases, found the following organisms present in health, the varieties ranging from 1 to 7 (Table I)

TABLE I —*Bacteriology of the Tonsils* (*Dwyer*)

	Cases		Cases.
Streptococcus (various types)	50	Diplococcus mucosus capsulatus ..	4
Pneumococcus	14	Influenza bacillus	5
Staphylococcus ..	20	Pyocyaneus	1
Micrococcus catarrhalis	12	Friedländer's bacillus	1
Diphtheria bacillus (5 true type, 5 pseudo 5 not determined.)	16	Spirillum	1
		Long curved bacillus	1

In pathological conditions the normal balance of varieties may be upset, while additional organisms may be present, such as (1) the bacillus of tuberculosis, (2) actinomycosis, and (3) bacillus coli. The most constant organism present, as is well known, is the streptococcus, and it can be found in nearly 100 per cent of examinations All the organisms above mentioned are capable of producing infection of the tonsil, though some may exist in contiguity with it throughout a lifetime and produce no harmful effect

Active invasion of the tonsil may occur through the lymphatic channels leading from an infective condition of the nose More often, however, the infection is from the surface and is determined occasionally by injury, but more often without any gross mechanical factor, it being dependent on an increased virulence of the organism or some lessening of the chemical defences of the body The organisms are contained at the time in the secretions of the mouth or may be carried to the tonsil in food, such as will be shown to occur with the tubercle bacillus, or by air, especially in mouth breathers The organisms in the food may be forced directly into the lacunæ or may be carried in on some foreign particles such as a fig seed, which I have found on at least two occasions

The lesion may be limited to the surface of the organ and be associated with a catarrhal condition of the rest of the pharynx The invasion may then spread to various depths and become subepithelial, lacunar, or in the substance of the tonsil From the tonsil spread is limited largely by the capsule, but infection may take place through this, either by means of the lymphatics or through some aperture, and so invade the cellular tissue, causing peritonsillar infection Further spread passes to the lymphatic glands, and from here to the circulation, and may become widespread

All forms of inflammation may subside completely and leave little trace of their presence Fibrosis or suppuration may result in each situation In some cases, as in other parts of the body, infection may not be entirely overcome and may show itself at irregular intervals during the whole life of a person, or the infection may become encapsulated, as in some of the tonsils exhibited

The effect of organisms on the tonsil varies considerably, depending on the nature of the organism and length of time that infection has been occurring It may have a stimulating influence and cause hypertrophy, this overgrowth being of such a nature that it subsides when the infection is overcome or removed. This enlargement may be followed by atrophy or the infected tonsil from the first may not enlarge, indeed, the smallest tonsil may be grossly pathological, and such disease may be entirely hidden from view, and can be judged only by its results on the lymphatic glands or rest of the body

INFECTION

Passing to consider some individual infections and their special manifestations, I need only mention that occasionally the tonsil is the focus of infection in syphilis and may be the seat of a primary chancre It has been estimated that 10 per cent of all extra genital chancres make their appearance on the tonsil

ACTINOMYCOSIS

The streptothrix group of organisms may gain access to the throat and in rare cases settle in the tonsils to such an extent as to form a recognisable lesion This consists in the production of a granuloma which may ulcerate and infect the neighbouring tissues This tendency to spread locally causes the tonsil also to be involved secondarily in the pharyngeal and buccal forms of the disease When an extensive lesion is present it is impossible accurately to determine the exact point of origin.

Ruhrah, in an analysis of 632 cases, found that the head and neck were involved in 57 per cent of the cases Of 109 cases occurring in the United Kingdom during the years 1884–1906, the face and neck were involved in 50, and of these 2 were situated in the tonsil In a systematic examination of 75 tonsils removed for hypertrophy and examined by Wright, one case of actinomycotic infection was found, the patient being a boy aged 12 years Similar cases have been recorded by Ruge and Lesin, the former mentioning four cases, the latte one

The organism gains entrance in the food suppl and may lodge in carious teeth, in the tonsils, o

A CASE OF

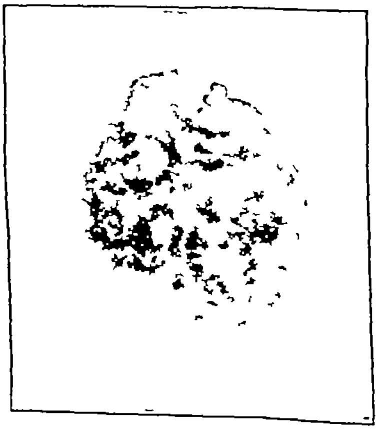
PERITHELIOMA OF THE SUPERIOR MAXILLA AND ETHMOID

BY G H LAWSON WHALE, M D CANTAB, F.R C S ENG,
URGEON FOR DISEASES OF THE THROAT NOSE, AND EAR TO THE HAMPSTEAD GENERAL HOSPITAL, AND TO THE LONDON TEMPERANCE HOSPITAL.

THE patient, a female Belgian refugee, aged 52 ars, came to the Hampstead General Hospital in ptember, 1914, with a lump in the right cheek three and a half years' duration The whole ght upper jaw bulged outwards, pushing the nose er towards the left There was no depression of e palate, the temporal fossa and post nasal space ere free The right eye was proptosed, but vision as perfect, the outer wall of the right nasal fossa as pushed inwards against the septum Examina on by transillumination and puncture revealed a lid tumour There were no palpable glands

Under chloroform I incised the friable outer ntral wall beneath the cheek, my intention being remove a piece for histological diagnosis But e bulk of the tumour came away so easily that I emoved all I could, a mass larger than a golf all (Fig 1) It was, however, impossible by this oute to get any instrument or finger beyond the pper pole of the tumour, so it was obvious that, or a cure, this proceeding had been unsurgical and nsufficient An extract from the pathologist s eport says —

FIG 1

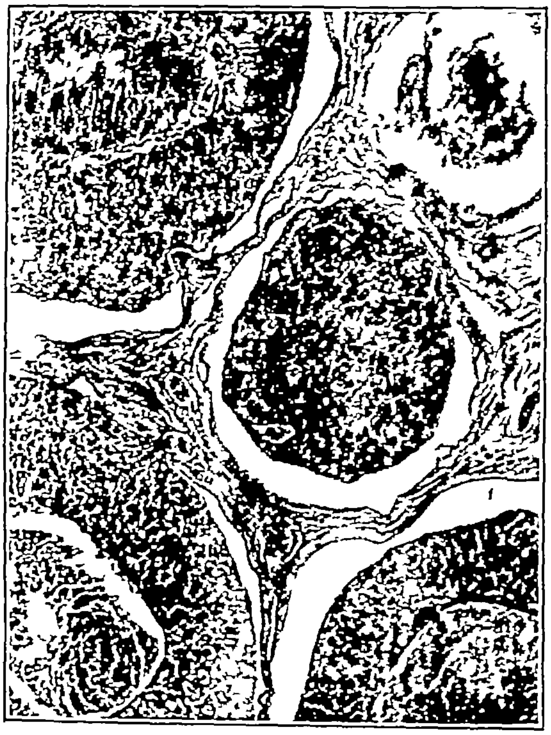


The mass of growth which was removed by elevating the cheek at the first exploratory operation About two-thirds actual size

> Richly cellular irregularly circular areas present in entrally a roughly circular space filled with blood corpuscles Bounding the space externally and the cellular area nternally is a layer of flattened cells suggesting the nternal lining epithelium of a vessel External to this are many closely packed oval cells with a well defined nucleus rranged concentrically around the lumen These appear ances suggest a perithelioma originating in the small blood vessels (Fig 2)

A week after exploring the antrum I went to France and so lost sight of the patient, on my return in January 1915, I again saw her The mass had not recurred in the outer antral wall, rom where I had formerly removed the large iece but the palate was slightly depressed on hat side the eye more proptosed and pushed outwards, the nose further displaced to the le and a large, irregular, hard prominence extended from the middle of the cheek, upwards and inwards, crossing the inner canthus to reach the nasion (Fig 3) A skiagram taken by Mr C Thatcher shows that the lower part of the antrum and the frontal sinuses were apparently free, but a shadow occupied the upper part of the jaw, side of the nose, and ethmoid region

FIG 2



Microphotograph showing section of perithelioma of the right antrum and superior maxilla. Magnification 200 diameters.

Operation —Ten days after the extraction of all the teeth, except those in the affected upper jaw, intratracheal ether was given by Mr C H C Visick Dr J Z Truter assisted No preliminary tracheotomy or laryngotomy was performed, but the right external carotid was tied An incision was then made, beginning in the middle of the eyebrow, in the line of which it was continued mesially to the root of the nose, then downwards in front of the lacrymal sac, and back to the sulcus between the nose and cheek, from here down to the junction of the nostril and cheek, horizontally inwards to the columella, and vertically downwards, dividing the lip in the mid line From a point in the first incision just below the lacrymal sac another curved horizontal incision was made in the line of the bony infra orbital margin on to the malar prominence These incisions are simply the classical one of Fergusson plus a prolongation half way along the eyebrow The usual large flap could now be turned down to expose the maxilla, and the skin over the root of the nose and inner half of the eyebrow could be raised upwards and to the left, for the better inspection of the ethmoid and frontal sinuses The whole right upper jaw, palate bone, nasal bone, and part of the malar were now ons of the tonsil close to the capsule The ize of the infected organ varies considerably, most often it is enlarged and fleshy, in other cases small and shrunken Unfortunately, there are no characteristic signs The enlarged tonsil may be firm or unduly friable, or its substance may appear yellowish. In other cases it may contain a mass of caseous débris occupying a ragged cavity in the interior or a small chronic abscess surrounded by a firm capsule of fibrous tissue The small tonsil may be fibrous and also contain a chronic abscess Ulceration is rare, I have not yet seen a case in the child, but in the adult this sometimes occurs, usually late in the progress of the disease Even when extensively diseased the capsule remains free and the tonsil can be readily dissected from its bed

It is almost impossible to recognise the tuberculous tonsil clinically—its nature can only be suspected before removal, and on gross section after removal there is often considerable doubt Its presence can be determined clinically, only by its effects—namely, infection of the cervical lymphatic glands This lesion is undoubtedly the main importance of the tuberculous tonsil In children affected with this condition, analysis shows that in 70 per cent of the cases the tonsillar gland is involved, either alone or being the largest of a set occupying the side of the neck From this gland the infection spreads to others situated around it, and may eventually involve the whole deep cervical chain In rare cases the tonsillar gland overcomes the infection, while glands lower in the chain may caseate and form an abscess

Unfortunately the tuberculous tonsil rarely causes symptoms apart from glandular infection There is no pain, attacks of inflammation are rare, and appearances are normal It is this which has so often led to the focus of infection in tuberculous cervical glands being overlooked In some cases the glands become apparent and enlarged after a sore throat, but even in these cases no secondary infection can be found in the gland The tendency of the disease is towards natural cure, and the infection of both tonsil and glands may remain latent till adult or middle life is reached, when a tuberculous abscess appears insidiously in the region of the tonsillar gland On evacuation of the abscess a small caseous or calcareous gland is found lying under the deep fascia which communicates with the abscess through a narrow opening

Bovine and Human Infection Preventive Measures

The largest number of figures dealing with this infection of the cervical glands are those of Mitchell, whose results coincide with my own and whose figures I quote In an investigation of the bacteriology of 72 cases of tuberculous glands from children in Edinburgh Mitchell found that the bacillus was of the bovine type in 90 per cent and of human type in the remaining 10 The main tonsillar gland was involved in 50 cases of the above series, with secondary involvement of the surrounding glands in most cases The tonsils in 64 cases were investigated, 24 of which showed histological tuberculosis In experimental inoculation 19, or 30 per cent., of these gave a positive result, of which it was determined that bovine bacilli were present in 12 and human in three Investigations in other parts give slightly different percentages, but the matter is being investigated at present in different localities for comparison with these results

We have thus seen that the tonsil is readily infected with either form of tubercle bacilli, investigations showing that the bovine type is most frequently present in children (Table VI)

TABLE VI.—*Examination of Tuberculous Glands to Determine Type of Tubercle Bacillus*

Name	Number	Human	Bovine.
Lewis	15	6	9
Litterer	11	5	6
Burckhardt	9	8	1
Weber	5	—	5
Park and Krumwelde	54	34	20
Oehlecker	14	10	4
German Imperial Health Board.	3	1	2
British Tuberculosis Commission	9	6	3
Mitchell	72	7	65
Total ..	192	77 (40%)	115 (60%)

Although primary tuberculosis of the tonsil is not uncommon, it is *unlikely to be the only lesion* present. This infection of the tonsil has to be detected largely by its secondary effects on the lymphatic glands, as locally it rarely gives rise to symptoms. The treatment can be readily suggested from the previously mentioned facts To prevent individual infection with the bovine bacillus at the present time it is essential that all cows' milk should be sterilised or should be obtained from healthy cows, those tested and found to be free from tuberculosis. The development of social legislation enforcing a pure milk supply, which is urgently needed and which is gradually being met, will obviate the necessity for boiling milk. The potency of this mode of infection can be realised by the experiments of Delepine, who has found that one part of milk is capable of infecting 100,000 parts in sufficient degree to produce tuberculosis in guinea-pigs, so that it may be argued that the milk from a single cow with a tuberculous udder is capable of infecting the milk from a whole herd

The preventive measures against human infection are being gradually adopted at present—namely, by isolating as far as possible the advanced cases of phthisis and the education of these people in the proper care of their sputum. When the lesion is suspected or manifest in the individual the treatment is to remove the tonsils entire in their capsule The usual indication for this is tuberculosis of the tonsillar cervical glands. The tonsil as the focus should be removed as early as possible, except where softening or abscess formation in the glands demands that they should be dealt with first

(*To be concluded*)

SOMERSET INSURANCE COMMITTEE —At the la meeting of the Somerset County Insurance Committee it wa reported that 31 medical men in the county were on act service, and of these 26 were 'on the panel Th chairman (Mr J C Morland) stated it was quite p bable that more medical men would be called away, an there might be difficulty in getting the usual prompt att tion in some districts, but under the circumstances he was sure that insured persons would give every consideration t these difficulties, and he was also certain that they coul rely upon the doctors left in the county to do their utmo to carry on as full and efficient a medical service a possible mechanical circulatory and lymphatic interference, and a leech on the upper eyelid cured it But on the fifth day it reappeared, and simultaneously a brawny semi fluctuating swelling was found over the right cheek, just in front of the ear Incision evacuated from this an ounce of the foulest pus I have ever smelt, all the while the temperature, &c, remained normal The chemosis now gradually disappeared As the union of the incisions became complete, and before removal of the stitches, the skin for an area of 1 in by ½ in, at the apex of the flap, just below the inner canthus, sloughed Whether or not a plastic operation be undertaken later to close this opening, it has meanwhile provided a most convenient route through which to irrigate the upper part of the cavity The eyebrow incision divided part of the origin of the levator palpebræ superioris and anterior belly of the occipito frontalis muscles Hence there are partial ptosis and inability to raise the eyebrow on that side (Fig 5) An obturator with dental plate is being made under the direction of Mr J F Colyer

A curious feature of the case is that, although the eyeball has dropped a little, there is perfect vision with either eye separately (proving that both eyes are used), and no diplopia when using both eyes (Fig 6), presumably an unconscious overaction of the intact extrinsic muscles compensates for the displacement of the globe The photographs, which are published with the patient's consent, were kindly taken by Mr J W Harrison, and the micro photograph (Fig 2) by Mr A Cornell, of Tonbridge, with the super microscope, without an enlarging camera, the invention of Mr F Davidson, 29, Great Portland street, London, W

Harley-street W

SPINAL ANÆSTHESIA IN 43 SUPRAPUBIC PROSTATECTOMIES

By H M PAGE, F.R.C S ENG,
ANÆSTHETIST TO GUY'S AND THE WEST LONDON HOSPITALS

I HAVE found spinal anæsthesia of great assistance in many genito urinary operations, such as malignant disease of the bladder, lithotomy, some cases of lithotrity, extensive perineal fistulæ, &c, but in this paper I have only included suprapubic prostatectomy A report on this one particular operation—performed, as it always is, on men who are all of advanced or great age, and in many instances suffering at the time of operation from the same kind of constitutional complications—is of a greater value for the comparison of spinal with general anæsthesia than if different operations, ages, conditions and diseases had been included

The victim of enlargement of the prostate gland is not only frequently of great age, but often presents evidence of organic degeneration, such as inadequately acting renal tissue, degeneration of the vascular system emphysema, and bronchitis The question of anæsthesia may therefore present a serious problem both as to the immediate result and ultimate recovery

The commonest causes of death following suprapubic prostatectomy are shock and hæmorrhage, suppression of urine pulmonary complications, and paralytic distension of the bowel

From my experience in the administration of both general and spinal anæsthesia for this and many other kinds of operations I have come to the following conclusions General anæsthesia administered for prostatectomy, which during the enucleation of the gland must be deep enough to relax the abdominal muscles, does not prevent shock. It tends rather to increase the amount of hæmorrhage if ether be the drug employed, and the risk of the supervention of urinary and intestinal complications possibly it tends to increase pre existing pulmonary troubles Successful spinal anæsthesia, however, practically prevents shock, and even in cases where the spinal block is not perfect the operative shock is greatly diminished. The risk of the supervention of suppression of urine is smaller This is principally due to the fact that the patient can be given fluids and stimulants by the mouth much sooner than after general anæsthesia, and partly to the absence of the effect of the general anæsthetic drug on the cellular tissues of the body Any pre existing pulmonary troubles are less likely to be increased. I may also add, as I cannot give an opinion on the subject myself, that a surgeon, who has used both general and spinal anæsthesia in a large number of prostatectomies, tells me that though distension of the bowel may occur after either, he considers it occurs less frequently after spinal anæsthesia.

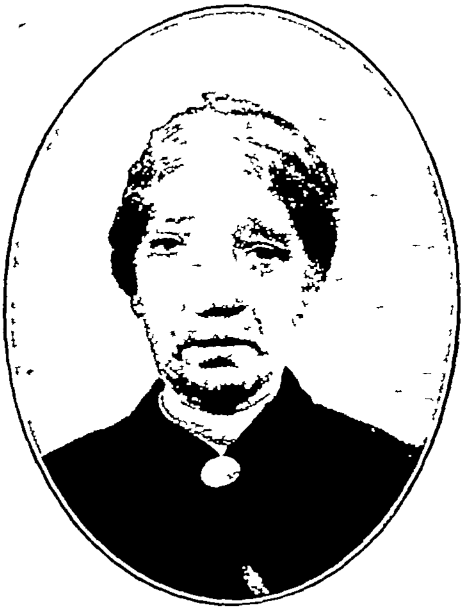
The mental shock which some patients experience, due to being conscious during the operation, is, I am sure, a matter to be seriously considered Fortunately this can be eliminated without practically losing any of the advantages claimed for spinal anæsthesia. Nitrous oxide and oxygen can be given during the operative interference, and in the absence of reflex stimulation this is comparatively easy Personally I should always recommend the administration of these gases if the patient expressed a wish for unconsciousness or showed signs of nervousness

The method I use is as follows A previous subcutaneous injection of morphia or omnopon and atropine with or without scopolamine is given I inject in the second lumbar space in the middle line with the patient lying on his side, using Barker's needles and his internal cannula The drug used in all these cases was novocaine In the first 21 cases I used a solution weighted with mannitol I have given up using weighted solutions altogether In the last 22 cases the unweighted 5 per cent solution with suprarenin borate, as made by the Saccharin Corporation, was used. The dose of this last solution for these cases varies from 2 to 2½ c c. according to the age, size, and condition of the patient Raising the buttocks slightly and flexing the thighs on the abdomen immediately after the patient is turned on to his back tend to raise the height of the anæsthesia even with unweighted solutions of novocaine or stovaine The head is, of course, kept slightly raised at the same time

The advantages I would claim for the use of the unweighted solution, instead of the solution purposely made heavier than the spinal fluid, are as follows Temporary collapse is met with in a certain proportion of cases after intrathecal injection of any of the drugs used to produce spinal anæsthesia Should this occur it can be treated by raising the patient's legs and lowering his head, and this is the most rapidly effectual treatment With the use of this solution the foot of the bed can be raised on blocks immediately the patient has been put back there, and if he has to be carried up or down stairs after the operation this can be done with the head dependent.

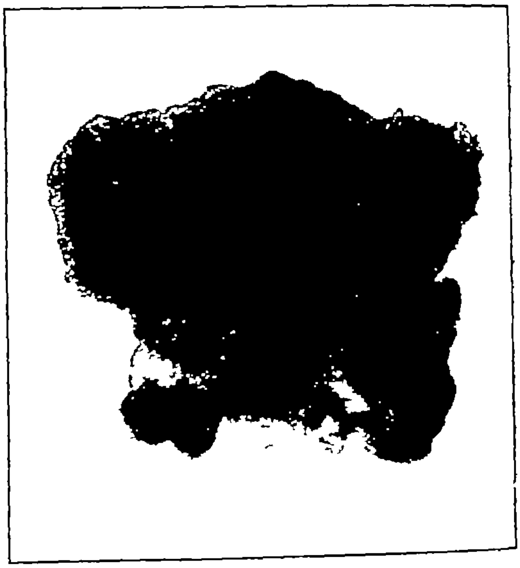
ed in one mass (Fig 4) For cutting through malar bone into the spheno maxillary fissure Gigli saw was used, for dividing the hard palate a keyhole saw Elsewhere all separations were effected with a knife or bone cutting forceps It was not possible to leave the orbital floor or periosteum, as both were invaded The "suspensory ligament" of the globe was not encountered—the eye rested on nothing but the orbital fat The growth had invaded the right ethmoid, which, with the lacrymal bone, was now entirely removed up to the cribriform plate The sphenoidal sinus and spheno maxillary fossa were found to be free from disease The attachment of the superior oblique pulley was not interfered with, and the soft palate was left The cavity was swabbed everywhere with solution of zinc chloride, 40 grains to the ounce The skin flaps were replaced and sewn up, and for 48 hours the cavity was kept plugged with wide ribbon gauze

FIG 3



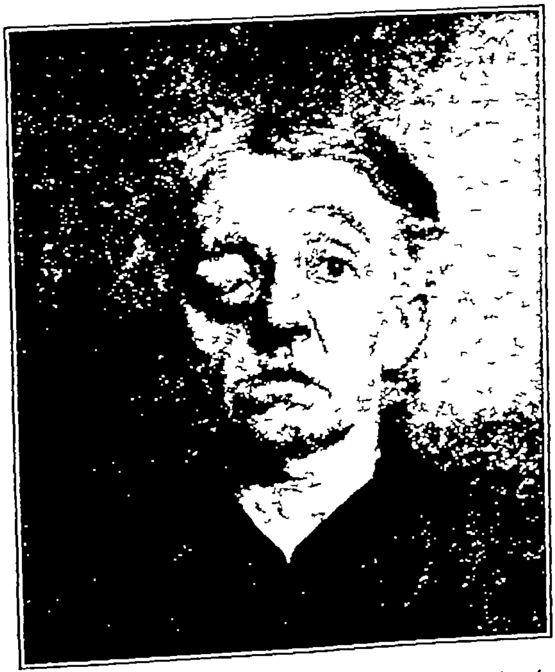
Appearance of the patient four months after first and shortly before second operation.

FIG 4



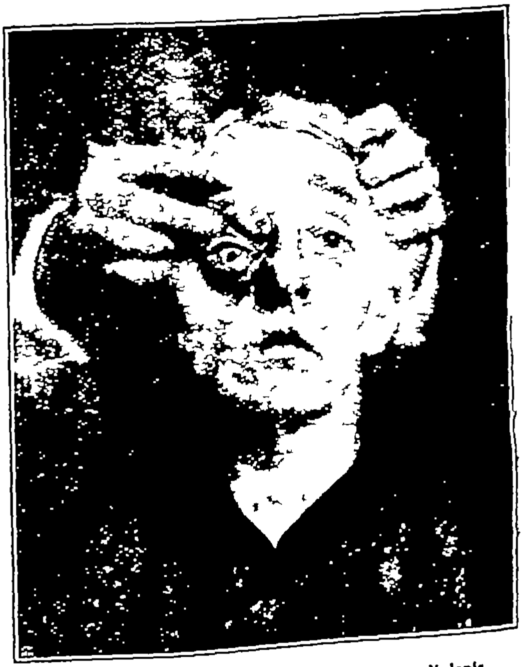
The upper jaw and adjacent bones removed at the second radical operation The growth has rendered the identity of this unrecognisable were it not for the teeth About two thirds actual size.

FIG 5



Patient after operation Shows the ptosis and inability to raise the eyebrow on the affected side

FIG 6



Shows how the globe has dropped but there is no diplopia

Subsequent history—Never at any time did the temperature exceed 99·8°F nor the respirations 24 On the third day a marked conjunctival chemosis appeared This was attributed to the great cessation of work while they last, interruption of the course of graduated labour, and loss of time. The introduction, therefore, of a possible disturbing factor like tuberculin administration has to be justified by results or its employment is unwarranted.

Gain in weight if taken as an index, not as a measure of improved nutrition is a sensitive and fairly reliable guide if considered along with other things such as the grade of work. As the observations are systematically taken their evidence is included.

After results.—It can be stated without fear of contradiction that the object of treatment in sanatoriums is not so much for patients to be able to live in a sanatorium as that they should be able to live and work outside, and that the true estimate of results must have regard to these after histories. It has also been suggested in the course of this inquiry that a true estimate of the value of tuberculin should be based upon these after-histories rather than upon the relatively short views of results by the time of leaving.

Analysis of cases.—Of 300 patients dealt with 71 were women workers and 229 men workers. Of the women 34, or 74 per cent., were given tuberculin while of the men 44, or 19 per cent., had tuberculin.

Duration of treatment.—Women: (*a*) The average period of residence of the 34 women who had tuberculin was 202.4 days; (*b*) of the 37 women who had no tuberculin, 148.1 days; (*c*) the average increase in the duration of treatment required for tuberculin cases was 54.3 days, or an increased duration of treatment of 36.6 per cent., and (*d*) in relation to the stadia of the disease the increased time required where tuberculin was used was as follows: Stadium I., 43.4 per cent., Stadium II., 28 per cent. and Stadium III. 33.8 per cent. Men: (*a*) The average period of residence of the 44 men who had tuberculin was 144.7 days; (*b*) of the 185 men who had no tuberculin 125.2 days; (*c*) the average increase in time for tuberculin cases was 19.5 days, or an increased duration of treatment of 15.5 per cent. and (*d*) in relation to the stadia of the disease Stadium I. took 14.9 per cent., Stadium II. 22.4 per cent. and Stadium III. 11.7 per cent. longer treatment than those of the same stadia who had no tuberculin.

Ability to work.—The ability to do work has been estimated first according to the average grade of work reached while under treatment. This, however, required to be associated with the duration of treatment to give a true comparison. There is therefore also given a comparison of the average increase in grade of work per diem. Women: (*a*) The average grade of work reached by the 34 women who had tuberculin was 1.82 while that of the 37 women who had no tuberculin was 2.25 or 23 per cent. higher, and (*b*) the women who had no tuberculin showed in the average daily increase in grade of work the following percentage excess compared with those who had no tuberculin: Stadium I. 75 per cent., Stadium II., 54 per cent. and Stadium III. 61.2 per cent. Men: (*a*) The average grade of work reached by the 44 men who had tuberculin was 3.30 and that of the 185 who had none 3.61, or 9.39 per cent. higher, and (*b*) the men who had no tuberculin had daily excess increase in the grade of work in Stadium I. of 31 per cent., in Stadium II. of 27.1 per cent. and in Stadium III. of 23.1 per cent. compared with those of the same stadia who had tuberculin.

Gain in weight.—Here also the total average needs supplementing by data as to gain in weight in relation to duration of residence, and the mean daily gain is therefore given to enable a true estimate of progress to be made. Women: (*a*) Average gain in weight in 37 women without tuberculin, 11.9 lb., in 34 women with tuberculin, 6.8 lb., the increased gain without tuberculin thus equalling 5.1 lb., or 75 per cent. (*b*) Average daily gain without tuberculin in excess of those with it: Stadium I., 122.7 per cent., Stadium II., 108.3 per cent., and Stadium III., 100 per cent. Men: (*a*) Average gain in weight in 185 men without tuberculin, 13.5 lb., in 44 men with tuberculin, 12.09 lb., the increased gain without tuberculin being 1.4 lb., or 11.6 per cent. (*b*) Average daily gain without tuberculin in excess of those with it: Stadium I., 51.6 per cent., Stadium II., 29.8 per cent. and Stadium III., 3.8 per cent.

After results.—As the result of inquiries sent to all of the 300 patients whose cases are under consideration 189 returns were sent in—61.6 per cent. of the cases treated with tuberculin ("T" cases) and 63.2 per cent. of those treated without it ("N T" cases). The deaths recorded were not markedly different in the "T" and in the "N T" groups—viz., 8.3 per cent. for both in women, and 12.8 per cent. "N T" men and 16 per cent. "T" men. The chief difference was in accordance with what might have been anticipated from the progress of these cases in the hospital. Among the "N T" cases 79.1 per cent. of the women and 71.1 per cent. of the men were reported as "able to do their work," while of the "T" cases only 50 per cent. of the women and 56 per cent. of the men could do so. To put it another way, adding together the men and women, while of the "N T" cases 26.9 per cent. were unfit for work or dead, of the "T" cases 46.9 per cent. were so conditioned. Upon dividing the cases into two groups—viz., those who left in the first, and those in the second half of the period—a similar difference in the after histories in favour of those who had had no tuberculin was found in each of the groups taken separately.

Summary.—The answers which the medical staff of the hospital sought to elicit from a consideration of these cases are given for these cases and under the conditions mentioned with sufficient clearness to enable a definite opinion to be formed. 1. The administration of tuberculin to selected phthisical workers does not shorten but, on the contrary, it lengthens the duration of treatment. 2. The use of tuberculin does not increase the ability to do work. It appears not only to delay the improvement in working ability but it also diminishes the ultimate ability achieved by a more prolonged course of treatment. 3. So far as gain in weight and the rate of gain enable one to judge, the administration of tuberculin is detrimental to the nutrition of patients to whom it is given under these conditions. 4. The after results in fitting patients to do their work after leaving the hospital in these cases are less favourable where tuberculin has been used than in the cases where it has not.

Tilworth.

CROWNHILL CONVALESCENT HOME NEAR PLYMOUTH.—The annual meeting of the subscribers to this home was held recently under the presidency of the Mayor. The medical report stated that during 1914 the patients admitted numbered 235. [illegible] Colonel A. B. [illegible] the duties had been performed by Dr. E. L[illegible] Fox. The financial statement was satisfactory.

In the cases reported here no failure to obtain muscular relaxation or analgesia occurred Anæsthesia, though slow to appear in 3 cases, was perfect eventually in 41 cases out of the 43, in the 2 others there were muscular relaxation and analgesia of the bladder 34 of the cases were operated on without any general anæsthesia Nitrous oxide and oxygen were given to 4 cases for prevention of mental shock, the spinal anæsthesia being perfectly good In 3 cases a little general anæsthesia was given during the skin incision, after which it was withdrawn and no more given These 3 patients were completely conscious when the skin was being stitched up at the end of the operation. The skin was then completely insensitive, therefore they were cases in which the anæsthesia came on more slowly than usual In 2 other cases a little general anæsthetic was given during the skin incision and stitching up only, none being given during the opening of the bladder or enucleation, muscular relaxation and bladder analgesia being present

Personally I should advise anyone beginning to use this method to aim at getting anæsthesia with the minimum dose of the drug likely to produce it in the particular case, and to risk having to give a very little general anæsthetic to supplement it

The ages of the patients in this series were—

1 case aged 94 years	Recovered
1 ,, , 90 ,,	,
4 cases over 80 ,	All recovered
14 ,, between 70 and 80 years	,, ,,
20 ,, ,, 60 ,, 70 ,,	1 died
3 ,, ,, 50 ,, 60 ,,	1 ,,

In a large majority of the cases I was asked by the surgeon to give spinal anæsthesia for special reasons, such as great age, vascular degenerations, low specific gravity of urine, emphysema, and bronchitis Personally, therefore, I should claim this series, from the point of both surgeon and anæsthetist, as a test of average recovery to be rather an exacting than a favourable one Of these 43 cases 41 recovered, the abdominal wound being healed and the urine passed naturally by the urethra Two cases died

1 Patient aged 65 At the time of operation he was suffering from uræmia He recovered normally from his spinal paralysis and was no worse at the end of the operation than before and remained no worse for two days, when vomiting and diarrhœa came on. The post-mortem record says- "Secretory tissues of kidneys practically non existent"

2 Patient aged 63 He recovered normally from the spinal injection and operation Did perfectly well for ten days, when an attack of acute lobar pneumonia (P M) came on and he died in a few days

These two cases have no bearing on the question of anæsthesia The first, as a rule, would have been a suprapubic drainage only and therefore not have got into statistics as to prostatectomy at all The second was an accident occurring in a most favourable case for prostatectomy, and occurring too late after the operation to have anything to do with the question of anæsthesia, whether spinal or general I have included them as I have here given all the cases in which I have used spinal anæsthesia for this operation

There was no case of permanent sequela following the spinal injection There are here 41 complete recoveries out of 43 cases Taking into consideration the causes of death of the two cases that died, I would suggest that this is really a better average recovery than it appears

I am particularly indebted to Mr John Pardoe for being able to make this report, as the very large majority of the cases were his, including the patient aged 94, and I take this opportunity of thanking him for his help and encouragement. Neither of the two cases that died was his My thanks are also due to members of the staff of Guy's and the West London Hospitals who have given me cases

Welbeck-street, W

A NOTE ON

TUBERCULIN ADMINISTRATION AND GRADUATED LABOUR

BY EDGAR TAUNTON, M.B LOND, F R C S ENG.,
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PATIENTS admitted to the Royal National Hospital, Ventnor, undergo the ordinary open air sanatorium treatment with rest or systematically graded exercise according to the state of the case A part of the accommodation of the hospital (about a fourth) is, however, set apart for prolonged treatment of selected cases by a course of graduated labour After selection these patients are on probation for a period of not less than four weeks, and if that term is passed satisfactorily they are taken in as "workers" to the special working blocks, where they remain until they leave the hospital

Tuberculin has been carefully administered in some of the most promising of these selected "workers" by the intensive method, either "B.E" or "T R" Slight reactions were occasionally observed In the rare cases of prolonged reaction the use of tuberculin was discontinued

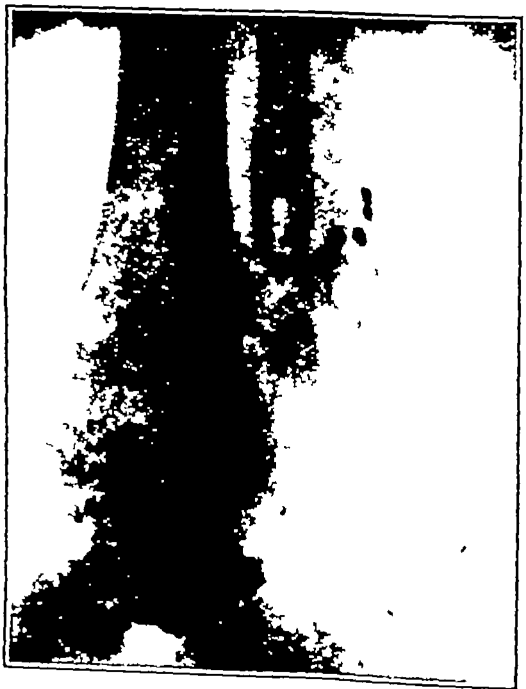
It has seemed desirable to the medical staff of the hospital that some definite opinion should be arrived at as to the value of tuberculin in such cases (a) in shortening the duration of treatment, (b) in increasing the ability to do work, (c) in improving the general nutrition, and (d) in ensuring better after results For this purpose an examination of the records of 300 patients who passed through the "working blocks" between April, 1912, and March, 1914, has been made and the after histories of about 60 per cent of these cases have been with some difficulty obtained

The course of graduated labour is for convenience divided into five grades of work, but in practice there is no abrupt transition from grade to grade and it might be more nearly accurate to speak of ten or more grades, the point to grasp being that it is not a rigid system but a flexible one adaptable to the needs of individual cases under constant medical direction and supervision.

Disturbances of temperature are a matter of prime importance in any consideration of the progress and treatment of cases of pulmonary tuberculosis, and here they have to do with the following 1 The primary selection of cases for the working blocks 2 The result of the probation of selected cases 3 The further selection of patients for tuberculin administration is determined by the absence of such disturbances 4 Ability to do work and the rate of progress from grade to grade of work are in relation to their absence or occurrence 5 The duration of treatment itself is very largely a question of the absence of such disturbances and of their extent and duration when they occur They involve rest, the his third operation He had pain which incapacitated him in his left lower leg The old operation scars ran vertically upwards from behind each of the malleoli There was a dry sinus in that over the tibia. The operation consisted of incisions upwards in the lines of the old ones and removal of the metallic fragments under the X rays One piece was found lying at the bottom of the sinus, and after it was extracted the sinus itself was carefully excised Both wounds were sutured without drainage and healed by first intention, and the patient was discharged a fortnight after admission, cured

The most difficult cases are those in which a foreign body lies embedded in muscular tissue without any intimate relation to bone The region is, as it were, uncharted Plates demonstrating such cases are at the Baltic Hospital rarely taken, as the projectiles are removed on the X ray table without any more ado, but our view as to the difficulty is supported by the number of such patients we have had sent to us showing large operation scars following a prolonged but fruitless search By the direct method of operating the possibility of working along the wrong muscular plane is obviated and difficulties are reduced to a minimum

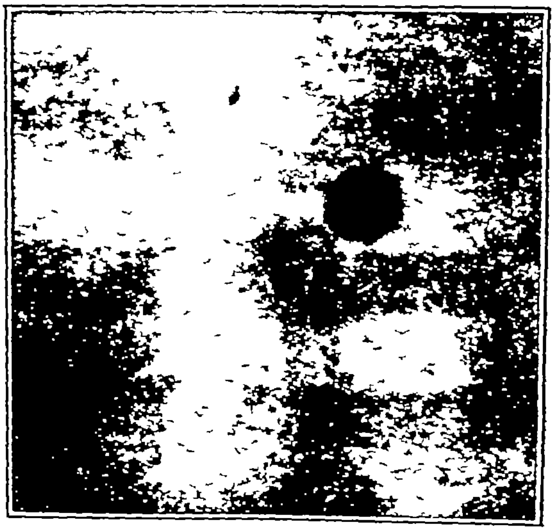
FIG 3



Showing a rifle bullet which has struck the fibula and exploded into minute fragments (Longmore quotes Busch to the effect that rifle bullets on striking bone may actually become melted and divided into numerous slug like particles and that this adds greatly to their destructive effect in wounds)

A lame convalescent returned to hospital will serve as an example of the trouble caused by a bullet lying deep in muscles even though the wound may have healed He was wounded in the back on Oct 22nd of last year and received treatment in two hospitals in England but the bullet was not removed at either On his return to the front he was unfit for duty owing to pain on walking. He also described a loss of sensation over the front of his left thigh On account of these symptoms he was sent to us for extraction of the foreign body A stereogram, not reproduced, showed a bullet pointing downwards lying deep in the muscles of the back on the left side in the angle between the iliac crest and the vertebral column At the operation a small longitudinal incision was made at a somewhat higher level than the situation of the bullet The reason for making it there was to allow of the base of the bullet being grasped The tendon of the latissimus dorsi was cut in the line of the first incision and the fibres of the erector spinæ were exposed Guided by the rays these were split with blunt forceps, and the bullet, which was lying deep in the muscle, was grasped and extracted The whole operation, as is usual, was only a matter of a few minutes The patient was discharged a few days later free from pain and healed

FIG 4



Showing a shrapnel ball (embedded in callus) that had been lying for four months *in situ*—viz. between the third and fourth ribs and on the pleura. It caused pain and incapacity and was removed by operation under the X rays

The wide sphere of usefulness of "the direct method" is shown in the following three cases. In Fig 4 a shrapnel ball is seen lying between the third and fourth ribs The patient, who had been wounded four months previously at the battle of the Yser, was admitted here on Feb 18th of this year He complained of pain in movement of the right shoulder, but there was no shoulder lameness There was a small scar in the posterior axillary fold about the level of the sixth rib This had been the wound of entrance. The radiogram shows two things One is the shrapnel ball between the ribs, four centimetres from the mid line, and the other is that the fourth rib was broken and comminuted. Evidently the ball had passed slightly upwards through the axillary fold and between the scapula and ribs, grazing and breaking the fourth, and lodging in the space above it Subsequently it was found that it had penetrated deeper, for it had passed forwards between the ribs and lay just on the pleura At the operation, the arm being pulled up and out to get the scapula out of the way, a long vertical incision, four inches was made through skin and fascia and also through the tendon of the trapezius. The subjacent muscles the rhomboideus major and then the erector spinæ were split in the line of

REPORT ON A FEW CASES ILLUSTRATING THE REMOVAL OF FOREIGN BODIES ON THE X RAY TABLE

BY JOHN R CALDWELL, M B, CH B ST AND,
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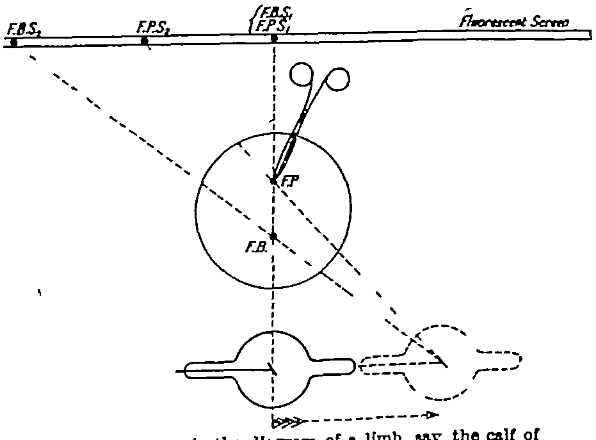
IN a recent article on this subject[1] the more routine adoption of a method of removing foreign bodies under the direct guidance of the X rays was advocated A description in brief of the method employed at the Baltic and Corn Exchange Hospital, Calais, was then given, and it has occurred to us that an account of a few cases might add to the value of the communication

For the benefit of those who have not given the subject of radiography special attention it may be well, as a preliminary, to recapitulate a few facts concerning the rough localisation of foreign bodies in situations not demanding precise and detailed measurements In our recent article we have stated that it is possible to obtain much information during the course of a surgical operation performed upon the radioscopic table by a slight movement of the X ray tube Let us suppose that a foreign body in the calf is to be removed The object is first "centred" The incision is made directly over it, or as nearly so as is consistent with a safe approach The skin, superficial fascia, and deep fascia are divided, and then the light is turned off and the X rays switched on Guided by the screen, closed pressure forceps are pushed a little way into the tissues towards the foreign body The tube is now moved to one side and the relative movements of the shadows cast respectively by the foreign body and the point of the forceps noted Should the former seem to move farther than the latter then the forceps have to be pushed still deeper The reason for this will be readily understood by reference to this simple and self explanatory diagram (Fig 1)

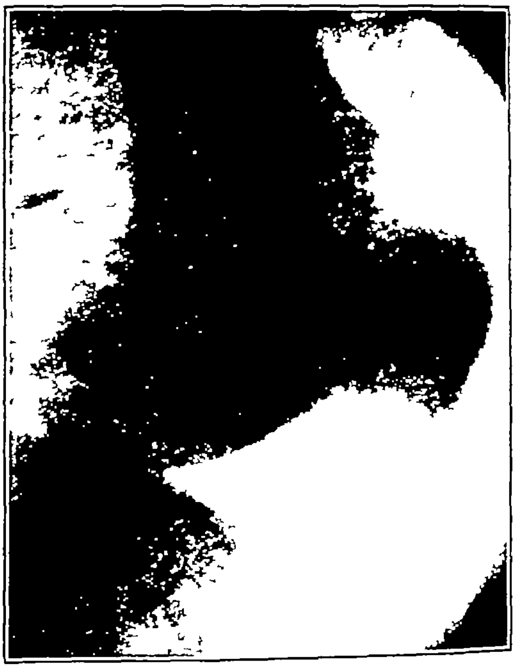
FIG 1



The circle represents the diagram of a limb say the calf of the leg in section in which F.B represents the foreign body and F P the forceps point. Then F B.S. and F P S. represent the shadows respectively of the foreign body and the forceps point on the fluorescent screen when the tube is situated vertically under the foreign body When the tube is moved to one side in the direction of the arrow the corresponding shadows are represented by F B S$_2$ and F P S$_2$

In the removal of minute foreign bodies the greatest difficulty is sometimes experienced, and while, in many cases, these may be well left alone, yet it sometimes occurs that it is most advisable to remove them Of this nature is the case that follows (Fig 2) A private of the 2nd Chasseurs à pied was wounded at Dixmude on March 17th by a small piece of bullet mantle, probably from a ricochet There was a punctiform wound in the outer side of the left thigh four inches above the patella. As the radiogram shows the sharp metallic fragment which caused it had penetrated deep into the popliteal space An incision was made in the line of the tendon of the semitendinosus, and dissection was carried on until the popliteal vessels were displayed The dissection towards the fragment was guided by frequent screening, but, of course, none was done under the rays, except the final extraction of the minute projectile The artery having been recognised by sight and being kept under the finger when the rays were switched on, a pair of closed forceps was introduced and gently pushed through soft tissue till the fragment was reached The foreign body, which was sticking in the sheath of the popliteal artery, was then gently grasped and removed There was no after trouble

FIG 2



Showing a small foreign body in the sheath of the popliteal artery

The minuteness of the foreign body makes the case seem almost trifling, yet the consequence of the presence of such a sharp metallic fragment in the proximity of the artery might have been very serious

Again, minute foreign bodies may act as sequestra and prevent healing, as in the case illustrated in Fig 3 The patient was a cyclist of the 1st Carabiniers and was wounded, eight days after the war began, at Warumme, near Liege He was taken to the Red Cross Hospital there, and carried thence in the retreat first to Louvain and then to Ghent, where he was operated upon, then to Ostend, to Duinbergen, then to England, to Hastings, where he was operated upon for the second time, then back to his depôt in France, whence, on March 19th, he was sent to us for

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[1] THE LANCET April 24th 1915, p 854

THE CHEMISTRY OF RICE-POLISHINGS

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In 1911 we published evidence that beri beri in Malaya is caused by the consumption of polished rice as the staple of diet, and that the substance or substances in rice polishings and in unpolished rice which prevent the disease are soluble in alcohol and are decomposed by sodium hydrate The experiments with sodium hydrate were referred to on page 74 of our report, but as one of the methods since employed by chemists who have sought to isolate the substance has involved the use of barium hydrate it is desirable that details of these experiments should now be given.

From a series of observations it was determined that fowls weighing from 1200 to 1400 grammes ordinarily consumed about 60 grammes of un polished rice daily, and if fed on 60 grammes of polished rice they required in addition 5 grammes of polishings for the maintenance of weight and health The polishings were passed into the crop once daily in the form of an emulsion in water

In our experiments polishings were extracted twice with six times their volume of 0 3 per cent hydrochloric acid The polishings after extraction were tested and found valueless Alcohol was added to the extract so as to bring the mixture up to the strength of proof spirit The precipitate, which consisted of phytin, was rejected The filtrate was nearly neutralised, concentrated at a low temperature, and its volume so adjusted that 30 c c contained the material soluble in proof spirit from 5 grammes of polishings

Eighteen fowls were fed on polished rice and received once daily 30 c c of this solution Their health was unimpaired, as is shown by Table I, which gives the weights in grammes of the first six fowls

Table I

Date	1	2	3	4	5	6
7 8-10	2095	1265	1550	900	1410	1105
11 8-10	2140	1280	1695	850	1430	1160
18 8-10	2100	1380	1655	905	1425	1075
25 8-10	2060	1275	1625	915	1445	1070
1-9-10	2050	1265	1660	935	1460	1100

Another lot of polishings was extracted in the same way and alcohol added to the extract as before To the proof spirit filtrate sodium hydrate was added so as to make a solution containing 0 3 *per cent* of that substance The precipitate was collected and the amount of it obtained from 5 grammes of polishings was given once daily to each of six fowls fed on polished rice The results of this experiment during 12 days are shown in Table II

Table II

Date	1	2	3	4	5	6
5 9 10	1440	1615	1575	1565	1195	1385
12 9-10	1330	1575	1340	1505	1255	1325
17 9 10	1265	1555	1335	1400	1215	1305

The filtrate was neutralised and evaporated at a low temperature until free from alcohol The volume of the solution was then adjusted, so that 30 c c represented the non alkali precipitable material from 5 grammes of polishings Each of six fowls on polished rice received 30 c c of this solution once daily The results of this experiment during 12 days are shown in Table III

Table III

Date	1	2	3	4	5	6
5-9-10	1520	1620	1555	1565	1260	1410
12-9-10	1450	1505	1320	1470	1250	1490
17-9-10	1405	1420	1180	1380	1200	1410

The fowls in neither of these two groups did well and most of them lost weight rapidly On further examination it was found that 0 3 per cent of sodium hydrate did not effect complete precipitation From this it was inferred that the active substance was either separated into two parts or that it has been decomposed by the alkali

It was found that by making the proof spirit alkaline to the extent of 0 5 per cent sodium hydrate precipitation was complete An experiment was then carried out in which fowls on polished rice received daily the alkaline precipitate obtained in this way from 5 grammes of polishings (Table IV)

Table IV

Date	1	2	3	4	5	6
14-9-10	1430	1145	1345	1030	1340	1595
20-9-10	1320	1010	1290	960	1180	1360
27-9-10	1255	915 P	1170	845	1065	1275
29-9-10	—	—	P	—	—	P
1-10-10	—	—	—	—	P	—

P = polyneuritis

It soon became apparent that the fowls were not doing well and the occurrence of polyneuritis ended the experiment In view of the preceding results it was unnecessary to carry out an experiment with the alkaline filtrate The inference from these experiments was that sodium hydrate in weak solution destroyed the active substance

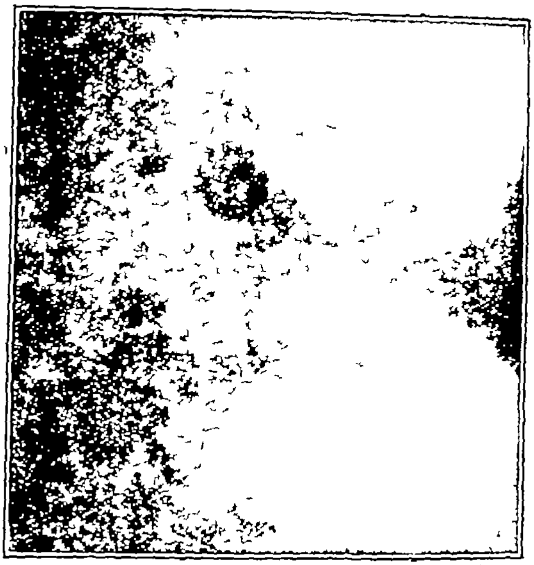
These experiments were not designed to test the destructive effect of alkali, but were attempts to isolate the active substance, and the results were surprising in that so weak an alkali should destroy a body which is not affected by boiling Various other methods were tried without success

Funk continued these researches, and in 1912 announced that he had isolated an organic base which he called "vitamine" and to which he attributed curative properties He extracted polishings with acidulated alcohol and then removed the alcohol by concentration *in vacuo* The residue was mixed with water and freed from fat It was then acidulated with sulphuric acid and excess of phospho tungstic acid added The precipitate was removed and the filtrate, freed from phospho tungstic acid, was found to be ineffective He then mixed the precipitate with *barium hydrate* and removed the barium phospho tungstate The filtrate, he stated, contained ammonia and smelt of methylamine This suggested to us, in view of our experience, that he had decomposed the active substance The further treatment to which he subjected the odoriferous filtrate strengthened that view, and we were unable to reconcile his results with our own From subsequent publications it is learned that he became less certain of the soundness of his results, and in 1913 he stated that two substances were necessary to effect a cure, but a paper which has just been published by Drummond and Funk confirms our findings, for they state that "we have ourselves failed to isolate the curative substance which occurs in rice polishings It is apparently decomposed during the their fibres and well retracted Then under the rays the deep hole thus made was probed with pressure forceps and the point of the forceps could be placed upon the ball with ease The ball could not be grasped, however, and on switching on ordinary light the point of the forceps was found to be on bone On making quite sure of this by repeated screening it became evident that this bone must be callus[2] occupying the width of the interspace Thereupon the callus was chiselled away and the leaden shrapnel ball revealed To get it out it was necessary to chip away a little of the rib, both above and below That done it was lifted from its bed with the utmost gentleness lest the pleura should be damaged The wound was partly closed, but a drain was left in Unfortunately convalescence was delayed by some degree of sepsis which commenced a week later, but on March 16th the patient was fit for discharge to England practically healed

We had one case which specially showed the inefficiency of ordinary methods of localisation as aids to extraction, On screening the region of the hip foreign bodies were seen, a bullet and its mantle The bullet was the darker shadow, lying anterior to the great sacro sciatic ligament During its passage from the wound of entrance, which was three inches below the great trochanter, the mantle of the bullet had been stripped off, and was seen as a fainter shadow behind the acetabulum The bullet was therefore just inside the pelvis, whilst the mantle was left lying rolled up in the dense fibrous tissue behind the joint The patient was wounded in December, and the bullet and mantle were not removed till he came under our care in March We first saw him, however, a day or two after his wound had been received, for he was sent to us by a French hospital for radiographic examination The position of the bullet was then marked on the skin and located at a depth of eight centimetres Armed with this information and with a plate, the French surgeon, a most competent operator, made an incision four inches long in the line of the great sciatic nerve He searched fruitlessly for the bullet, and the patient after 66 days in hospital returned to duty Eighteen days later, on March 11th, he was sent back to hospital on account of pain in walking, and there was tenderness posteriorly over the neck of the femur On the 13th he was operated on for the second time, on this occasion at the Baltic Hospital A three inch incision in the line of the great sciatic nerve, and then splitting of the gluteus maximus in the line of its fibres were the initial stages of the operation. Then the rays were switched on, and by blunt dissection the bullet located It was levered up from its bed by an elevator pushed gently under its lower pole and removed by forceps The mantle was extracted without difficulty When the soldier left the hospital a week later his wound was healed and his pain had gone

The minimum of damage is done to the tissues by "the direct method." Of this fact the case illustrated by Fig 5 affords a striking example The story is a simple one The man was wounded in the neck at Antwerp on Sept 11th, but did not come into our hands until March 7th He had been to England in the interval and his wound had healed, but he still had pain in his neck, and was sent to us on that account The scar was an inch to the left of the sixth cervical spine The X rays showed a shrapnel ball lying between the transverse processes of the first and second dorsal vertebræ A vertical incision was made over it through the skin and the aponeurosis of the trapezius The muscles were split in the lines of their fibres and then under the rays the forceps was inserted and the ball grasped and removed Eleven days after he had been admitted the patient was discharged free from pain and healed

FIG 5



Showing a shrapnel bullet lying between the transverse processes of the first and second dorsal vertebræ

It has been urged by some that this method of operating holds considerable danger for the surgeon, but after six months of operating by it I may say, speaking personally, I have had no trouble Working with the smallest diaphragm available it is possible to keep the hands almost always out of the "direct line of fire" We take the precaution to smear the nail beds with flexile collodion before each operation Two pairs of rubber gloves are worn, an outer thick pair which can be removed when the extraction is completed, and an inner thin pair for more delicate work

During the past six months upwards of 132 wounded patients have been admitted to the Baltic Hospital with projectiles still lodged in the tissues In many wounded by artillery several shrapnel balls or fragments of shell casing were present In all except four instances the foreign body has been removed, and in the great majority this has been accomplished by operating directly under the X rays

In conclusion, I wish to acknowledge my indebtedness to Dr L J Picton (St John Ambulance), surgeon and registrar, for his help in compiling these cases My thanks are due also to Dr H R Ramsbotham, B R C S, and Lieutenant A E Chisholm, R.A M C, for their permission to publish two of the cases which were respectively under their care

Baltic and Corn Exchange Hospital, Calais

BRISTOL INSURANCE COMMITTEE —This committee reports that in Bristol there are 133,578 members of Approved Societies and 2056 deposit contributors

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[2] The callus being recent is evidenced by the merest cloud on the skiagram

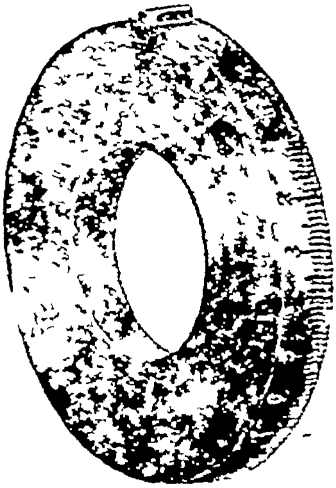
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

SHELL WOUND OF THE LEFT SHOULDER, EXTRACTION OF FRAGMENT FROM THE NECK.

By J B Haycraft, M B Edin ,
LIEUTENANT R.A.M.C (TEMPORARY)

A PRIVATE of the Guards was admitted on Nov 3rd, 1914, with a shell wound on the back of the left shoulder, which he had received three days previously The wound, which was oval in shape, with jagged edges, and about the size of a five shilling piece, was situated almost exactly over the back of the joint The exposed muscle and fascia were greenish black in colour, and there exuded a lot of brown coloured foul smelling fluid, together with bubbles of gas and broken down blood clot The shoulder, back, and left side of the neck were greatly swollen, and the skin over a wide area was discoloured, being of a bluish colour close to the wound fading away to a yellowish brown with an apparently raised edge The head was held rigid, any movement of the neck causing severe pain There was a great deal of dyspnœa, the patient having to be propped up in bed, and he could only swallow liquid food with difficulty He had a high temperature and sweated profusely, showing signs of septic absorption The wound was probed, but nothing was detected neither could anything be felt on palpation of the neck or back Owing to the valvular nature of the wound the finger could not be inserted for any distance



Time train" of a German shell exact size extracted from the wound

Nov 7th The wound had been syringed out twice daily with hydrogen peroxide and the patient's general condition was much improved Œdema and discolouration were less marked and breathing was much easier though there was still considerable difficulty in swallowing A localised swelling was now apparent in the left supraclavicular space it was slightly red extremely tender and on percussion yielded a resonant note

Under chloroform an incision about 2½ inches in length was made over the swelling in the posterior triangle of the neck Its direction was diagonal from above downwards and inwards On dividing the deep fascia some gas and foul smelling fluid escaped, and on exploring with the finger a large cavity was found in which a foreign body could be felt at a considerable depth from the surface The incision, being too small to permit of its extraction, was enlarged, the external jugular vein being divided between forceps and ligatured The body removed proved to be the circular movable "time train" of a German shell It is situated just behind the apex of the shell, and can be moved round regulating the time at which the shell will explode after being fired It weighed 6¼ oz and was lying in a slanting direction pressed up against the great vessels, œsophagus, and prevertebral muscles A drainage tube and gauze packing were introduced

Nov 8th to 16th —The wounds were syringed through twice daily with hydrogen peroxide and sloughs removed The swelling and discolouration gradually disappeared and all difficulty in breathing and swallowing was relieved The patient was discharged on Nov 16th, the wounds being practically clean

The points of interest in the case are (1) The small size of the entrance wound compared with the diameter of the piece of shell, (2) the presence of so large a foreign body in the neck which could not be detected by palpation, and (3) its close proximity to several vital structures without proving fatal The illustration represents the actual size of the object

A CASE OF INTESTINAL OBSTRUCTION DUE TO A GALL STONE,

IN THE COURSE OF WHICH NUMEROUS GALL STONES WERE VOMITED

By A R Neligan, M D Lond , M R C S , D T M & H Cantab ,
PHYSICIAN TO THE BRITISH LEGATION TEHRAN

CASES of intestinal obstruction due to gall stones are recorded in medical journals fairly frequently, but the vomiting of gall stones must be, I think, an event of some rarity However that may be, my small library makes no mention of it, and so I venture to describe the first case of which I have heard

The patient, an enormously fat Russian woman, 55 years of age and of alcoholic habits, was seen early on August 14th 1914 for diarrhœa, vomiting, and abdominal pain These symptoms had come on during the night, and were ascribed to a surfeit of grapes on the previous day There seemed to be no doubt of this for, before I left the house, she vomited a quantity of grape pips and skins, a fact which moreover suggested that her stomach was dilated A large drink of warm alkaline water was prescribed in order to wash out the stomach, to be followed by calomel in fractional doses In the evening I was called to see the patient again The diarrhœa had stopped before midday—in fact, no flatus had been passed since that hour the vomiting was as bad as ever and the vomit consisted of bile and mucus The pain was coming on in severe paroxysms it was felt all over the abdomen but was particularly severe in the right hypochondrium The abdomen was more distended than in the morning nothing definite could be felt in it or per rectum fractionation and all trace of it is lost" Through the complicated processes to which the extract was subjected by them it is unnecessary for us to go, save to express the belief that the decomposition was, in part at least and perhaps entirely, due to the use of baryta

The existence of "vitamine" in the sense that Funk employed that word is therefore disproven The word itself is not objected to and may be applied to the substance when it is isolated, but the premature publication of results which, on the findings of the writer himself, are subsequently shown to be erroneous creates confusion and retards progress At the present day the problem is no nearer solution than it was four years ago, nor is progress likely to be made until improvements are effected in the methods employed by chemists in this work, those now employed are crude and imperfect

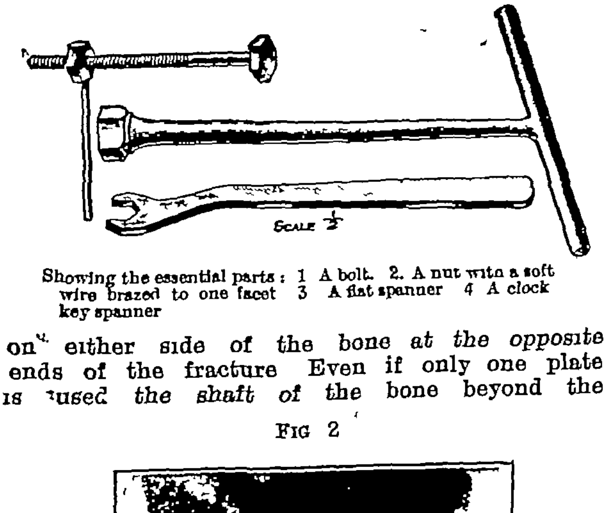
Bibliography—Fraser H, and Stanton A. T Studies from the Institute for Medical Research No 12, 1911. Funk, C Journal of Physiology vol. xliii p 395 1911. Ibid, vol xlvi p 173 1913. Drummond J C, and Funk C Biochemical Journal vol. viii p. 598, 1914

Kuala Lumpur

A BOLT FOR THE TREATMENT OF FRACTURES

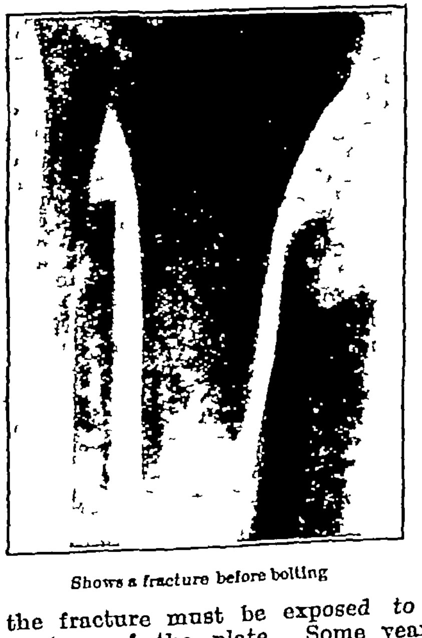
BY CUTHBERT WALLACE, M B, B.S LOND, F.R C S ENG,
SURGEON ST THOMAS'S HOSPITAL JOINT LECTURER ON SURGERY IN THE MEDICAL SCHOOL.

FIG 1



Showing the essential parts: 1 A bolt. 2. A nut with a soft wire brazed to one facet 3 A flat spanner 4 A clock key spanner

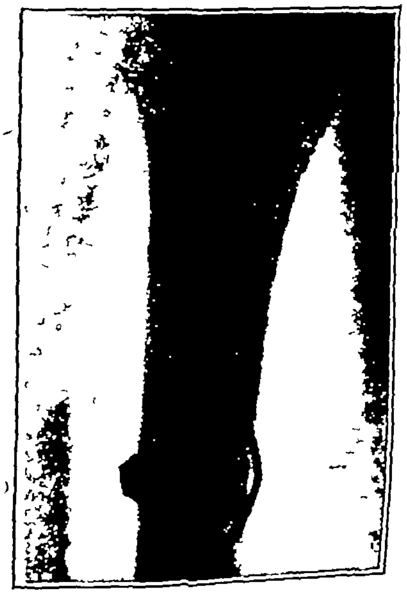
FIG 2



Shows a fracture before bolting

THE plating of a long oblique fracture presents some difficulties To ensure complete fixation two plates are required, one on either side of the bone at the opposite ends of the fracture Even if only one plate is used the shaft of the bone beyond the end of the fracture must be exposed to allow the application of the plate Some years ago I devised a bolt (Fig 1) for the treatment of long oblique fractures and have found it useful in fractures which are only slightly oblique

FIG 3



Same as Fig 2, after bolting

The mode of application is as follows The fracture is reduced A hole is then bored through the centre point of the fracture with a Morse drill The axis of the hole should be at right angles to the axis of the bone. If the fracture is not very oblique it is best to set the bolt somewhere near a right angle to the fracture The hole should allow the bolt to pass easily The bolt is pushed through till the end just emerges on the opposite side. (Figs 2 and 3) The nut is then taken up by the wire and held so that the bolt can engage when turned by the clock key spanner The bolt is then screwed home, rotation of the nut being prevented by traction on the wire Very little force is necessary to bring about complete fixation of the fracture When this is accomplished the protruding end of the bolt is cut off by a pair of screw cutting forceps The wire is then bent round the bone to the head of the bolt and the redundant part cut off The object of leaving the wire *in situ* is that the nut can easily be withdrawn if it is necessary to remove the bolt when union has occurred If the bolt passes obliquely to the axis of the bone shaft the head can easily be housed by cutting away some of the shaft

Upper Wimpole-street W

that an emulsion of a large mass of fæces could be used which was advantageous Four drops of good size were then dropped on to a gelatine plate by a Pasteur pipette and rubbed well over its surface until almost dry The middle part of the plate was then exposed to the light, the lateral parts acting as controls With successive exposures of a few seconds more and more of the surface in sections was protected from the light, so that different parts of the plate were exposed for different periods The electrode could be of iron aluminium, platinum, gold, or silver, the last being preferable as far as had been found at present This electrode closely apposed a hollow tube containing a smaller hollow tube Cold water flowed in through the inner tube, impinged on the electrode and flowed out through the outer tube In this way a perfectly cold light was assured and fusing of the electrode safeguarded.

Professor DREYER also demonstrated shortly the agglutination method which is associated with his name[*] By it the temperature was kept constantly at 55° C, the culture was one of dead organisms and consequently constant also The advantages he claimed for it were that co-agglutination did not occur, that the end point of reaction was reached practically at the end of half an hour, and that a constant temperature and emulsion of organisms being employed the agglutinating powers of sera could be strictly comparable

Dr AINLEY WALKER said that the advantages of the arc light method were its rapidity the large amount of material which could be examined and the avoidance of the gradual dying out of organisms which occurred by using media The agglutination method he considered to be certain and reliable and an easy method of distinguishing an active case of typhoid fever from a case in which immunity had been attained It allowed of a comparison being made between the agglutinating power of the patient's sera on succeeding days The cultures could be used in very high dilution

SECTION OF PSYCHIATRY

The Thyroid Gland and Mental Disorder with Especial Reference to Hypothyroidism—Exhibition of Cases and Specimens

A clinico-anatomical meeting of this section was held on April 28th at Claybury Asylum, by the courtesy of Dr Robert Armstrong-Jones, under the presidency of Dr F W MOTT F R S

Dr M KOJIMA read an interesting paper setting forth the results of examination of the thyroid gland in 110 cases of mental disorder with especial reference to hypothyroidism In this consecutive series all the ductless glands were carefully removed from the body, then freed from their surrounding tissue and weighed The minimum average weight of the thyroid in the non insane was 22 to 25 grm In the average insane person the weight was much less—namely about 16½ grm in males and 16 87 grm in females but there was considerable variation in the weights among the insane especially in females He considered that all these cases exhibited hypothyroidism The weights of the external parathyroid in 41 cases varied from 0·01 to 0 07 centigramme In a third of the cases four glands were found The weight of the pituitary body seemed to have no relation to the nutrition of the body or to the form and duration of the insanity The adrenals of the male were heavier than in the female, and there was no relation of their weight to that of the body No definite conclusion could be arrived at regarding the weight of the reproductive glands in the male and female in relation to body weight or mental disease, except that in congenital imbecility and dementia præcox the ductless glands were all below the average weight The paper was illustrated by a number of microphotographs

The PRESIDENT gave a microscopical demonstration of the changes in the nervous system in hypothyroidism He discussed the changes he had found present in the nervous system in six cases of the condition These chromolytic changes he first observed ten years ago in a case of myxœdema which was under his care at Charing Cross Hospital, as reported to the International Medical Congress at Lisbon in a communication entitled "Cerebral Lesions in Relation to Disturbances of Toxic Origin" Mr Arthur Edmunds working in his laboratory had found similar changes in dogs from which the thyroid gland had been removed The changes in question were not specific of hypothyroidism, this metabolic change in the cells had been found in other conditions also In the Proceedings of the Society in 1913 (Vol. VI) he gave an account of the microscopical investigation of the nervous system in three cases of spontaneous myxœdema In the case of a woman whom Dr Armstrong Jones had sent for him to see there was anæmia but the only signs of hypothyroidism present were slight dryness and harshness of skin, a malar flush and slowness of speech She showed marked confusion She died shortly afterwards and he (Dr Mott) examined the thyroid gland and nervous system As the changes seen in her had been since found also in three other asylum cases the faults which had been described by Dr Kojima might be regarded as established, seeing that these had now been found in six cases The thyroid showed only a few remnants of glandular structure amid the lymphoid structure and a large excess of fibrous tissue The autonomic centres in the medulla were more affected than were the other cells but all the cells of the central nervous system and spinal ganglia, especially the small viscero-vascular cells, exhibited some chromolytic change The processes were but indistinctly seen and the nucleus was excentric He specially wished to show the changes in the cortex so as to correlate the mental symptoms with the changes in the cortical cells These he demonstrated by a series of slides A section from the cardio inhibitory centre in a typical case of myxœdema showed a pericellular chromatolysis in all the cells Similar changes were seen in the glosso-pharyngeal nucleus and the psychomotor cortex, the cortical pyramidal cells had lost their position and instead of lying in columns with the apical processes pointing upwards, they were twisted from side to side A superficial layer of the cortex stained with Victorian blue, showed a network of glial cells and a superficial felting in the cortex owing to the extreme glial proliferation A low power slide showed that the columns of Meynert, formed by the pyramidal cells and their processes were too indistinct to be recognised their places being partly taken by nuclei of proliferated glial cells In these cases there had been a change which led to the disappearance of the substance known as the Nissl substance, which probably occurred on account of an alteration of the osmotic conditions of the cells allowing water to pass in and swell the cell If, as was supposed, this basophile substance was the kinetoplasm, this change constituted a physical reason for the slowness of speech and cerebration which these cases manifested The President also showed slides of ganglion cells in the living stage, as viewed with the dark ground microscope, an enormous number of highly refractile granules were seen in the cell The little granules of fluid were enclosed by a thin membrane which stained blue and this formed the Nissl granules when death occurred This change could be watched His view was that these granules formed an enormous oxygen surface because if they were stained blue and placed in an atmosphere of nitrogen in a warm chamber the colour disappeared, but on letting oxygen in the colour returned I would be important to be able to prove that the Nissl substance was the energy substance for in hypothyroidism there was a definite lack of that substance and it would account for the loss of mental capacity and of alertness of response observed in these patients

Dr ARMSTRONG JONES exhibited a number of cases of Hypothyroidism a condition due to loss of function of the thyroid gland He said that though Schiff described cases of this condition in 1859 Gull in the "sixties," Ord in 1880, Kocher in 1883 and Sir George Savage over 30 years ago in Tuke's "Dictionary of Psychological Medicine" where the association with insanity was indicated it was through the special interest of Dr Mott that the question was now raised in its bearing on insanity or mental disease, for he made the relation of the ductless glands (thyroid suprarenal pituitary ovaries and testicles) the subject of his address last year Sir Victor Horsley had demonstrated the effect of removal of the thyroid A committee of the Clinical Society of London also studied the question and it was known that the condition cachexia strumipriva allied in all respects to myxœdema was induced in animals by removal of the thyroid gland and that this could be prevented by transplanting the thyroid of an animal into the peritoneum Sir William Osler had stated that the

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[*] THE LANCET, [illegible]

A fact in the patient's previous history now assumed importance—namely, that some six months before I had seen her in consultation on account of prolonged fever and obstinate constipation She had then an enlarged and tender liver, continuous with the lower border of the right lobe and extending to the navel was a large tender mass There was a leucocytosis of 25,000 The diagnosis lay between abscess of the liver and cholecystitis An operation was recommended, but was refused The patient slowly recovered and the tumour disappeared as I was afterwards told

From her present symptoms I therefore came to the conclusion that she was suffering from biliary colic with reflex paralysis of the bowel The usual remedies were ordered as well as large enemata During the next day the vomiting continued and the vomited matter took on a fæcal odour, the pain increased, the abdomen became greatly distended, the pulse weaker and more rapid The bowels had not acted in the night, nor had flatus been passed While I was in the room that morning the patient vomited into a metal vessel, and I was attracted by a sound which suggested that a charge of buck shot had been fired into it On examination a number (about 30) of small faceted gall stones were found, the largest of which was about the size of a dried pea. The patient said she had vomited a smaller number of similar stones some hours previously

It was now evident that the woman had intestinal obstruction. Further, it seemed reasonable to suppose that no other cause having been found, the obstruction was due to a gall stone which had escaped from the biliary passages into the bowel As she was obviously going down hill I advised that laparotomy should be done This was refused by her medical attendant on the ground that she ought to have had an operation six months before, but had got well without one This seemed rather curious reasoning at the time, but later events justified it

On the morning of August 16th the patient was still weaker A variety of enemata had been tried without result, but a little flatus had been passed The abdomen was still more distended That evening I was called to see her again I found her looking better and wearing an almost triumphant smile. Apparently she had felt very ill during the afternoon and had asked her master to give her some champagne He had sent her a bottle She drank a glass and felt better and had a strong desire to go to stool She passed flatus, liquid fæces, and something hard which made such a noise in the utensil that "she and everyone else were frightened" This turned out to be a gall stone Unfortunately, the family's curiosity had been too much for them and the stone had been broken with a hammer What was left showed that it must have been roughly round in shape and three centimetres in diameter, it must have weighed about 16 grammes There was one large facet The stone consisted of cholesterol with an external coating of phosphates 1 millimetre thick

The patient made a good recovery, and her abdomen shows no signs of the stormy events which had taken place inside it She has now been quite well for three years, this in spite of the fact that she looks upon champagne as a sovereign remedy and does not at all approve of the Russian campaign against vodka Surely Nature has never made a more determined or a more successful effort to get rid of gall stones

Tehran

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF PATHOLOGY

Tyrosine as an Aid in the Demonstration of the de novo Origin of Living Organisms —Aneurysm of the Left Ventricle —Arc Light Method of Isolating Typhoid Organisms, and Agglutination Method

A MEETING of this section was held on May 4th, Dr F W ANDREWES, the President, being in the chair

Dr H CHARLTON BASTIAN read a paper on the Importance of Tyrosine as an Aid in the Demonstration of the Present day *de novo* Origin of Living Organisms He said that the incredulity with which the results of experiments showing the occurrence of "spontaneous generation" called by him "archebiosis," had been received had given rise to attempts to explain them away by one or other of three suppositions (1) that the bodies found were mere simulacra or pseudo-organisms, (2) that the organisms found were dead, and having pre existed in the experimental solutions were killed by the sterilising process, and (3) that the alleged organisms had not really been taken from the tubes but had come from an impure pipette, or dropped from the atmosphere on to the microscope slide before the cover glass had been applied He adduced evidence to show that the last view was untenable To dispose of objections (1) and (2), tyrosine had proved valuable since the use of a small quantity of a very dilute solution of this substance caused the living organisms that might be present to grow and multiply freely Its effect was noted on the contents of tubes which were fairly ripe for examination—i e, seven to nine months after sterilisation. From each tube that was opened a sample of the deposit was taken with a well sterilised pipette and then with another pipette about 20 drops of the sterilised tyrosine solution were added The tube was then securely closed and again placed in the incubator or exposed to light After three or four weeks each tube was opened again and another sample of its deposit was withdrawn, stained, and compared with the earlier sample All of about 40 of these tubes that had been examined had shown a very remarkable increase in the number and size of the organisms The unmistakable growth and multiplication of the organisms effectually negatived the suppositions that they were either simulacra or dead. When tyrosine was added to new tubes, however, every one remained sterile, which seemed to indicate some harmful effect of the tyrosine on the solutions This result, though unexpected, told strongly against supposition (3)

Dr R HINGSTON FOX exhibited a specimen of Aneurysm of the Left Ventricle The aneurysm projected from the apex of the heart and was about as large as a cricket ball. Over it the pericardium was adherent. The aortic valve showed sclerotic changes and a coronary artery some thickening of its walls Both kidneys were enlarged, adherent to the perinephric fat, and contained calculi, one as large as a walnut Some of the distended loculi contained pus and one a yellow substance of amber hue, which could be cut easily with the knife No changes attributable to syphilis were found elsewhere in the body

Professor G DREYER and Dr E W AINLEY WALKER demonstrated the Arc Light Method of Isolating Typhoid Organisms devised by the former[1] Professor Dreyer said that the results of light on micro-organisms had been much confused with those of heat Speaking of the powers of different parts of the spectrum, in this respect, he said that a great effect was caused by the ultra red rays but the maximum effect was shown by the ultra violet The intervening parts of the spectrum were less effective, gradually strengthening from red to the first part of the ultra violet, but weakening somewhat at the violet. The effect of light on micro-organisms could be studied in detail by using clear glass, blue glass, quartz, or a solution of potassium bichromate It was possible by means of selected light to isolate micro-organisms, even when this was impossible by ordinary bacteriological methods Speaking of the application of the method to typhoid fever, he said

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[1] THE LANCET, March 27th, 1915, p 648

Mr H G ARMSTRONG related his experience of an epidemic, commencing on Jan 24th last, of cases of an indefinite febrile nature characterised by œdematous throats, cough of a laryngeal type little or no expectoration, and slow pulse Ninety four cases occurred by Feb 8th At this date relapses began to occur. On the 12th a woman exposed to the infection of these cases was taken ill with what was at first considered influenza. She died from meningitis on the 23rd A baby 1 year old exposed to infection from this case on Feb 19th sickened on the 23rd and died on the 24th from cerebro-spinal meningitis On the 18th, among the cases of relapse an eruption of a roseolar type was noted, mostly confined to the abdomen, forearms and legs In one case the eruption was general and resembled measles, in another it resembled scarlet fever Several cases had herpes labialis and other painful erythematous patches With one exception all made a speedy recovery, but the first case of the series developed cerebro-spinal meningitis, confirmed bacteriologically Another case occurred on March 5th and the patient died within 24 hours, meningococci being found in both blood and spinal fluid All cases of relapse with rashes had vomiting of straw coloured fluid

Dr H LYON SMITH and Sir JOHN BROADBENT the latter of whom discussed the mechanism of the infection, also spoke

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF SURGERY

Localisation of Modern Projectiles with Reference to a Special Method of Surgical Technique in their Removal

A MEETING of this section was held on April 9th, Mr H STOKES being in the chair

Dr W S HAUGHTON in opening a discussion on the above subject gave an account of the different methods of localisation in use, and described in detail the method which he recommended as the simplest and most exact He then gave the surgical details he advocated in the removal of foreign bodies, and described fully a case he had recently under his care of a bullet lodged deep in the spinal muscles of the neck

Mr M R. J HAYES said that if Dr Haughton had succeeded in spanning the gulf between the radiologist and the surgeon he was to be thanked, as in no department of their work was the gap so great between the radiologist and the surgeon as in the localisation of foreign bodies He agreed with Dr Haughton that the most accurate method of localisation was the Mackenzie Davidson method It was more complicated than the methods usually employed, but he considered that the additional labour was fully repaid by the results He considered Henderson s method which was very expeditious and if properly carried out was fairly accurate not at all as good as the Mackenzie Davidson He suggested that in the localisation of bullets which were fairly large what was wanted was to get a fairly accurate method which was at the same time easy of employment and he thought that with further experience of the triangular method it was quite probable that the results would be better than they had hitherto been In looking for fairly large foreign bodies if one could get within 2 or 3 millimetres there would be no difficulty in finding them and it was only in the case of foreign bodies in the eye that one would be driven to the use of the more difficult method of Mackenzie Davidson Mr Hayes suggested that there were a great many foreign bodies which would be far better left alone and he had seen cases in which the attempts at removal had done far greater damage than would have arisen had they not been interfered with Referring to the interpretation of radiograms he agreed with Dr Haughton that no one was in as good a position to know the exact site in the limb of a foreign body as the radiographer He suggested that even the expert radiographer, if given a perfect skiagram and asked to locate the foreign body would experience as much difficulty as the surgeon who had not the experience A point which should not be lost sight of in attempting to find a foreign body was the position which the limb was in at the time of localisation and it should also be remembered that the approximation of depth was always open to error as the substance being dealt with was subject to alteration by gravity and pressure Another point of importance which should be attended to by surgeons was that when cutting down upon a foreign body it was very easy at the commencement of the incision to follow a line which one believed to be in the direction of the bullet, but one might go a little to one side, and by the time the object was reached, if it was deeply situated, he would be well to one side or the other

Mr W I DE C WHEELER said that a point which struck him was that if the bullet was localised and not found the whole fault lay with the surgeon, and this he agreed with to a certain extent

Mr P E HAYDEN agreed with Mr Hayes that failures were often due to the deepening of the wound not being done quite in line where the incision was made He suggested that a very valuable help in avoiding this mistake was first to mark the sites on the skin at either end of the wound In deepening the wound it was advisable to look along these marks

Mr C M BENSON also referred to the difficulty of cutting down straight upon the foreign body, and suggested that this difficulty was removed by Dr Haughton's idea of putting down a long sterile probe, and he thought that if two of them were used one could be absolutely certain of going in the right direction without being dependent on the eye to correct any retraction on the wound

Dr HAUGHTON, replying to the remarks, said he agreed with Mr Hayes that in some cases very accurate methods of localisation were not required He also admitted that if a bullet was lodged in a muscular pad it might safely be left there, but in his paper he assumed that the cases to be dealt with were those in which it would be considered desirable to operate The influence of gravity in the localisation he had not lost sight of, and he considered it an important point which should be taken into account He avoided suggesting any screening methods which involved length of time on account of the evil results of excessive exposure, and he would earnestly exhort everyone to keep away from screening as much as possible He considered that the little gauge wire and the sterile needle demonstrated by him would be of the greatest assistance to the surgeon

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WEST LONDON MEDICO-CHIRURGICAL SOCIETY — A meeting of this society was held at the West London Hospital on May 7th Dr S D Clippingdale being in the chair—Dr H J F Simson read a paper entitled "Some Developments in the Management of Labour" He began by pointing out how often it happened among married women of every class of society that when they came to consult their medical attendant they dated the beginning of their ailment from the last confinement Such a state of affairs went to prove that the methods generally practised left some room for improvement With regard to the question of a painless labour, about which so much had been said lately in the lay as well as the professional papers, the results of using morphine and scopolamine to produce the so-called "twilight sleep" were not so free from objection as many wished the profession and the public to believe It was not free from risk either to the mother or the child There was little doubt that the use of chloroform increased the risk of post-partum hæmorrhage, and the after effects were often so unpleasant that multiparæ frequently preferred to endure the pains of labour during their later confinements However desirable it was to enable labour to take place without pain, the fact remained that it was not yet possible to do this in all cases without risk The greatest source of danger from external help lay in the possibility of puerperal infection. It was quite true that the absolutely sure way of preventing avoidable infection was to depend on abdominal palpation for diagnosing the position of the fœtus, and if one waited until there was pressure on the pelvic floor before giving chloroform one could be more or less certain that the os was fully dilated Before this stage of labour was reached, however, the patient often suffered a lot of pain For instance, a slightly œdematous anterior lip coming down in front of the head often prolonged the last part of the first stage by half an hour or more besides causing much pain. How much better it was to push the anterior lip up between the pains, this would entail passing the finger into thyroid became congested at puberty and during menstruation, also in women at the defloration period Also, that the gland, or a lobe of it, became enlarged in conjunction with recent syphilis or secondary to infection Baumann demonstrated that the nucleo albumin of the gland contained a large percentage of iodine, and that it was present with protein matter within the vesicles of the thyroid, also that the gland manufactures some thyroantitoxin, and forms an internal secretion having the characteristics of an alkaloid This substance had a profound physiological effect on the whole organism through the medium of the blood, for it acted as a hormone to other glands, while its absence was followed by physical and mental disturbance On the physical side hyperthyroidism caused tremors, twitchings, tachycardia, headache, and prostration Hypothyroidism caused an overgrowth of the subcutaneous tissue, the hands became unwieldy, the skin rough and harsh, and the hair disappeared or became sparse and wiry On the mental side there was apathy, listlessness, and inactivity Pawlow had shown how glandular secretions could be influenced by the emotions In children absence of the thyroid produced sporadic cretinism and, possibly, idiocy of the Mongoloid type In adults its absence eventuated in myxœdema It was not by any means easy to recognise during life all cases of hypothyroidism, as some of the symptoms, such as tremor, seizures, and the mental reactions, were common to alcohol and general paralysis

Dr **LENA BEACH** exhibited and demonstrated a case of Disseminated Sclerosis

Dr **SANO** reported the result of his anatomical investigations regarding speech functions in a case in which there was a cyst of the left hemisphere, dating from birth or shortly afterwards The lesion had destroyed the whole of the centrum ovale on the left side, but, notwithstanding that, the man had been able to earn his living as a clerk The cortex remained, but practically the whole of the projection system was destroyed.

HARVEIAN SOCIETY OF LONDON

Discussion on Cerebro-spinal Meningitis

A MEETING of this society was held at the Stafford Rooms, Titchborne street, W, on April 22nd, Dr G DE B **TURTLE**, Vice President, being in the chair

In a few well chosen words Dr **TURTLE** expressed the great regret with which the news of the death of the President of the society, Dr Edgar G Bulleid, had been received, referring in terms of appreciation to the great services he had rendered to the society A resolution embodying the latter sentiments was passed, and an expresion of sympathy was sent to the widow

Dr Turtle was then unanimously elected President for the remainder of the session

Dr F E **BATTEN** opened the discussion on Cerebro-spinal Meningitis with a paper which was published in THE LANCET last week (p 964)

Dr **DAVID NABARRO** gave a résumé of the history of the bacteriology of the disease from the discovery of the meningococcus by Weichselbaum in 1887 down to the latest work upon the subject during the recent epidemic He then described the morphology and biology of the meningococcus, and gave an account of its occurrence in the human body The changes in the chemistry and cytology of the cerebro-spinal fluid in meningococcal meningitis were described, and the alterations which are brought about by injections of serum Finally, he showed a number of lantern slides of the meningococci in the cellular deposit of the cerebro-spinal fluid and in culture

Dr J A **ARKWRIGHT** dealt with the epidemiology of the disease He divided the history of the epidemiology into three periods (1) Before the discovery of the meningococcus, (2) the period commencing with the isolation and description of the diplococcus intracellularis in 1887, and (3) the period introduced by the discovery of the organism in the naso-pharynx of a patient and one carrier by Albrecht and Gohn in 1901 He then dealt with the large epidemics which have occurred since that date The question of carriers was next considered It had been shown by various observers that though the carriers were usually free from the meningococcus in two or three weeks a small percentage were still carriers after two or even seven months, and Mayer had related a case probably existing two years Carriers might develop meningitis after two or three weeks, and no doubt all cases were carriers for a longer or shorter period Subjects of meningitis must be looked upon as persons who in the course of a pharyngeal infection developed meningitis as a complication. The bacteriological examination of contacts was next referred to and the differential diagnosis between the meningococcus and other Gram negative cocci found in the naso pharynx discussed Prophylaxis was then dealt with The detention and isolation of carriers early in the epidemic whenever possible were advocated, with the avoidance of overcrowding and the breaking up of large bodies of troops into smaller units The value of prophylactic vaccination was as yet uncertain The morbidity, contagiousness, and seasonal variation were next discussed The variation of the number of carriers among contacts in different epidemics was alluded to Among 300 soldiers who were contacts Dr Arkwright and his colleagues only found four carriers In other epidemics as many as 23 and 32 per cent had been found by various observers In conclusion, he said that there were many points still requiring elucidation

Dr L **COLEBROOK** spoke of the treatment of meningococcus infections by vaccines He suggested that this procedure should not be considered as alternative to the intrathecal injection of serum, but rather as complementary to it By the use of serum it was hoped to check the multiplication of meningococci in the cerebro spinal fluid, and possibly to promote their destruction by phagocytosis, and it remained for the patient's own antibacterial defences to deal with the microbes which had established themselves in the meningeal and cortical tissues—the more serious factor in the infection By the inoculation of vaccine into uninfected tissues it was sought to whip up these antibacterial defences to a maximal effort Dr Colebrook referred briefly to his experience of about a dozen cases—some of the "posterior basic," others of the epidemic type—of meningococcal meningitis, in which vaccine had been used He had several times seen the temperature come down promptly and the patient's condition improve in a manner which strongly suggested that the inoculation of vaccine had exercised a favourable influence on the infection But sometimes it seemed that very serious injury had been done to the central nervous system by the invasion of the cortex, blocking of the foramina, &c, in the days or weeks of the disease prior to the commencement of vaccine treatment, and in these cases, although the infection might be controlled as evidenced by the temperature, the taking of food, and so on, yet full recovery was very slow or did not ultimately occur It was, therefore, of great importance to exploit the vaccine very early in the disease, for choice on the second or third day Probably nothing was to be hoped for in the fulminant cases which ran their course within 24 hours, as the patient s response to vaccine would not be affected within a few hours at least, possibly a day or two It might even do harm to inoculate a patient so suddenly overwhelmed with his infection In view of the marked difference to reaction towards immune sera displayed by meningococci of various origins, it would seem best to use an autogenous vaccine whenever possible but during an epidemic it was certainly worth while to try the effect of a polyvalent stock vaccine Such a vaccine had recently been prepared at St Mary's Hospital from some 15 strains isolated in various parts of the country In reference to dosage of the vaccine, Dr Colebrook suggested that the foremost consideration was the avoidance of any congestive focal reaction, particularly in cases with marked cerebral symptoms He had seen the best results with doses of from 2 000 000 to 5,000 000 cocci in young children and 7,500,000 to 20,000,000 in adults Such small doses should be repeated every third or fourth day Replying later to a question by Sir **JOHN BROADBENT**, he said he had recently used the stock vaccine above referred to for the prophylactic inoculation of persons exposed to the danger of meningococcal infection and of carriers He had hoped that the vaccine might help to get rid of the microbe from the naso pharynx of carriers, but this had not happened with any regularity He had used doses up to 2,000,000,000 subcutaneously and 300 000,000 intravenously for these purposes There was usually no general reaction except after the intravenous doses

Reviews and Notices of Books.

The Brain in Health and Disease.

By JOSEPH SHAW BOLTON, M.D., D.Sc. Lond., F.R.C.P. Lond., Professor of Mental Diseases, University of Leeds, Medical Director, West Riding Asylum, Wakefield, &c. London: Edward Arnold. 1914. Pp. 479. Price 18s. net.

THOSE who have followed with interest and instruction Professor Shaw Bolton's researches on the correlation of cerebral structure and cerebral function and of mental symptomatology and cerebral pathology—as epitomised, for instance, in his recent Goulstonian lectures—will extend a ready welcome to this more ambitious volume, in which he deals with his systematic researches of some 18 years in a comprehensive fashion. In a brief but important preface he makes clear his point of view. After referring to the strides taken by biochemistry, bacteriology, and pathological psychology, and remarking that each of the methods of research based on these has been claimed by its advocates as the long sought-for means by which the knowledge of psychology and of psychiatry would at last be advanced, he states that his volume is a contribution to the subject which is based on the old anatomo-clinical or clinico-pathological method, of which he truly remarks that it has been employed with success in the past in all the major investigations in the field of medicine.

The book is divided into two parts. The first deals with cerebral function in the normal brain; the minute histological features of the normal cortex are set forth in great detail and the accepted localisations of cerebral function are described and exemplified. The pathological changes in the cortex found in various mental diseases are given in similar detail, special attention being directed to those areas which are commonly affected. In this part of his subject Professor Shaw Bolton bases his findings on personal researches, which, for minuteness of investigation and breadth of interpretation, leave nothing to be desired. The second part of the book is concerned with cerebral function in mental disease. Taking the differentiation, which he has long advocated, of mental disease into "amentia"—i.e., subnormal cerebral function—and "dementia"—i.e., morbid cerebral function—the author proceeds to deal with the varieties of each, in every instance endeavouring to correlate their clinical features with their histo-pathology.

The author's main generalisation is based on a mass of clinical and pathological evidence which represents the work of many years, and is handled with great ability. He holds that the outer cell laminæ of the cortex subserve the associative, psychic or educative functions of the cerebrum, in contradistinction to the inner layers, in which are localised the organic and instinctive functions. The subjects of amentia, in the sense above specified, are found, microscopically, to suffer from a more or less marked grade of deficient neuronic development, of subevolution of the cerebrum, while the subjects of dementia suffer from a more or less marked grade of true involution or dissolution. These changes are seen mainly in the cortex of the prefrontal region of the cerebrum. The existence of amentia does not preclude the onset of dementia. In arriving at these conclusions the author has made a specialty of the micrometric study of the cortex of the insane, and with unsurpassed patience has measured and investigated the histopathology of projection and association areas of the cortex in a very large number of brains from insane patients of every variety. His technique is described in detail, and well reproduced illustrations render it easy for the reader to follow the author's argument and add materially to the value of the book.

It is clear that Professor Shaw Bolton has adduced evidence in favour of his main contentions which cannot be lightly set aside, nor can criticism be adequate unless it is based on the utilisation of similar material and on the prosecution of similar investigations. The alienist and the neurologist, indeed, the general physician, should be familiar with this monograph, in which the clinico-pathological method is shown to the greatest advantage and in which is embodied, as it were incidentally, a whole series of illuminating observations on the problems of cerebral function and cerebral localisation. At a time when indiscriminate resort to purely psychological methods of investigation might appear almost to be forcing a disruption of clinical phenomena in mental disease from any corresponding pathology, the solidly based researches here reported deserve the closest attention, and we anticipate for them a widespread recognition.

Flies in Relation to Disease: Bloodsucking Flies.

By E. HINDLE, B.A., Ph.D. Cambridge University Press. 1914. Pp. 398.

THIS is a companion volume to one recently reviewed in this column which dealt with the transference of disease by non-bloodsucking flies.

In the present volume the author details the present state of our knowledge concerning those flies which by their bite directly transfer parasites to the bodies of their victims and the nature of the parasites thus injected into human and other beings. The book, in fact, is a zoological handbook, but the author assumes a general knowledge of that science on the part of his readers. Any person thus prepared will obtain from the study of Dr. Hindle's guide a very good general acquaintance with the anatomy of the diptera, and also an insight into the systematic arrangement of those flies which form the subject of the treatise. Similarly, though to a less degree, the structure and life histories of the parasites, protozoa and filariæ, are set before the student of this department of biology. The author, however, by no means neglects the utilitarian aspect of his subject.

Observing (in the preface) that "the fly's proboscis is more successful in retarding the progress of civilisation and the alleviation of human suffering than all the armaments of our most Christian Powers!" he reassures the less expert readers that as to yellow fever, "owing to the factors involved being relatively simple, it is literally possible within a few months to remove this most deadly disease from the list of human ailments." This and other diseases are entered into in the text with due regard to their history in the past and the symptoms available for their detection. Dr. Hindle points out the curious fact that so long ago as 1848 the origin of yellow fever was attributed to "some insect or mosquito." This, of course, was in the nature of a happy guess, for the real association between flies and the spread of disease is, as is well known, a matter of recent discovery. In the case of yellow fever, however, the discovery is very far from complete. Though the fly responsible has been tracked the vagina, of course The point he wished to make was if one can trust to one's precautions it does not matter, within reason, how often we examined in the last half hour, any more than if under proper conditions the hand is put frequently into the abdominal cavity during a laparotomy, but one must be able to trust implicitly in the precautions With regard to the risk from post-partum hæmorrhage where means were taken to ensure painless delivery, either with chloroform or in the incomplete anæsthesia from scopolamine and morphine, the application of forceps at the end of half an hour's chloroform got over the difficulty if the chloroform was combined with the early administration of scopolamine and morphine, and a hypodermic injection of pituitrin shortly before the forceps were used —Dr Leonard Dobson considered Dr Simson's paper so lucid and practical that there was little to add and nothing to criticise With regard to the use of rubber gloves he had given them up as he found it practically impossible to keep them sterile during the progress of the confinement He now relied on thorough washing and sterilising as for an operation and the use of a bowl of antiseptic solution into which the hands were frequently dipped His experience of morphine and scopolamine had not been satisfactory and he had given up using it, especially on account of the effects on the child He quite agreed as to the value of pituitrin given in the way Dr Simson mentioned, the only drawback he had noticed was that occasionally the placenta was retained owing to the uterus contracting upon it instead of expelling it With regard to the use of chloroform, he made it a rule never to give this unless the os was fully dilated and one could reasonably anticipate the birth of the head in about half an hour —Dr G O Crichton said that his experience taught him that the application of the forceps should not be too long delayed, whether the prolongation be due to fatigue or to a slightly contracted pelvis As to antiseptic methods great care and thought were needed in even ordinary simple cases, in the matter of cleanliness nothing was to be taken for granted —Dr Clippingdale gave some interesting details of historic confinements —Dr Vernon Monckton, Dr S R Schofield, Dr G L Turnbull, and Mr W P Mallam also took part in the discussion

BRADFORD MEDICO CHIRURGICAL SOCIETY —A meeting of this society was held on April 20th, Dr A Manknell being in the chair —Dr T Jason Wood read a paper entitled "Some Remarks on Diagnosis in Abdominal Cases" These cases divided themselves broadly into two groups (*a*) Those in which the symptoms were of sudden onset, and (*b*) those in which the symptoms were more moderate and of longer standing In any case the chief things to decide were 1 Was the patient's illness due to serious organic disease? 2 Was it a case in which operation was desirable or necessary, and when should operation be undertaken? Dr Wood advised operation in all cases of serious abdominal injury if the pulse was good, as the probability was that some organ was ruptured If the pulse was bad, the probabilities must be balanced and operation undertaken if possible In civil practice all penetrating wounds should be operated on In acute abdominal illness he laid stress on the fact that accurate diagnosis is well nigh impossible After enumerating the various conditions which may confront the surgeon when called upon to see an "acute abdomen" he pointed out that the first thing to decide was whether or not there was a perforation of a hollow viscus, as in these cases a few hours' delay meant death instead of recovery for the patient He laid great stress on the fact that every case of severe abdominal pain is worthy of the closest examination from the very first The cause of it is more likely to be serious than trivial Until a diagnosis excluding certain things has been arrived at, purgatives on the one hand and morphia on the other should be avoided Even though a perforation may have occurred no signs of collapse may be present —The paper was discussed by Dr W Mitchell, Dr D Clow, Mr G H Oliver, and Mr J Phillips, and Dr Wood replied —Mr Oliver read a paper entitled "Some Remarks on Toxic Amblyopia" After mentioning the various drugs which have long been known to cause amblyopia, such as methyl and ethyl alcohol, lead, tobacco, male-fern, quinine, muscarine, iodoform, ergot and many others, Mr Oliver wished specially to draw attention to a new drug which had lately made its appearance in the treatment of pneumonia—namely, ethyl hydrocuprein. He was called in consultation early in February to see a patient who had been very ill with pneumonia in the first week of January Five-grain doses of ethyl hydrocuprein were given every three hours On the fourth day he had severe tinnitus and deafness, and on the fifth day he became suddenly blind, with semi-dilated and fixed pupils In all he took 120 grains of the drug He had bare perception of light, the retinal vessels were reduced to fine threads, and both discs were quite white and atrophic Some slight improvement had taken place since. —Dr J O Sykes introduced a discussion on the End results of Gastro enterostomy He said that gastro-enterostomy had become one of the most fashionable and successful of modern operations, but unfortunately there were many failures, chiefly owing to faulty selection of cases He severely condemned the surgeon who performed the operation in the absence of any trace of ulcer and comforted himself with the belief that it could drain the stomach and so relieve the suffering It could not be too clearly emphasised that no good could come from gastro-enterostomy ulcer though there be, if the pylorus was still patent and unobstructed. No food whatever would pass through an anastomotic opening however large so long as the outlet from the pylorus remained patent —Mr Phillips disagreed with Dr Sykes's statement that no good could come from gastro-enterostomy if the pylorus was still patent, and quoted many cases where he had performed the operation with excellent results —Dr Mitchell said that X rays showed distinctly that food did pass through an anastomotic opening, even though the pylorus were patent —Mr Oliver, Dr Wood, Dr R A R Lankester, and Dr Manknell also took part in the discussion, and Dr Sykes replied

MEDICAL SOCIETY OF LONDON —At the annual general meeting held on May 10th the following officers were elected —President Dr William Pasteur Vice Presidents Dr David Lloyd Roberts Sir St Clair Thomson, Dr Guthrie Neville Caley, and Mr Walter H H Jessop. Treasurer Dr J. Mitchell Bruce. Librarian Dr Arthur Francis Voelcker Honorary Secretaries Sir John Broadbent and Mr Hugh Lett Honorary Secretary for Foreign Correspondence Mr Edmund Owen Council Mr Donald Armour, Dr Francis F H. Bateman, Sir John Bland Sutton, Dr W Ironside Bruce, Dr Edmund Cautley, Mr Edred M Corner, Sir David Ferrier, Dr H Morley Fletcher, Dr Herbert French, Mr George E Gask, Dr John Gay, Dr Bruce E Goff, Mr John D Malcolm Mr Herbert S. Pendlebury Dr Guthrie Rankin, Dr James H Stowers, Mr J. W Thomson Walker, Dr H D Waugh, Dr W H Willcox, and Dr Robert A Young After the business had been transacted a selection of the society's old and rare medical works were exhibited Refreshments and smoking terminated the meeting Owing to the absence of Sir William Osler on military service the annual oration and conversazione will not take place this year

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SMALL-POX AND VACCINATION IN BRISTOL —At the last meeting of the Bristol health committee Dr D S Davies the medical officer of health, stated that the local outbreak of small pox introduced from India was now practically at an end Referring to vaccination, he remarked that it was difficult to get people re vaccinated until they were face to face with small pox, when they usually yielded without great demur He added that he had recently had the gratification of vaccinating the originator of the antivaccination league in Bristol.

SANITARY INSPECTORS' EXAMINATION BOARD —At the recent examination for qualifying sanitary inspectors under the provisions of the Public Health (London) Act 1891, the examiners were Sir Arthur Whitelegge, chief inspector of factories and workshops (chairman), Dr W J Howarth, medical officer of the City of London, Dr Charles Porter, medical officer of health of St Marylebone, Mr C Hall, medical officer of health of Plymouth, and Mr R Stephen Ayling F R I B A. The examination included the inspection of artisans' dwellings and report thereon by the candidates, and the examination of specimens of meat and other foods provided by the Corporation from the City markets and specimens of fish provided by the Fishmongers Company Candidates were present from provincial towns as well as the London district and 70 per cent succeeded in passing the full examination work is now undergoing the most stringent test possible on the battle fields of Europe, and nobly does it answer to the test For the British part of the long battle line we have the report of Sir John French[1] as to the general health of the army, and among other things he says "I would particularly comment upon the energy displayed by the Royal Army Medical Corps in the scientific efforts they have made to discover and check disease in its earliest stages by a system of experimental research, which I think has never before been so fully developed in the field"

Now practically the whole of modern surgery, the whole of preventive medicine, and the greater part of clinical medicine is rooted in and grounded upon researches made upon animals These facts are, or should be, known to all medical men, though there are apparently some who are either ignorant of them or who do not believe them, but many a layman is naturally unacquainted with such facts, and to such we recommend Professor Keen's excellent book It is a reprint of sundry papers and addresses, published or delivered from time to time between 1889 and 1913, and is divided into two main portions The first comprises papers dealing with what has been accomplished by animal experimentation, the second includes those dealing with what Professor Keen calls misrepresentation on the part of objectors to "vivisection," using the word as the said objectors are wont to do, in its widest sense as signifying any kind of experiment upon a living animal On the former portion it is unnecessary to enlarge, but in regard to the latter it is as well to insist on certain points There is no one who will object to persons disliking vivisection or even as a matter of invincible ignorance denying that any advantages have accrued to humanity therefrom The ignorant and the foolish have always existed, and will probably continue to exist But what all honest men, whether they approve of vivisection or not, must reprobate, is the way in which the opponents of research try to bolster up their cause The following examples of misrepresentation given by Professor Keen may serve as samples One appears on p vi, in which is quoted a letter written by Mrs Henderson, Vice President of the American Antivivisection Society, to the *Philadelphia Ledger* of Dec 19th, 1913 In this letter she asserts, says Professor Keen, that "Dr Crile's book repeatedly describes experiments followed by the words 'no anæsthesia!'" Dr Crile answered this charge by saying that in not a single instance do these words appear in his book ("Surgical Shock") Professor Keen could not find them either, but he did find the following words "In all cases the animals were anæsthetised" Mrs Henderson, on being challenged both by Professor Keen and by the editor of *Harper's Magazine* to name the pages in question did not reply, nor do we know that she has replied since this book was published An even worse case is the misrepresentation of Dr Wentworth, of Boston, of whom the antivivisectionists wrote in the *Journal of Zoophily* for April, 1910, that he experimented 'upon between 40 and 50 little children in the Children's Hospital of that city, every one of whom died after the performance of his operation" The whole story is too long to quote, but shortly the facts are these The date was 1895 when the operation of lumbar puncture was new Thirty children had 45 punctures made In 3 cases the puncture was made after death In 15 of the 30 cases the puncture was made for diagnostic purposes, meningitis being suspected In the other 15 cases the puncture was made for cytological research Of the 27 living children who had the operation performed 14 died, not from the puncture, but from meningitis, or tubercle, or pneumonia

We recommend, in conclusion, the perusal of the series of papers at pp 110 *et seq*, these contain a correspondence with Mr James M Brown, President of the American Humane Association, which commenced on Oct 4th, 1900 Professor Keen's polite and crushing rejoinder to Mr Brown would have afforded keen joy to those past masters in the art of flattening out controversial opponents, the late Professors Huxley and Goldwin Smith

LIBRARY TABLE

Health for the Middle Aged By Seymour Taylor, M D Aberd, F R C P Lond London Methuen and Co 1915 Price 1*s* net —In writing this excellent little book for laymen, Dr Seymour Taylor has confined himself to useful generalities, excluding technical medical terms and giving advice as to the conduct of daily life that anybody should be able to understand and take He who would live long should above all things be moderate in four indulgences—namely, eating, alcohol, tobacco (the cigarette habit is specially barred), and exercise In addition Dr Taylor recommends plenty of sleep, absence of worry, and the investment of cash in an annuity or insurance policy The book may be warmly recommended to the middle aged, for whom it is written, though the advice will often reach them too late For its perusal suggests the thought that the habits formed in youth are not readily altered in the second half of life Much of the good advice it contains may be found in the old saw of the medical school at Salerno, dating, appropriately enough, from the Middle Ages

Si tibi deficiant medici, medici tibi fiant
Haec tria, mens hilaris, requies, moderata diaeta

An Introduction to School Hygiene By W B Drummond, M B, C M Edin, F R C P Edin With illustrations London Edward Arnold 1915 Pp 237 Price 3*s* 6*d* —This little work on school hygiene is written for teachers and students of education Since the introduction of the medical inspector into the school teachers have shown a commendable interest in all those factors which directly influence the health of their pupils and indirectly their learning capacity Although many works have been published on school hygiene most of them are too medical or too technical for the average assistant teacher in an elementary school Dr Drummond has successfully found the *via media* between the too scientific and the too popular He explains in quite simple language how defects in the organs of special sense, the eye and the ear, may be discovered by an intelligent and observant teacher, and how unhygienic and insanitary conditions may detrimentally influence the physical health of school children and consequently their capacity for acquiring knowledge A whole chapter, and a very useful one, is devoted to the care of the voice and the defects of speech Professor Wyllie's classification, physiological alphabet, and methods are described sufficiently plainly to enable the teacher to discover in his pupils the causes of many speech defects and their mode of correction We are glad to notice and is known to be Stegomyia fasciata, the parasite which it carries has not been hunted down In the case of the, also tropical, disease dengue, the author gives us, what he does not in the case of yellow fever, two most informing maps, of these, one shows the range of the sickness and the other the distribution of the mosquito involved, which has been ascertained to be Culex fatigans There is a very close correspondence between the two, which can be grasped at a glance

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[1] The Times April 15th.

This excellent volume shows us that while zoologists can justly boast of the utilitarian as well as philosophical importance of their studies, the medical profession have on their side given great stimulation to the investigations of the zoologists The anatomy and systematic arrangement of various insects and protozoa are now becoming the best explored regions of the animal kingdom

Castration and Ovariotomy

By FREDERICK T G HOBDAY, F R C V S, F R S E, Honorary Veterinary Surgeon to His Majesty the King, Examiner in Surgery and Obstetrics to the Royal College of Veterinary Surgeons, &c London and Edinburgh W and A K Johnston 1914 Pp 162

THIS is the second edition of a little book which has been out of print for some years, and that a second edition of a work on such a subject as "The Castration of Cryptorchid Horses and the Ovariotomy of Troublesome Mares" should be demanded proves that the tendency for "specialising" in animal surgery is moving with the times in the same way as has been the case in human practice The new edition has been enlarged to include the castration of the domesticated and semi domesticated animals, and the work of other specialists in this line has been freely quoted

The first chapter deals with castration, and includes a clear account of the best and most usual methods of performing this operation in a large number of animals The operations practised for scrotal hernia in the horse, dog, pig, and calf are next described, and then the author considers the interesting question of the castration of cryptorchid horses The term "rig" or "ridgling" is commonly applied to horses with an undescended testicle The origin of the term is uncertain, but one form of it—viz, "ridgil"—occurs in Dryden, who in his translation of Virgil's Pastorals, says —

And ware the Libyan ridgil s butting head

Horses with this condition are notoriously vicious and uncertain animals, and their amorous tendencies often cause a great deal of trouble to their owners Possibly it is this trait which explains the name "rig," since this word was employed by the old writers to denote a wanton or a strumpet No doubt some male pseudo hermaphrodites among horses are of this character, and in parts of the country the curious name of "Will Gill" is applied to these animals The derivation of this term also is a matter of curiosity Can it be from will to wander, and gill or jill, a girl, denoting a similar conception of the characteristics of the animal to that implied by the name "rig" Most of the horses affected in this way are sterile, although potent, and the operation of castration is extremely successful in curing them of their "rig" propensities As Mr Hobday points out, to ensure success the strictest surgical cleanliness is as essential as in operations on the human subject

Just as castration is a most useful operation in cryptorchid horses, so ovariotomy can often be practised with great success in the case of mares who suffer from a condition of troublesome, almost constant, œstrum The failures are, as a rule, only in the case of old animals in whom kicking has become a habit, and if the operation is performed before the condition has existed for any length of time the results are excellent The operation is performed by choice by the vaginal route, the posterior fornix being opened with a guarded knife, the opening enlarged with the fingers, the hand introduced into the abdominal cavity, and the ovaries removed by an écraseur If the operation is done successfully there is practically no bleeding and the after recovery is very rapid In one case alluded to by the author the mare was hunted on the sixth day after the operation and no ill effects followed In mares who have become a nuisance on account of indecent behaviour the author states that the operation almost always cures, and this opinion is based upon the results of more than 90 consecutive cases in which this operation has been performed

Another interesting and useful operation described is the spaying of cows when they are nearing the age at which their dairy utility is diminishing As a result the milk supply is increased in quantity and enriched in quality, and the period of lactation is extended to an average of about 18 months This procedure is practised to a very large extent in Switzerland, but for some reason or other an attempt made by the late Professor John Gamgee to introduce it into this country was not successful It is interesting at the present time to recall the fact that the originator of the method of operating through the vagina in the cow is M Charlier, of Rheims Professor Flocard has recorded 5079 cases of spaying in cows, and in the last 3000 animals he has had no deaths and only 4 or 5 per cent of accidents of secondary importance An interesting final chapter on abnormalities of the sexual glands of man and horses is contributed by Sir John Bland Sutton.

This brochure, as its author terms it, forms extremely interesting reading, and gives a very good and complete account of the two operations of which it mainly treats

Animal Experimentation and Medical Progress

By WILLIAM WILLIAMS KEEN, M D, LL D Professor Emeritus of Surgery, Jefferson College, Philadelphia With an introduction by CHARLES W ELIOT LL D President Emeritus of Harvard University Boston and New York Houghton Mifflin Company, London Constable and Co. 1914 Pp 312 Price 7*s* 6*d* net

"THERE is not, and there never was on this earth, a work of human policy so well deserving of examination as the Roman Catholic Church." So, practically, begins one of the best known of Macaulay's essays But there is another work of human policy which, although its life has been ephemeral compared to that of the Church, whether Western or Eastern, may take Macaulay's words to itself, especially when we remember who it was that said, "The Son of Man is not come to destroy men's lives but to save them" And that work is the great work of lessening or preventing disease and of rendering the most intricate operations of surgery possible and safe which scientific men of all nations have been carrying out for many years past, and especially within the last 50 years That glycerine has a distinct though feeble germicidal action and that it seems to be a selective poison for the bacillus of plague, the spirillum of cholera and the bacillus of diphtheria. In 50 per cent of glycerine in physiological salt solution all the non sporing organisms died in less than four days Dr Ruediger makes no reference to the fact that for nearly 20 years the bactericidal action of glycerine has been used to remove the extraneous organisms from vaccine lymph in England and other European countries —Dr Otto Schöbl has been carrying out researches on the vitality of cholera vibrios in Manila waters. He has found that these vibrios remained longer alive in less polluted waters than in those more highly contaminated and that the organisms disappeared earliest from distilled water remaining most numerous in the sea water —The morphology of the adults of the filaria found in the Philippine Islands is described by Dr Ernest Linwood Walker, who expresses the opinion that the Philippine filaria is identical with F bancrofti —Dr Honoria Acosta Sison, of the Department of Obstetrics in the University of the Philippines, contributes an article on pelvimetry and cephalometry among the Filipinas From her observations she finds that the Filipino pelvis is smaller than that of the American or European, and this may to some extent be explained by the smaller stature of the Filipino race The transverse diameters of the Filipino pelvis except the transverse diameter of the pelvic outlet, are smaller than those of the European or American The relative enlargement of the transverse diameter of the pelvic outlet may be explained by the habitual squatting position that the Filipinas assume and by the fact that the carrying of the child astride the hips of the mother or nurse may also affect the child in the transverse diameter of its pelvic outlet The head of the newly born infant is proportionate with the Filipino pelvis —Dr R B Gibson supplies a note on the physiological action of the proteoses and the same writer in conjunction with Dr Isabelo Concepcion furnishes a paper on the lymphagogic action of the Philippine mango Mangifera indica (Linnæus) —Dr Concepcion also contributes some observations on mango rash It appears that transient eruptions of an erythematous type occur in the natives of the Philippines during the hot season, and are attributed popularly to the eating of mangos Dr Concepcion extended the observations to ascertain if the fruit had any influence in this respect upon infants through the mother s milk Four newly confined mothers in the obstetrical ward of the Philippine General Hospital were selected for experiment and were given six mangos daily with their meals In all the cases except one rashes were produced on both mother and child. It is believed that the babies are more susceptible than the mothers —An interesting instance of milk poisoning due to a type of staphylococcus albus occurring in the udder of a healthy cow is described by Dr M. A. Barber The symptoms produced resembled those of so-called ptomaine poisoning The cases occurred from time to time on a certain farm and extended over a period of about four years The particular cow whose udder was discovered to be infected had been imported from Australia. The fresh milk was harmless, but when it had stood for some hours at a room temperature a toxin was developed in sufficient quantity to give rise to acute gastric disturbance. Culturally the toxin producing staphylococcus differed little from a non toxin producing strain except that the former produced acid in mannite and maltose litmus agars. This number completes Vol IX.

ERRATUM —In the review of Sir Edward Schäfer s ' Introduction to the Study of the Endocrine Glands and Internal Secretions ' published last week on p 970 of THE LANCET Sir Edward Schäfer s newly coined word autacoid was spelt antacoid" by a printer s error We take this opportunity to correct the mistake , the word autacoid, derived from the Greek αὐτός self and ἄκος a medicinal agent or remedy was applied to the specific hormones and chalones of internal secretions in order to draw attention to the way in which their action resembles the action of drugs, such as the vegetable alkaloids

THE late Mrs T Aitken has left £10,000 each to the Ramsbottom Cottage Hospital and the Aitken Sanatorium for Consumption at Holcombe, near Bury

AN ANALYSIS OF THE NATURAL MINERAL WATERS OF VERGEZE, FRANCE (SOURCE PERRIER)

INASMUCH as Perrier water is supplied to this country in very large quantities, and is rapidly increasing in popularity, an independent examination of it from a hygienic point of view may be held to be desirable in the public interest We have been asked to give a detailed opinion of the suitability of Perrier water for table purposes based upon a consideration of the conditions under which the water is bottled and sent to the consumer, and upon the results of our own chemical and bacteriological examinations of the water

We have received samples direct from the springs and have made our own purchase of samples upon the market, all of which have been submitted to chemical and bacteriological examination The samples examined included two taken from the springs, the first not being under pressure, and the second having been aerated with the natural gas which escapes in large quantities from the springs

The results of the bacteriological and chemical examinations of these samples were compared with those obtained with the samples representing those purchased by the public, and this comparison appears in the figures given below In addition, we have made certain inquiries as to the situation of the springs and as to the methods of bottling the water, which, of course, needs to be carefully carried out in order to preserve the water in a state of purity desirable for drinking purposes

Source Perrier owes its name it is interesting in passing to remark, to a well known medical man, Dr Louis Perrier, of Nimes, a town situated some nine miles away from the springs at Vergéze Gard There is abundant evidence to show that the springs were known to the Romans but not until recent times was it realised that ' the boiling springs '— les bouillens ' as they are locally called—might furnish a plentiful supply of natural aerated water for table purposes Chiefly through Dr Perrier s energy the plant and machinery for bottling in bulk was installed near the springs, and this natural sparkling table water soon enjoyed a considerable patronage not only in France but in this country also

The complete purity of both the natural water and carbonic acid gas demands very careful watching in the bottling process in order to avoid the slightest departure from a high standard, and the natural circumstances well assist the efforts of the proprietors The springs are situated in the midst of fields and vineyards far from human habitations They rise in the Cevennes mountains, visible at a distance of some miles and thence flowing underground through sandstone, clay and chalk, emerge to the surface at Vergéze in the Midi and some twenty miles from the sea coast in the direction of Montpellier Of the springs available the one chosen for bottling purposes is the least mineralised. Special precautions are taken to bottle the water under the cleanliest conditions possible To this end the bottles are subjected to a thorough washing process effected by machinery, and all pipes conveying gas and water and the aerating plant itself are kept scrupulously clean If strict attention was not practised in any one of these directions the bottled water would not pass the requirements of both chemical and bacteriological standards of purity, in spite of the purity of the springs themselves

Chemical Composition of Perrier Water

According to an analysis made in THE LANCET Laboratory samples of the water taken directly from the source, both still and sparkling, and samples procured on the that the author warns his readers against forced breathing, which, he says, may lead to stiffness and rigidity of the chest walls, and in this connexion it might have been of equal service if a timely warning had been offered against attempts at making children breathe through the nose when the nasal air passages are too narrow to permit of adequate respiration by this route. Considerable attention is devoted to the subjects of heating, lighting, and ventilation, but the information afforded is highly practical and free from scientific technicalities On school buildings some useful observations will be found, and a model plan on the Staffordshire type is commended to the notice of teachers as fulfilling at the least expense most of the admitted requirements The central hall with its inherent faults and impediments to cross ventilation is condemned, although the compactness which the system affords is admitted to facilitate mechanical ventilation—an advantage that the author cynically observes will appeal to those who regard this kind of ventilation as an end and not as a means As a short, interesting, and up-to date introduction to school hygiene we strongly commend Dr Drummond's little book to the notice of educationists

Glaucoma A Symposium Presented at a Meeting of the Chicago Ophthalmological Society, Nov 17th, 1913 Edited by WILLIS O NANCE, M D, President of the Chicago Ophthalmological Society (1913), and WESLEY HAMILTON PECK, M D, President of the Chicago Ophthalmological Society Chicago Chicago Medical Book Company 1914 Pp 150 Price 6s —In this symposium on glaucoma the whole subject is reviewed from various standpoints by well known American ophthalmologists, and Lieutenant Colonel R H Elliot, I M S, the only Englishman contributing, deals with the operation of trephining which he has so ably advocated Operations other than scleral trephining for the relief of glaucoma are described by Dr Casey A. Wood The etiology and classification of glaucoma are reviewed by Dr Edward Jackson, the pathology by Dr John E Weeks, and treatment by non surgical measures by Dr George E de Schweinitz None of the papers is really exhaustive, but all are good and contain instructive material The paper by Dr de Schweinitz is particularly noteworthy for its completeness and sound sense Much as all ophthalmologists appreciate the value of trephining, it is well to be reminded, as Dr de Schweinitz reminds us, that "increased tension is not the whole story of glaucoma, and a filtering cicatrix is not the last word in surgical therapeutics, but there is much to learn."

Bibby's Book on Milk Section II, The Law relating to the Sale of Milk Fourth edition 1914 Liverpool J Bibby and Sons Pp 256 Price 4s net —In addition to articles on the history of the law as affecting the trade of milk, with criticism of its administration and suggestions for its amendment, this volume will be found to contain a good deal of miscellaneous information, not always available in legal text books, in the form of copious extracts from reported cases These include not only those reported in the lawyer's sense—i e, published as decisions of the higher courts in the accepted law reports—but cases in courts of summary jurisdiction, which may throw light upon the practical working of the law relating to adulteration and other topics, but which usually are not available for the purpose of reference Explanatory notes on the Food and Drugs Acts, extracted, with acknowledgment, from Stone's Justices' Manual, Bell's Sale of Food and Drugs Acts, and Mr Hedderwick's volume on the same subject, summarise in a convenient manner information capable of being of use to those whose duty it is to safeguard the food supply of the public

JOURNALS

Journal of Anatomy and Physiology Conducted by Sir WILLIAM TURNER, K C B, Professor ALEX MACALISTER, Professor ARTHUR THOMSON, Professor ARTHUR KEITH, and Professor ARTHUR ROBINSON Vol XLIX Third Series, Vol X, Part III April, 1915 London Charles Griffin and Co Annual subscription, 21s, post free —Apparently there is no portion of the human body that can be exhausted as a subject for the researches even of gross anatomy It certainly seems that it is impossible to come to an end of the anatomy of the femur Within the last two years the femur has been the subject of a great many papers, and yet Dr Thomas Walmsley in his two studies has managed to find plenty of new material. His first contribution deals with certain structural details of the neck of the femur and the second with the neck of the femur as a static problem, and we are of opinion that both these contributions will prove the stimulus to further work Both studies are of great interest and are permanent and solid contributions to the literature of the femur We would remind the author that both H Cloquet and J Cloquet were surgeons and anatomists —Another careful study is that by Dr R J M Connell on the Topographical and Applied Anatomy of the Gall bladder and Bile ducts, a paper the type of which we have rather missed from the journal of late The illustrations are particularly good and in them one can detect what one may express with admiration as the influence of the Belfast school —Anomalies are dealt with in the remaining papers Dr James C Brash describes in great detail a vertebral column with six and a half cervical and 13 true thoracic vertebræ with associated anomalies of the cervical spinal cord and nerves The column was obtained from a male subject aged 61, and it is an extremely anomalous one of a type not uncommon in malformed fœtuses Dr. Brash has made a very exhaustive study of the spinal column the spinal cord and nerves, and he concludes (we believe quite rightly) that the "bone condition is secondary to the nerve anomaly"—Two cases of Cervical Ribs are described by Miss M F Lucas (here designated as "Mr") The paper is one which we hope will be imitated, since the arrangement of all the vertebral elements and the constituents of the limb plexuses are recorded in detail The anomalies are found not infrequently in the dissecting room, and it is only by records such as these that the study of the subject is likely to be advanced Too often the associated parts, which alone may help in an understanding of the condition, are dissected away or disregarded when note is made of the anomaly The paper is well illustrated —Miss Lucas also contributes a paper on an Anomalous Arrangement of the Vagi At first sight the case is a remarkable one for the usual spiral arrangement of the vagi on the œsophagus is exactly reversed, the right nerve lying in front of, and the left behind a normally situated œsophagus and stomach The author however, concludes that only an exaggeration of a not infrequent type of resolution of the plexus gulæ is present —Dr Douglas G Reid continues his studies of the disposition of the peritoneum with a contribution on Appendices Epiploicæ and Pericolic Membranes —Under Anatomical Notes Professor E Fawcett describes and illustrates two rare and interesting cases The first is that of an internal mammary artery arising from the thyroid axis, the second is an instance of the rare condition of the external semilunar cartilage forming a complete circular disc covering the external tibial facet There is surely a misprint in the statement that "Bruce Clarke saw three such cases in one *limb*"

The Philippine Journal of Tropical Medicine, Vol IX., No 6 —The first article of this number is by Dr E H Ruediger, who writes upon the subject of the germicidal power of glycerine on various micro organisms under differing conditions From his experiments he concludes that

THE LANCET.

LONDON: SATURDAY, MAY 15, 1915.

The Scarcity of Medical Men. The Proposal of the Pharmaceutical Society.

SOON after mobilisation it was realised that the wave of enthusiasm for active service was likely to affect the number of medical students presenting themselves for examination. From all medical schools came accounts, not only of diminished entries of new students, but of the serious depletion in the ranks of students who had already reached their third and fourth year of medical studies. The desire to be on active service in defence of the realm had led many to enlist, and it was therefore realised that, unless some means of adjusting the balance could be devised, there was likely to be a serious shortage in the supply of medical men for the future needs of the nation. This difficulty, which is entirely disconnected with the immediate needs of the Army Medical Service, was early recognised by the President of the General Medical Council and on his representation an order was issued releasing from the responsibilities of enlistment which they had incurred all medical students in their third or fourth year, so that they might be able to resume the normal course of their work and fit themselves for qualification at the earliest possible date. It was realised that these men, who had already gone through several years of training in the preliminary subjects, would be far more useful to the nation in their medical capacity than they could possibly be as simple units in the army. As these young men become qualified they will probably join the Royal Army Medical Corps if the war still goes on. In this service the younger men are likely to be more pliant and more ready cheerfully to carry out orders in face of difficulties than older men, who might naturally resent having their instructions given to them by officers who, though superior in rank, must be younger in years. But while the younger men obtain in this way an enviable pride of place, the older men, whom circumstances have reserved for home service, are meeting the needs of the civilian population with alacrity, and are displaying a willing readiness to adapt themselves to war conditions. In many cases work that has hitherto been done by younger members of the profession must be distributed amongst those who had thought that their period of drudgery was over. The rush for the Army Medical Service has naturally involved in difficulties many public institutions. The conditions of resident appointments have been relaxed, with the result that many appointments, both as residents and as pharmacists, have been filled by people of far more than the usual age, or by women. But these changes may be regarded as temporary. It is to be anticipated that, when the war is over, those who have been serving abroad, and who desire to return to their former sphere of work, will find it easy to do so.

In common fairness to those medical men who have temporarily given up their work in this country, it is essential that no steps should be taken which would place them at a disadvantage when the needs of the army no longer call for their services. There has been displayed a spirit of *camaraderie* by which medical men have undertaken to carry on the work of absent neighbours as though they were partners, and where such arrangements have been made general practitioners will, in all probability, speedily be able to resume their practices. There remains, however, the scarcity of medical men owing to the absorption of the youth of the nation on active service—we do not know what the measure of this scarcity may be, but we are sure it has been exaggerated. Letters have been published in the *Pharmaceutical Journal* holding out that the present affords an opportunity for pharmacists to enter the medical profession. It has been urged that special facilities should be granted to those who have already qualified as pharmacists, and the proposal seems to have culminated in active measures being taken by the Pharmaceutical Society. The writers of the letters believe that many pharmacists would enter the medical profession if the present regulations were temporarily altered, and it is suggested that, if the examinations they have already passed were allowed to rank at full value, the numbers of men in the medical profession might speedily be increased. It is stated by one contributor to the correspondence that this would benefit both the medical profession, in which there is such a scarcity of men, and the pharmaceutical profession, which is suffering in some districts from an unmistakable plethora. It is not pointed out in what way members of the medical profession are to be benefited by finding their numbers largely increased when they return from active service. Perhaps the idea is that with greater competition there may be less work for each individual, but this may not produce a living wage without strenuous effort and much anxiety.

The concessions suggested for pharmacists are (1) Exemption from the Preliminary Examination and from matriculation; (2) exemption from chemistry and botany in the First Professional Examination; and (3) exemption from materia medica and pharmacy in the Second Professional Examination. While the movement was confined to correspondence it was right to take no notice of it, even though it was urged that chemists' associations throughout the country should get up a petition to the Pharmaceutical Society asking the Council to approach the medical market, show the following composition in regard to mineral ingredients, the results being given in grains per gallon —

TABLE I —*Chemical Composition*

	Still from source	Sparkling from source	Market sample
Calcium carbonate	26 04	28 00	29 40
,, sulphate	3 22	3 22	3 22
Magnesium carbonate	0 63	0 42	0 42
Sodium chloride	2 60	2 60	2 00
Silica	1 68	1 12	1 12
Total mineral matters	34 17	35 36	36 16

The water of Source Perrier thus belongs to the group of natural springs classed as "indifferent" or simple "acidulous" waters It contains no active medicinal constituent In a table water in constant use the presence of such may be undesirable Even considering the total quantity of salts present, it is clear that the mineralisation is very moderate, and the chief constituent is carbonate of calcium dissolved in carbonic acid gas The total salts amount to an average of 35 grains per gallon, or a little over 4 grains per pint, of which about three fourths is carbonate of calcium This salt in solution, of course gives the water some antacid properties and, no doubt, adds to its palatability A small quantity of sulphate of calcium is present also, confirming the statement as to the flow of the water through calcareous bearings, which are well known to furnish the purest water for potable purposes Sodium chloride occurs only to the extent of 2 grains or so to the gallon, a quantity which can have very little importance from a therapeutic or palatable point of view The analyses of the various samples obtained establish the identification of the water procured in the open market with the waters directly from the source, and further show that it is remarkably constant in composition

Organic Purity of Perrier Water

The same samples were next examined for organic purity by chemical analysis, and for this purpose the estimation of the free ammonia, albuminoid ammonia, nitrogen in nitrates, and oxygen absorbed was decided upon

The following were the results given in parts per 100,000 —

TABLE II —*Organic Purity*

	Still from source	Sparkling from source.	Market sample
Free ammonia	0 0006	Trace	Trace
Albuminoid ammonia	0 0006	Trace	0 0007
Nitrogen in nitrates	0 4300	0 4100	0 4000
Oxygen absorbed	0 0280	0 0200	0 0400

A sample of the water from the spring and a sample also procured on the market were submitted to bacteriological analysis

The sample taken direct from the spring without any special precautions gave the following results —

Growth from 1/10 c c	Colonies per 1 c.c
In gelatin at 22° C	2680
In agar at 37° C	810

There was no evidence of the presence of bacillus coli when operating on 200 c c , 100 c c , 10 c c , 1 c c , and 0 1 c c respectively, and the organisms present are of no importance pathologically The complete absence of coliform organisms or streptococci is remarkable, and shows the water is well guarded from contamination The sample procured on the open market gave still more striking results It contained neither bacteria in 1 c c nor bacillus coli in 100 c c , and the water is thus seen to be sterile

In Table II are recorded the results of examination in regard to organic purity based upon the estimation of free ammonia, albuminoid ammonia, nitrogen in nitrates, and the oxygen absorbed from a weak permanganate solution The figures obtained demonstrate an unusual degree of organic purity which, in fact, surpasses that of most of the public water supplies This speaks well for the precautions taken to guard the source from contamination and for the cleanliness of the bottling processes Perrier is thus an exceptionally pure water

Bacterial Purity of the Water

Consistently with the high degree of organic purity revealed by chemical examination the bacteriological results negatived contamination Samples of Perrier water procured on the market were, in fact, shown to be sterile no ordinary water bacteria being present, and a search for bacillus coli failed to find this organism, even when 100 c c of the water was examined In the sample obtained direct from the spring some harmless water bacteria were found, but again no bacillus coli There are few natural waters which would not show bacteria present in 1 c c , the deep well water showing the least, and the river or surface water the most number It seems clear that Perrier water is derived from a very deep source, which accounts for its bacterial purity, and this purity is maintained up to the time it reaches the consumer, the risks entailed by collecting and bottling being removed by scrupulous care in the processes These results incidentally point also to the bacteriological purity of the natural carbonic acid gas and of the cleanliness observed in the aeration process

The Natural Carbonic Acid Gas of the Perrier Springs

The carbonic acid gas was carefully collected from a bottle of Perrier water and examined It proved to contain 99 65 per cent of pure carbonic acid gas, the residue, 0 35 per cent , consisting of about equal volumes of nitrogen and oxygen

Conclusions

These results of analyses show that Perrier water can stand the most exacting ordeal required by chemical and bacteriological investigation in regard to questions of purity It possesses no objectionable mineral salts, is organically pure, and is perfectly free from harmful bacterial life The samples obtained upon the market were, in fact, sterile Such findings afford a strong recommendation in regard to any potable water, and in a water pleasantly aerated with the natural carbonic acid gas of the springs the result is particularly satisfactory The care taken to preserve the water in its pure state on its way from the springs to the consumer has clearly been complete The advantages of natural carbonic acid gas in table waters are still a matter of controversy, some maintaining that the chemically prepared gas is less easily assimilable. There is one important difference which is noticeable when natural gas is used, and that is, it gives a softer and pleasanter taste to the water and renders it more palatable and digestible For some reason artificial gas gives a sharper, more strongly acid taste to table water than does the natural gas, and this may well prove to be a dietetic disadvantage Some medical men in France attach great importance to the use of natural gas for aeration purposes and attribute to it a more favourable action on the gastric processes but it is generally agreed that the moderate use of aerated beverages promotes digestion and stimulates the motor activity of the stomach There is evidence that they help digestion also by a mechanical process, the bubbling up of the gas through the stomach contents facilitating their disintegration The natural effervescing waters appear also to influence osmotic processes to a greater degree than artificial mineral waters, and thus increase the powers of absorption and promote diuretic action

It may be added that Perrier water has been systematically and periodically examined by Dr Wilson Hake, lecturer on chemistry and toxicology in the Westminster Hospital Medical School, since the water was placed upon the market in 1904 to the present time The many results he has thus obtained in his controls show no appreciable deviation from his first figures, and our recent analyses confirm his work in all significant particulars

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THE PEREIRA MEDAL.—At the May meeting of the council of the Pharmaceutical Society the Pereira medal was adjudicated to Miss Dora F White. This medal—which is generally regarded as the blue ribbon of pharmacy—was struck in 1861 in memory of Jonathan Pereira the great authority on materia medica, and has been awarded annually ever since This is the second time it has been won by a woman pharmacist The Pharmaceutical Society s silver medal has been won by Mr A J Somes and the bronze medal by Mr R W Bowles

The question of replying to this new and revolting form of warfare by similar application to the forces and resources of chemistry has been freely discussed Chlorine is certainly as available for the Allies as for Germany, but the method is full of uncertainties, particularly when the letting loose of the gas into air currents calculated to reach the enemy is relied upon Already it has been reported that the German calculations sometimes failed and that the attacking party received the gas by return currents The method at any rate can only have relatively local effects, and its success has been much due to the surprise and terror which it momentarily caused If the Allies decide to retaliate, as they have every right to do, they may be depended to improve on the infamous example set them This country possesses enormous resources in regard to the manufacture of chlorine and its compounds This is seen in the fact that while England produces about 200 000 tons of bleaching powder (the chief reservoir of chlorine output), France produces 60,000 tons, and Germany 100,000 tons But at the present time ingenuity is being exercised only for defensive purposes The distribution of chlorine in explosive shells may offer a serious problem unless effective means are found to ward off attacks by means of 'anti chlor saturated respirators Of the numerous 'anti chlors" available hyposulphite of soda is the best, the respirators found on captured German soldiers proved to be moistened with hyposulphite, confirming the conclusion that the gas used was chlorine Next to hyposulphite common carbonate of soda is most efficacious Failing these the respirator moistened with water would undoubtedly serve to reduce the severity of the attack The Germans have probably employed liquid chlorine, of which they make large quantities in steel cylinders for industrial purposes It is used for displacing bromine from the bromide liquors of the Stassfurt mines and for the production of chloracetic acid, which is essential in the synthetic preparations of artificial indigo The use of chlorine gas as an offensive weapon is new its employment as a defensive weapon in the sterilisation of water for drinking purposes has for some time been recognised as effective Civilised nations will agree, in the name of humanity, that its powers to destroy should be confined to low organisms It may be suggested that just as war is war, so chemistry is chemistry, and that the use of one disastrous chemical agent is no more morally wrong than the use of another Yet we must all feel that there is a vast difference between the skill of arms and the skill of the poisoner

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UNIVERSITY OF SHEFFIELD—The Council, at its last meeting, appointed Mr J Sholto C Douglas M A. D M. B Ch. Oxon M.Sc. Birm. to the John Hunter chair of pathology in succession to Professor H. R Dean Dr Douglas is at present lecturer on pathology in the University of Manchester

Annotations.

"Ne quid nimis

THE SINKING OF THE "LUSITANIA' FATE OF MADAME DEPAGE.

THE sinking of the *Lusitania* is universally accepted as the crowning infamy in the German conduct of the war up to the date of its occurrence. The crime has been received with a chorus of horror throughout the world True, when analysed, the deed is no baser than the murder of unfortunate fishermen in the North Sea, than the use of virulent gases in the trenches, or than the deliberate assassination of wounded prisoners—all of which proceedings we learn from authentic reports have marked the conduct of the war by the Germans during the recent weeks Yet the cynicism of an action which condemned in a moment helpless women and children in crowds to a terrible death has impressed civilisation more than any other of the horrors which have followed upon the frequent breaches of international convention during the war But the impression has not been that which presumably the Germans expected, disgust and resolute anger have been aroused, not shuddering fear

To many of the medical profession the tragic fate of the *Lusitania* has a particular sadness, because one of the ill starred passengers was Madame Depage, of Brussels The deepest feelings of sympathy will be extended to Professor Depage on the tragic death of his wife Madame Depage was on her way back from a tour in the United States to obtain funds for wounded Belgians in the Depage Hospital at La Panne The generous mission was devotedly undertaken at great personal sacrifice, and now that it has ended in death a sense of personal grief will be experienced by the many friends in England whom she had so often welcomed at her house in the Avenue Louise, Brussels The members of the Societe Internationale de Chirurgie will, we are sure, not quickly forget her graciousness as a hostess, her wonderful power of organisation, her gaiety, her great linguistic powers, and the tact which enabled her to harmonise the clashing interests of a polyglot assembly Last year she accompanied Professor Depage to the United States as the wife of the President of the Société Internationale de Chirurgie, and no better suppliant with the American people on behalf of Belgium could have been found. Bravely she left her husband and her children out of love of her stricken nation, and she has died in her country's cause

THE SPIRIT DUTIES

THE drastic proposals of the Chancellor of the Exchequer in regard to levying additional duties on wines and spirits have been withdrawn, and the suggestion we made in our columns three weeks ago has been adopted in principle This was that the sale of immature spirits should be stopped by a system of compulsory bonding Time is to be given to the industry to find the accommodation necessary for storage Spirits up to two years will be compulsorily bonded, and a surtax is suggested to be levied on all spirits taken out of bond between two and three years of age. After that time it may be presumed that no surtax will be charged. The or Government authorities with a view to modifying the curriculum The question, however, has now been crystallised by a letter to the Registrar of the General Medical Council, officially addressed to him by the direction of the President of the Pharmaceutical Society This letter definitely asks that qualified pharmacists may be excused the Preliminary Medical Examination and such parts of the qualifying examination as are included in the subjects which pharmacists have to pass in order to qualify under the Pharmacy Acts It would seem to be somewhat unlikely that much sympathy will be shown by the General Medical Council towards this relaxation of medical examinations, while it is highly improbable that any of the aspirants for medical qualifications could be qualified in time to take active service in the army during the war If they are unable to help the nation in this way, it would seem that the only benefit resulting from any compliance with their requests would be a benefit to the individual pharmacists concerned, while, on the other hand, medical men now serving at the front might, within a few years, find the ranks of the medical profession inconveniently crowded We have no desire to oppose the entrance of pharmacists to our ranks There are already numerous instances of medical men who have attained professional eminence after having steadily gone through the full course of study of both departments, but this should not lead to any hasty alteration of a curriculum which has been gradually and carefully evolved with such great benefit to scientific medicine While we are sure that the General Medical Council will not be influenced by the spirit of antagonism recently displayed towards it by some of the members of the Pharmaceutical Society, we trust that the reply given will be firm, judicious, and unmistakable in its purport

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Chlorine Poisoning

THERE remains little doubt that the gas employed by the Germans against our soldiers in the trenches was chlorine The evidence of the newspapers and the descriptions of the sufferings of the "gassed" pointed, as we said in our issue of May 1st, to one conclusion—namely, that chlorine was the disastrous agent used Chlorine is cheap, can be preserved in liquid form, or generated from bleaching powder cubes, and as it is nearly two and a half times as heavy as the air it is capable of manipulation Investigations have now been conducted on the bodies of the victims, and the observations made coincide closely with those recorded from time to time in industrial cases of chlorine poisoning The following case, given in Dr WITTHAUS'S "Manual of Toxicology," sets out, for example, a train of symptoms which are typical and which show a remarkable accordance with the symptoms displayed by the poisoned victims at Ypres The patient described by Dr WITTHAUS had inhaled a small quantity of the pure gas He immediately experienced an inclination to cough, and complained of dyspnœa and a stabbing pain in the chest, which continued through the evening and became still worse the next morning when the dyspnœa was intense, and coughing was almost uninterrupted The patient was greatly excited and spoke only with difficulty The heart impulse was not perceptible, but the heart sounds were clear Sibilant rales were heard, particularly to the right and above The face was cyanosed The dyspnœa now increased markedly, every respiratory muscle was called into play, the movements of respiration were short, there was cyanosis, and the pulse was very frequent and small The patient slept occasionally for half an hour, woke struggling, the pulse became imperceptible, there were rales in the throat, and he died about 48 hours after the inhalation There need be no question as to whether the Germans appreciated the horrible fate to which they were condemning the victims of chlorine inhalation—the tortures of the death were common knowledge

Chlorine and its compounds appear to result in the formation of hydrochloric acid in contact with the moist mucous membranes, and the symptoms are generally a sensation of suffocation, difficulty of breathing, and lacrymation The gas severely attacks the respiratory organs, bronchial catarrh, inflammation of the lungs with frothy blood stained expectoration supervening Apart from the method of pouring chlorine gas into the air intended to travel in the direction of the opposing forces, the Germans have apparently contrived to despatch the gas by means of shells, and one officer's experience of the bursting of these outrageous missiles is of interest as confirming the effects recorded in cases of industrial poisoning On the bursting of these shells, he states, a green gas was developed, and before he and his comrades had a chance of moving they were inhaling the poisonous gas and a moment later they were struggling terribly for breath Two of the men died before his eyes, which afforded a horrible sight, "for they had turned quite blue" He escaped with others owing, he thought, to the fact that they had stuffed their handkerchiefs into their mouths They felt at the time, however, that suffocation was inevitable, and afterwards they experienced the discomforts which follow an attack of bronchitis in its most virulent form He had no doubt at all, in his own mind, that the gas in the shells and the curtain of "creeping gas" were of the same nature It is generally stated that chlorine gas in the proportion of as little as 0 04 to 0 06 per 1000 taken into the lungs is dangerous to life, and the effects, for all intents and purposes, are much the same as those of hydrochloric acid gas But of course the formation of hydrochloric acid due to chlorine acting upon moist membranes means that it is present in the nascent form, in which form it is far more active—that is to say destructive the sphere of the massed movements Possibly the cæcum has a separate mechanism for mixing the contents and feeding them into the ascending colon preparatory to the occurrence of the mass movement The significance of incompetence of the ileo cæcal valve, a condition which Dr Barclay confirms in his own observations in relation to chronic constipation, is not touched upon here. Not all cases of constipation are due to those motor disturbances of the large intestine thus described. Whilst stagnation of fæces in these cases is met with in the cæcum, the larger class of cases of constipation are due to stagnation in the rectum, a condition termed by Hertz "dyschezia.' This is, however, a fault of defæcation rather than a true constipation Dealing with the X ray findings in cases of neoplasm of the large intestine, the opaque enema is recommended in preference to oral administration. By the latter method it is only when the growth is very far advanced that definite banking up of the shadow behind the growth appears, generally, too, the head of the shadow seldom reaches the obstruction itself, suggesting hypertonicity of the colon above the site

THE INEBRIATES ACT IN 1913

IN submitting his report for 1913, with regard to institutions certified or licensed under the Inebriates Acts, 1879 to 1900, Dr R Welsh Branthwaite explains that owing to the pressure of other work both before and after the war he has been unable to incorporate observations on the medical aspects of inebriety in continuation of remarks made in a previous report The report is therefore confined to the usual statistics relating to inmates of inebriate reformatories and retreats As the total number of persons treated in these institutions has not been large many of the tables do not refer only to 1913, the year specially dealt with, but contain corresponding figures for each year since 1899, when the Act of 1898 came into force Many of these are of interest, but attention may be specially called to one of them, because at the present time two topics upon which it has a more or less direct bearing are arresting public attention It will be found that during the period included in the report, 1899 to 1913, there were in all 586 persons committed to certified inebriate reformatories for offences dealt with under Section 1 of the Act of 1898—that is to say from assizes and sessions The nature of these offences is specified in the report, and it will be found that comparatively few involved conduct of the kind commonly regarded as seriously criminal in character Only 47 persons in all were convicted of larceny, stealing and receiving, and 44 of attempted suicide, 13 of assault, and 7 of malicious wounding In this connexion it is necessary, perhaps, to suggest that a very large number of serious offences due to inebriety are not so looked upon in the courts, but are punished in the usual way by imprisonment, without attempt at reformatory treatment The one offence, however, which appears to be specially selected to be dealt with under the section mentioned is that of unlawfully neglecting children in a manner likely to cause them unnecessary suffering Out of the 586 committals to inebriate reformatories referred to 459 were for offences of this kind, and as only 57 were men it will be seen that drunken mothers who neglect their children constitute a very large proportion of the persons sought to be reformed under Section 1. The "drink question" has been made prominent recently by delay alleged to be caused by intemperance in the production of munitions of war, and the figures cited above show a particular aspect of the effect likely to be produced by inebriety upon the rearing of a healthy generation of children, to compensate for the ghastly destruction of human life which the war is causing, and for the diminished birth rate which may be expected in future years

INJURIES OF THE PERIPHERAL NERVES

INJURIES to the peripheral nerves are extremely common in warfare, and at the same time they form a class of case in which early and expert treatment is essential if the best results are to be obtained At its meeting of March 4th the Societe de Neurologie of Paris passed a resolution, which was forwarded to the French Minister of War, pointing out the extreme desirability of avoiding delay in transporting those with nerve injuries, and injuries of the nervous system generally, to the special neurological hospitals of Paris and elsewhere, since successful treatment depends on the care and minuteness with which the preliminary neurological investigation of such cases is prosecuted. The society points out how frequently the special hospitals are asked to take cases of traumatic neuritis in which, as the result of delay, fibro-tendinous retractions, sub ankyloses, and other complications have supervened, which often prove rebellious to treatment From a later number of the *Presse Medicale* we learn that improvement has taken place and that special neurological services have been established in connexion with various of the army hospitals. Similar utilisation of the expert neurological opinion of this country should be organised to its fullest extent, to obviate unsatisfactory results in cases treated originally, owing to stress of time and other circumstances, in an incomplete fashion. The French medical journals have contained a number of useful contributions to the study and treatment of traumatic lesions of the peripheral nerves Among these may be mentioned a paper by M. Temoin, read before the Societe de Chirurgie, emphasising the necessity of a complete motor, sensory, and electrical examination in all cases of peripheral nerve injury, to facilitate early and successful surgical intervention M Claude has given to the Academie de Medecine the results of 100 cases of peripheral nerve lesions operated on, and in the *Presse Medicale* of March 4th, with M. Vigouroux and M. Dumas, he records the results in a further series of 100 cases All of these were examined by neurologists clinically and electrically before operation, and after operation they were given suitable secondary treatment In a series of 56 cases there were 7 of complete section of a nerve trunk with separation of the ends, in 12 the nerve was cut across but the ends were together, in a fibrous development, in 21 the section was incomplete, 3 showed induration without section, and in 13 the nerve was compressed by perineural sclerosis Apart from the complete sections, where improvement is a question of time mainly, in no fewer than 87 per cent. the result of surgical interference was amelioration of symptoms In another series of 46 cases, improvement was obtained in 74 per cent. The paper contains useful hints for the surgeon. Another communication of interest appears in the *Presse Medicale* of March 18th from the service of Professor Pierre Marie at wine duties are not to be raised There is to be a State control of all licensed houses in munition areas, and for this purpose a central board has been created composed of representatives of the Admiralty, War Office, and Home Office On the whole a wise compromise has been reached and the proposals promise to offer a satisfactory settlement They should remove, also, all anxiety as to the spirit used for medicinal purposes being further taxed

NOTABLE REDUCTION OF TYPHOID FEVER IN ITALY

IT is only of late years that Italy has begun to apply large measures of sanitation to her whole united population To many of us, accustomed to the better hygienic environment of our own country, residence in Italy has always caused anxiety, especially in regard to the possibility of contracting typhoid fever, and in some places this anxiety has been justified But recently Italy has been very literally setting her house in order, and the risks of typhoid fever have much abated We are just now more concerned for the possible fighting strength of the Italian army than for the security of the rare tourists of our own nationality who may be in Italy, but on both accounts it is good to learn of the general improvement in public health indicated by the decline in frequency of typhoid fever The fighting strength of an army is naturally enhanced if it is recruited from healthy material When the troops come from towns and villages where typhoid epidemics are frequent there is a greater danger that the army itself will be infected This is often left out of calculation, the health of those with the colours being considered as though it can be independent of the conditions where the levies are raised In Italy financial facilities for public health works, such as water supply and drainage, have been greatly accelerated by the Public Health Acts of July 13th, 1905, and June 25th, 1911 It is especially in respect to small and poor districts that the State guarantees the interest on the money borrowed for sanitary purposes Thus from July, 1905, to July, 1911, no less than 337 districts or communes received State aid for their water supply works During the same period 763 communes obtained financial aid for other public health undertakings, such as the building of isolation hospitals, improved drainage, &c The result has been specially noticeable in regard to the prevalence of typhoid fever Professor Santoliquido is responsible for the following figures The cases of typhoid fever notified in 1888 amounted to 59,631, and there were 23,869 deaths, but in 1912 the number of cases was reduced to 30,558 and deaths to 7743 This means that whereas in 1888 there were 800 deaths from typhoid fever out of every million inhabitants, the proportion per million was only 221 in 1912 Of course, it may be said that these were exceptional years, and to a certain extent this is true, because they represent the highest and the lowest figure. Nevertheless, the reduction, while showing certain fluctuations, has been persistent Thus the fall was gradual from 1880 to 1894, when the proportion of deaths per million of the population was only 439, but it rose again the following two years to 498, then to 520 In 1897 it was 491, and the year following 545 After that the figure never again attained to 500, and after the year 1900 it was always below 400 Finally, after the year 1905 the proportion of deaths from typhoid fever has always been below 300 per 1,000,000 inhabitants We have therefore good reason to hope that the prevalence of typhoid fever has been definitely reduced by about two thirds This is no mean achievement, and the Italian authorities are to be congratulated

UNUSUAL SYMPTOMS DUE TO GALL-STONES

IN another column we publish an interesting note on a case of gall stones described by Dr A. R. Neligan The usual symptomatology of cholelithiasis is generally recognised, such as paroxysmal pain, vomiting, collapse, jaundice, and the presence of gall stones in the motions, to which may be added the occurrence of ague-like attacks During an attack of biliary colic the contents of the stomach are first vomited, and bile may also be present, but it is only in very rare instances that a calculus is vomited In Dr Neligan's case, however, a number of faceted gall stones were found (about 30) in the vomit We have been unable to find a similar record In addition, the patient suffered from intestinal obstruction, an operation was recommended but refused, and after the administration of enemata she passed some flatus, liquid fæces, and a hard mass which subsequently proved to be a gall stone Unfortunately it was broken up before Dr Neligan saw it, but apparently it must have been roughly round in shape and 3 centimetres in diameter, and must have weighed about 16 grammes Mechanical obstruction of the intestines by a gall stone is also uncommon, but many cases have been reported Morestin[1] was able to refer to as many as 242 cases Dr H D Rolleston[2] states that the relative frequency of this cause to other causes of intestinal obstruction has been variously estimated at from 1 to 13 to 1 to 45 The occurrence of two unusual symptoms in the same patient—viz, the vomit of many gall stones and the obstruction of the bowel by one such stone—is certainly remarkable, making the record of the case exceptionally interesting

RADIOLOGICAL STUDIES OF THE LARGE INTESTINE

Dr A E Barclay, whose work on the alimentary tract is well known, contributes some interesting observations to the symposium on intestinal stasis in the current number of the *British Journal of Surgery* Constipation is due less, he considers, to Lane's intestinal kinks than to an absence of what he terms *points d'appui*, from which, as fixed points, the mass movements of the fæces can be urged forward These *points d'appui* appear to be variable in their site—they are never seen in the cæcum itself, more commonly such a point is found in the neighbourhood of the hepatic flexure Under the X rays the mass is found to be pushed forward from the fixed point Failure of such fixed points leads to inability of the large intestine mechanically to propel forwards, in the abrupt occasional and brief manner now recognised as typical, the fæcal mass The "cess pool," or loaded cæcum, under this view must be regarded less as the cause than the effect of such inefficient propelling action This organ, in fact, is suggested to be little concerned in the propulsive action, it is often found to contain bismuth for a long time subsequent to its administration, it is not cleared out so effectively as are other parts within

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[1] Bulletin de la Société Anatomique de Paris, 1900

[2] Diseases of the Liver, 1905

PARIS

(FROM OUR OWN CORRESPONDENT)

Colloidal Gold in the Treatment of Infected Wounds

M Cunéo and M Polland have been using colloidal gold in a whole series of infected traumatisms in which the phenomena of infection persisted in spite of the usual surgical measures The gold was injected intravenously, intramuscularly, or hypodermically in the peripheral zone of the infected region The clearest and most valuable results have been obtained in large wounds of limbs with infection by anaerobic microbes In these cases a marked fall of temperature ensues, together with considerable diminution in the number and quality of pulsations and a return towards normal of the arterial pressure Local modifications may also be observed in the wound a diminution of the fœtid odour and secretion and attenuation of the œdema These latter phenomena are even more influenced by local injections of colloidal gold In penetrating wounds of the abdomen medically treated the authors have used this remedy as a preventive measure In pyogenous infections the results of injections of colloidal gold have been less clear, perhaps because the authors have been led to employ them more in cases of infection of the serous membranes, where a local reaction sufficient to stop the processes of suppuration was not to be expected The intravascular injections are followed by violent reaction, a severe rigor may last for 40 minutes Sometimes the countenance becomes slightly cyanosed, the temperature rises, and the pulse is quickened An abundant perspiration sets in later and may last sometimes several hours When given intramuscularly colloidal gold gives rise to no reaction It may be injected by this route up to 50 c c at a single time and several days in succession Used thus the gold has a mode of action milder but also slower than that by the intravascular route These injections may be also made by means of a long needle around the limits of the infected tissue, avoiding the vessels so as not to provoke by the entrance of some drops of the liquid directly into the blood the violent reaction of an intravenous injection Intravenous injection is definitely indicated only where rapid effect is sought In individuals with lowered tension recourse had better be had, at first at any rate, to the intramuscular route Injections around the wound are especially indicated when a local action is desired

Conservative versus *Radical Operations in the Surgery of the Limbs*

M Mauclaire has reported to the Sociéte de Chirurgie on the work of Dr Lapointe, who between Oct 26th and Feb 7th was at the front on medical duty, ten miles from the firing line Here he saw more than 4000 wounded pass through his ambulance, and close on 800 operations were done nearly all by himself Out of this number, 547 presented fractures, crushings, and lacerations (*arrachements*) of the limbs In the upper limb, out of 317 wounded 145 that were not operated on gave 9 deaths, out of 172 operated on, 104 by conservative operations gave 34 deaths, 68 by radical operations 11 deaths, or a total of 54 deaths In the lower limb, out of 228 wounded, 90 not operated on gave 11 deaths, out of 138 operated on, 75 conservative operations gave 34 deaths, while 63 mutilating operations gave 28 deaths, or a total of 73 deaths In the upper limb among the radical operations performed there were 68, with 11 deaths, or a mortality of 16 per cent Three disarticulations of the wrist, 5 amputations of the forearm, 2 disarticulations of the elbow, all primary, had no deaths Out of 42 amputations of the arm there were 6 deaths, of which 2 out of 33 primary amputations and 4 out of 9 secondary, 16 disarticulations of the shoulder gave 5 deaths, of which 2 out of 12 primary disarticulations and 3 out of 4 secondary disarticulations Total, 4 deaths out of 55 primary radical operations, and 7 deaths out of 13 secondary In the lower limb 65 mutilations out of 63 wounded, with 28 deaths, mortality 43 per cent Three economic operations on the foot gave 3 cures, 21 amputations of the leg gave 5 deaths, of which 3 were in 17 primary and 2 in 4 secondary amputations, 40 amputations of the thigh gave 22 deaths (or 55 per cent), of which 12 occurred in 25 primary and 10 in 15 secondary amputations One primary disarticulation of the hip was followed by death Nearly all the amputations were done by the circular method For the disarticulation of the shoulder and for some high amputations of the arm and the leg, M Lapointe employed "racket" amputation He left the greater part of the stumps uncovered, because most of the wounds at the time of arrival at the ambulance were very seriously infected For the sterilisation of instruments and gloves M Lapointe employs sodium borate The site of operation and the dressings have been treated in the same method up to the day when M Lapointe was able to procure trioxymethylene and to prepare dry dressings instead He has used oxygenated water, permanganate of potash, formol solution, 5 per 1000, and tincture of iodine.

Death of Dr Thoinot

Dr Thoinot, professor of legal medicine at the Faculte de Medecine, and a member of the Academie de Médecine, has died very suddenly In 1906 he succeeded his teacher, Brouardel, in the professorial chair He was physician to the Hôpital Laennec, and from the beginning of the war medecin principal at the Val de Grâce and head of the service of contagious diseases His writings are of importance, while as an expert he was highly esteemed in the judicial world, and his medico legal work had gained for him an international reputation

May 8th

IRELAND

(FROM OUR OWN CORRESPONDENTS)

An Association of "Medical Advisers"

A NUMBER of the "medical advisers" and "certifiers" of the Irish Insurance Commission met in Dublin last week to form an organisation in defence of their interests Having elected officers and a committee, they passed a resolution declaring their wish to assist in a settlement of the certification question, provided their own interests were safeguarded. It is generally thought that the present system of certification is about to be abandoned

The Medical Profession and the War

A committee has been appointed by the medical profession in Belfast (*a*) to make arrangements for looking after the practices of those who may become whole time medical officers under the R A M C, and (*b*) to form a list of practitioners willing to serve as whole time officers for a short period —At a meeting of the board of management of the Benn Ulster Eye, Ear, and Throat Hospital, held in Belfast on May 6th, it was decided to allow Dr I. A. Davidson and the Salpêtrière Professor Marie gives a full description of an unusual variety of traumatic lesion of the median nerve, in which the symptoms are mainly sensory, the motor symptoms being slight Instead of holding his hand in the characteristic position of median palsy, the patient keeps his fingers extended, sometimes the terminal phalanges are hyperextended, the thumb is in slight opposition There is a fine tremor of the three radial fingers, and marked trophic and vaso motor changes in the median distribution are always observable The hand is warmer than its fellow, but, above all, it is "*atrocement douloureuse*" The maximum pain is in the pulp of the affected fingers and their nails, whatever be the site of the lesion in the nerve trunk this is the distribution of the pain Dry heat always aggravates the condition, hence the patients cover their hand in cold, wet dressings, and keep renewing them themselves So insignificant a stimulus as a cough increases the pain at once, and in three cases it was noted that grasping, with the sound hand, a warm object induced an exacerbation of the pain on the affected side A yawn, a sneeze, even simple emotions such as seeing a fellow patient slip on a polished floor, a sudden noise, music, looking at a touching or an amusing picture, are all mentioned by Professor Marie as aggravating the neuralgia Objective sensory changes are confined mainly to the tactile form There is also a slight wasting of the muscles concerned, but, as already observed, never a pronounced paralysis The pathological condition is probably one of traumatic ascending neuritis of the nerve, and operative treatment has not, in Professor Marie's experience, been very satisfactory He makes the interesting observation that the musculo spiral, ulnar, and median seem to vary somewhat in their reaction to injury, in the case of the musculo spiral, the chief symptoms are paralysis, and there is little sensory change, in the case of the ulnar, with a traumatic main en griffe, there are few, if any, trophic and vaso motor changes, while with the median the motor defects are secondary and, in some cases at least, pain and vaso motor phenomena are extremely pronounced

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RUPTURE OF THE EXTENSOR LONGUS POLLICIS

Dr J Ramsay Hunt has recorded in a recent issue of the *Journal of the American Medical Association* a case of a very rare injury—rupture of the tendon of the extensor longus pollicis The patient was a tailor, aged 31 years, who worked from 10 to 12 hours daily, much of the time sewing with a coarse, heavy needle He also used an iron for pressing clothes On Oct 25th, 1914, after a day's work, he inserted his right hand into his trousers pocket in search of some object, twisting the hand about as one does in trying to explore angles and recesses He was seized with severe pain over the posterior surface of the wrist on the radial side and over the back of the first metacarpal bone On removing his hand he could not extend the distal phalanx of the thumb, though he could easily flex it For several days there was great pain over the dorsal surface of the wrist and first metacarpal bone, and for a fortnight this region was tender and showed some swelling On examination on Dec 1st there was paralysis of the extensor longus pollicis The patient could strongly flex the distal phalanx of the thumb, but had not the least power of extension In contrast there was fair power to extend the proximal phalanx and first metacarpal bone When the tendons of the thumb were rendered prominent by strong extension the normal prominence of the extensor longus pollicis was absent When the finger was drawn along the course of the long extensor there could be felt just below the posterior annular ligament a small movable rounded slightly tender swelling This corresponded to the distal end of the ruptured tendon The proximal end was not palpable Electrical examination failed to elicit any response in the extensor longus pollicis, while all the other muscles reacted normally The sensibility of the hand was normal Suture of the tendon was recommended but declined Normal tendons are so strong that rupture is almost impossible In the case of severe strains either the muscle tears or the periosteal insertion of the tendon gives way, often carrying a fragment of bone For a tendon to rupture it must have been previously weakened by disease While rupture of the extensor longus pollicis is very rare in medical literature generally it has been well known to German military surgeons for a long time In the medical reports of the Prussian army from 1870 to 1904 von Wurthenau collected 62 cases, all in drummers The condition is the result of chronic tenosynovitis induced by a peculiar method of holding and using the left drumstick, which causes mechanical irritation of the tendon as it emerges from its compartment in the posterior annular ligament of the wrist In time changes take place in the tendon and its sheath and eventually rupture occurs, either during a paroxysm of drumming or more rarely spontaneously It is said that the affection occurs usually in beginners and exclusively on the left side Microscopic examination of the severed tendons has shown hyaline swelling and necrosis and separation of the tendon fibres Dr Hunt thinks that in the case of the tailor there must have been similar changes in the tendon It is curious that no warning pain seems to have been observed in any of the cases But though rupture may occur painlessly, more frequently a piercing pain is felt over the back of the wrist, often shooting up the forearm The tendon may be swollen and tender and the distal portion is often felt below the annular ligament as a tender movable nodule Isolated instances of the lesion have been recorded in a compositor, a wood carver, a farmer, and in waiters As to treatment, if there is no evidence of union after a brief period of fixation, suture should be performed

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THE Croonian lectures will be delivered at the Royal College of Physicians of London on June 17th, 22nd, 24th, and 29th at 5 P M, by Surgeon General Sir David Bruce, C B, F R S, A M S The subject will be Trypanosomes causing Disease in Man and Domestic Animals in Central Africa

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THE Progress of Public Health in Egypt is the subject which Dr F M Sandwith has chosen for his course of four Gresham lectures to be delivered at the Gresham College, Basinghall street, E C, on May 18th, 19th, 20th, and 21st, at 6 P M The lectures will have a topical bearing moment, he should write to the surveyor notifying his desire for any adjustment that may be due to him, to be claimed when circumstances permit There will be many cases in which the profits of the practice for the year, with the addition of the pay have amounted to a sum so much less than the figure originally returned for assessment, that the total income from all sources, then shown as over one of the "earned income" limits say £1000, has fallen below that limit with the result that a new rate of duty will apply

In determining the amount to be regarded as income from army pay, it is not necessary to take into account the field allowances, ration money, or servants' allowances, these seem to be regarded as not subject to income-tax presumably on the ground that they are intended to defray expenses occasioned purely by the exigencies of military life No corresponding relief appears, however, to be allowed when a *uniform rate of pay* is fixed to cover such allowances It will usually be found the most convenient course to inquire of the assessor precisely what amount has been treated as subject to income tax for the year ended April 5th, 1915, as suggested above

Other Forms of Relief

There are other descriptions of relief in respect of which repayment may be claimed by those to whom they have not already been allowed—that is to say, the allowance for life assurance premiums, the abatements of £160 £150, £120, and £70 on total incomes not exceeding £400 £500 £600, and £700 the deduction of £20 *for each child* under 16 years of age on April 6th, 1914 allowed where the total income does not exceed £500, and the "small incomes" relief amounting for the past year to 4*d* in the £ on incomes not exceeding £300 and 1½*d* in the £ on incomes not exceeding £500 The last mentioned form of relief does not apply to income on which the "earned income" rate has been charged. In all these cases it is possible to claim repayment at any time within the next three years but the preparation of the claim will involve the least trouble now, when the necessary figures and papers are readily available The time-limit of three years does not apply to applications for adjustment on account of a falling off of *professional profits* or non allowance of the "earned income" rate on pay and allowances, applications of this nature should be made without delay

The total income for income tax purposes of a medical man who has been engaged on war service during the past year is computable as follows the amount of the profits of his practice (or civil salary, if holding an appointment) for the year to April 5th (or March 31st) *plus* his military or naval pay and those allowances that are treated as subject to income tax *plus* the amount of any other taxed income that he or his wife may have If this total fall below one of the limits referred to in this article a title has arisen to one or more of the forms of relief indicated

MEDICINE AND THE LAW

Dr F J Waldo s Annual Report

THE return made annually to the Common Council by the coroner for the City of London and borough of Southwark has been issued for 1914 and contains, as usual, interesting notes and suggestions upon topics arising out of inquests held by Dr F J Waldo Some of these relate to cases which have attracted public attention and might be in danger of being forgotten if the attention of a body such as the Common Council were not officially recalled to them, with the possibility that useful results may some day ensue. An example is to be found in the death of a newspaper seller outside Broad street railway station, who was shot by a man recently released from a private lunatic asylum The patient had been allowed to go on the condition that relatives took charge of him and this they had failed to do, with the result that without any difficulty he bought a gun licence a revolver and cartridges, which he fired in the street with the fatal result mentioned. In another pistol case recorded by Dr Waldo the deadly weapon had been bought by a boy without any need to comply with the formal provisions of the Pistols Act, 1903 because its barrel was more than 9 inches in length The effect of this dangerous proviso in creating a trade in weapons quite as deadly as many of the shorter pistols is well known. An interesting case referred to in Dr Waldo s report, but not one of the kind which attracts popular attention in reports of inquests, is that of a butcher named Tarrant, manager of a meat store at Mitcham, who died from cutaneous anthrax in Guy's Hospital At the inquest it came out that a horse and a slaughterman had also died from anthrax, and that two other butchers and a clerk were suffering from it, all cases being most probably connected The horse belonged to a wharf company and was kept in stables adjoining a slaughterhouse, from which meat had been brought to the butcher s establishment at Mitcham by horses which also belonged to the wharf company This meat was handled by Tarrant A slaughterman in the Croydon slaughter house had died from anthrax in Croydon General Hospital without any notification of his death reaching the Croydon coroner The third butcher referred to was the son of Tarrant s employer, and had handled the contagious swelling on his neck, and the fourth was in the same employment but at Croydon, where he obtained meat from the same slaughter house A rider to the verdict at this inquest suggested that anthrax should be made compulsorily notifiable to the medical officer of health of the district in which it occurs, and that all deaths from it should be reported to the coroner This no doubt is one of the subjects which should be remembered whenever legislation resumes its natural course and when time permits of the amendment and codification of the law relating to the registration of deaths and to the duties of coroners.

Stevens v British Medical Association

The Court of Appeal recently heard and dismissed an application for judgment or a new trial made by the unsuccessful plaintiff in the action of Stevens v The British Medical Association The action it will be remembered, was based upon criticism of a destructive character directed against Stevens s Consumption Cure" and republished from the *British Medical Journal* in "Secret Remedies What They Cost and What They Contain" Specific questions were left to the jury at the trial before Mr Justice Shearman, and upon them judgment was given for the defendants The Court of Appeal now delivered judgment without calling upon counsel for the British Medical Association to argue, Lord Justice Swinfen Eady saying that the question was whether upon the facts truly stated the comment was fair and such as could reasonably be made. The jury had had all the facts laid before them and their answers amounted to this that the words complained of were not libellous because they were fair comment In his opinion the allegation that the verdict was against the weight of evidence could not be supported and there had been no misdirection In his lordship's opinion the trial had been very fairly conducted In an earlier portion of his judgment Lord Justice Swinfen Eady said that it had been already decided that words containing personal imputations upon the plaintiff might be in law fair comment" The British Medical Association and our contemporary are to be congratulated upon a judgment which brings to a satisfactory ending the difficult and dangerous litigation involved in cases of this kind

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

Fleet Surgeon (retired) W Hackett to Devonport Dockyard

The undermentioned have been entered as Surgeons for temporary service in His Majesty s Fleet —Alfred Beuthin Danby and Guy Walker Woodhouse (dated May 4th)

The following appointments have been notified —Temporary Surgeons H L P Peregrine and S W Toulmin to the *Victory* additional, for Haslar Hospital, F A V Denning to the *Victory*, additional, J A Watson to the *President*, additional for Eastbourne Aerodrome, A B Danby to the *Vivid*, additional, for Plymouth Hospital, G W Woodhouse to the *Pembroke*, additional, for Chatham Hospital, G W Pool and J C Gillies both to the *Victory*, additional, for Haslar Hospital, C H Browne to the *President* additional, W B Cunningham, to the *Acteon* R S Lawson to the hospital ship *Plassy* and G M Fraser to the *Zealandia*

ARMY MEDICAL SERVICE

Temporary Major Cuthbert S Wallace from Royal Army Medical Corps, to be Colonel (dated April 29th)

ROYAL ARMY MEDICAL CORPS.

William George Kynaston Barnes, late Deputy-Surgeon-General, Royal Navy, to be temporary Major (dated April 16th).

Dr W A. Anderson leave of absence for one year, they having offered their services to the War Office, and to keep their positions open for them As a result the out patient department will be open only three days a week

LUNACY IN EGYPT

THE FINAL REPORT FOR THE YEAR 1914

RECENTLY we reviewed the delayed reports of 1912 and 1913[1] dealing with lunacy in Egypt, and now we have the final report of 1914 before us As in Dr J Warnock's previous reports, we get a most complete history of the work carried on And this has been done under trying conditions, as, owing to the death of Dr Pearson, deputy superintendent, the administration has been short handed There is again complaint made that there is not sufficient accommodation for the patients, so that many have to be discharged before they are really mentally stable, hence relapses are frequent, and criminal acts are done by the unstable convalescents In the main building at Abbassia the recent and acute cases are received, while at Khanka the more calm and chronic cases are occupied in agriculture The report is for English readers chiefly interesting from the special causes of insanity, and for the medico legal aspect of the partly cured patients

Pellagra is a great cause of insanity, in fact, is given as the chief cause Of 700 admissions, 132 were suffering from pellagrous insanity, 94 from hashish, and 40 from alcohol General paralysis provided 41 cases A very interesting table is the one showing the offences and forms of insanity of the 54 male accused persons, and the forms of insanity of the 21 male convicted prisoners admitted in 1914 Of the 54, 12 were suffering from pellagrous insanity, and 8 from that due to hashish Of the 75 in whom there was a history of crime, 10 were pellagrous, and 6 of the insane from hashish were convicted of murder or murderous assaults Every form of crime is represented by the pellagrous insane, but violence is the most common Thirty eight deaths were due to pellagra, but others suffering from tuberculosis had pellagra as well

Nearly 6 per cent of the male admissions were suffering from general paralysis, and 25 of the 125 deaths of male patients were due to the same disease There was a slight decrease in the number of patients suffering from hashish insanity Considering the prejudice against post mortem examinations, it is interesting to find that 56 were performed Dysentery was, as usual, represented, but was only responsible for nine deaths

A pathological laboratory has been started, and as a result a special ward for observation and treatment of ankylostomiasis was opened One hundred and ten patients were recently examined, and 29 proved to be infected, these were treated with thymol. No patient succeeded in committing suicide A good many accidents occurred, due to violence in the overcrowded wards

The report of Dr H. W Dudgeon for the Khanka Asylum is brief, but points to the steady development of the subsidiary asylum It is also the model for a working asylum which is carried out and developing under rather trying conditions

The Lunacy Department now being a branch of the Ministry of the Interior, and having an official head in Dr Warnock, time and money alone are required to make the work very satisfactory as well as instructive

SERVICE MEDICAL OFFICERS AND THE INCOME-TAX

THERE are no doubt many medical men on war service who from one cause or another have not taken up the question of their income-tax for the past year and are not acquainted with their rights in regard to any tax that may have been paid in excess of their true liability The service medical officer's position in regard to the income tax is, moreover, of interest to those whose liability, though not affected for the year 1914–15, will be affected for the current year owing to the interference with their general practice. Before dealing with the matter it may be remarked that an officer who is in doubt as to the manner in which the tax that he has paid has been arrived at can obtain full particulars on application to the Surveyor of Taxes in regard to the private practice, and to the Assessor at the War Office or Admiralty in regard to official pay and allowances

Claims for Adjustment

The tax charged on pay and allowances is, of course, deducted by the paymaster, but unless the recipient has taken steps to ensure allowance of any relief due to him the tax will have been deducted at the full rate The importance of taking measures to obtain any adjustment that may be due will be realised from the fact that in the case of earned incomes it is only where the total income from all sources exceeded £2500 that the full rate of *1s 8d* for the past year was payable, on smaller incomes there was relief of *8d* in the £ where the total income was not more than £1000, *6d* where not more than £1500, *4d* where not more than £2000, and *1½d* where not more than £2500 In regard to this type of relief it must be observed that it is now too late to make any claim unless the officer filled in a statement of total income from all sources before Sept 30th last, either by way of a specific claim to the "earned income" rate or in the ordinary course in making his professional return for the year 1914–15 The possibility to be guarded against is that, while relief has been allowed on the professional assessment the reduction in the rate has not been extended to the War Office or Admiralty pay Forms were issued to enable officers to make claims or to declare the address from which they had already claimed, and in cases where these were duly completed there is little likelihood of overcharge under this head, but it is not too late to obtain relief where an officer, having duly made his statement of total income from all sources locally, did not notify the War Office or Admiralty The original statement will of course, have proved inaccurate in the light of subsequent events, but it operates as a notification of claim, and an amended statement may now be put in for the purpose of obtaining repayment of any overcharge

In this connexion there arises the question of the amount to be regarded as income from the practice for the year 1914–15 by those who for part of the year were engaged on war service This matter was dealt with by the second Finance Act of last year The assessment on the profits of the practice was originally made on a figure intended to represent the average profits of the three preceding years, but a special provision enacts that where a person has been serving as a member of the military or naval forces, or in any work abroad of the British Red Cross Society, St John Ambulance Association or any other body with similar objects, the assessment shall be reduced to the amount of the actual profits of the year and repayment of duty made where necessary To secure this adjustment it will be necessary to submit to the Surveyor of Taxes an account of the receipts and expenses of the practice for the year 1914–15 prepared on the lines indicated in THE LANCET of April 24th, p 878, and from that official may also be obtained the form necessary for any other repayment that may be due In cases where the practitioner usually makes up his accounts to Dec. 31st and not to March 31st it will be well to make an adjustment in order that full effect may be given to any falling off of receipts after Dec 31st This may be done by substituting the receipts in the first quarter of 1915 for those in the first quarter of 1914, and adding to the expenses of the year 1914 a sum representing the extra expense incurred by the employment of a locum tenent for the first quarter of 1915 If it be not convenient to an officer to go fully into the matter at the

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[1] THE LANCET, Jan 30th, 1915 p 243.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50 000 persons at the last Census, 8776 births and 5383 deaths were registered during the week ended Saturday, May 8th The annual rate of mortality in these towns, which had decreased from 19·9 to 17 3 per 1000 in the four preceding weeks further fell in the week under notice to 15 5 per 1000 of their aggregate population, estimated at 18,134,259 persons at the middle of last year During the first five weeks of the current quarter the mean annual death rate in these towns averaged 17 8, against 18 8 per 1000 in London Among the several towns the death rate last week ranged from 6 1 in Lincoln, 7 7 in Enfield 8 1 in Southend-on Sea, 8 2 in Hornsey and in Smethwick, and 8 7 in Wimbledon to 23 7 in Barrow in Furness 23 8 in Walsall, 24 3 in West Hartlepool, 24 5 in Wigan, and 25 2 in Middlesbrough

The 5383 deaths from all causes were 639 fewer than in the previous week and included 557 which were referred to the principal epidemic diseases against 689 and 711 in the two preceding weeks Of these 557 deaths, 276 resulted from measles, 121 from whooping-cough, 67 from infantile diarrhœal diseases, 51 from diphtheria, 30 from scarlet fever, and 12 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 1 6, or 0·4 per 1000 less than in the previous week The deaths attributed to measles, which had been 426 389, and 392 in the three preceding weeks, fell to 276 last week, and caused the highest annual death rates of 2·4 in Salford, 2 8 in Sheffield, 3 1 in Tottenham and in St Helens, 3 5 in Darlington, 4 0 in Northampton and in West Hartlepool, 4 4 in Walsall 4 5 in Middlesbrough and 6 3 in Barrow in Furness The deaths referred to whooping-cough, which had declined from 167 to 142 in the four preceding weeks, further fell to 121 last week, the highest death rates recorded from this cause were 1 2 in Willesden and in Walthamstow, 1 4 in South Shields, 1 7 in Reading 2·0 in Swindon and in Aberdare, and 3 4 in Wigan The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 63, 65 and 73 in the three preceding weeks, fell to 67 last week, and included 17 in London 7 in Liverpool 5 each in Birmingham and Sheffield, and 4 in Salford The deaths attributed to diphtheria, which had been 55 49 and 55 in the three preceding weeks, declined to 51 last week, of which 9 occurred in London and 3 in Great Yarmouth The deaths referred to scarlet fever, which had increased from 16 to 34 in the five preceding weeks fell to 30 last week, and included 5 in London 3 each in Liverpool Middlesbrough, and Newcastle-on Tyne, and 2 each in Birmingham and Leeds The fatal cases of enteric fever, which had been 11, 8 and 12 in the three preceding weeks, were again 12 last week, and included 6 in London

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2422 2369 and 2377 at the end of the three preceding weeks, had increased to 2384 on Saturday last, 307 new cases were admitted during the week, against 263, 259, and 316 in the three preceding weeks These hospitals also contained on Saturday last 1214 cases of diphtheria 220 of measles, 63 of enteric fever, and 14 of whooping-cough, but not one of small pox. The 1384 deaths from all causes in London were 187 fewer than in the previous week, and corresponded to an annual death rate of 16·0 per 1000 The deaths referred to diseases of the respiratory system, which had been 469 392 and 346 in the three preceding weeks, further declined to 259 in the week under notice but were 68 in excess of the number in the corresponding week of last year The deaths from influenza numbered 20, against 39 27, and 30 in the three preceding weeks

Of the 5383 deaths from all causes in the 96 towns 211 resulted from different forms of violence and 398 were the subject of coroners' inquests, while 1567 occurred in public institutions The causes of 32 or 0·6 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Manchester, Leeds Bristol, West Ham Bradford Hull and in 74 other smaller towns Of the 32 uncertified causes of death 9 were registered in Birmingham 4 in Liverpool and 2 each in St Helens, Southport, Warrington, Sunderland, and South Shields

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2 345 500 persons at the middle of this year, 1231 births and 815 deaths were registered during the week ended Saturday May 8th The annual rate of mortality in these towns, which had been 20·9, 18 5, and 20·2 per 1000 in the three preceding weeks, declined to 18 1 per 1000 in the week under notice During the first five weeks of the current quarter the mean annual death rate in these towns averaged 19 7 against a corresponding rate of 17 8 per 1000 in the large English towns Among the several towns the death rate last week ranged from 10 2 in Kirkcaldy, 11 7 in Leith and 11 8 in Coatbridge, to 20·3 in Edinburgh, 20·6 in Perth and 24·0 in Greenock

The 815 deaths from all causes were 94 fewer than in the previous week, and included 142 which were referred to the principal epidemic diseases, against 128 and 150 in the two preceding weeks Of these 142 deaths, 65 resulted from whooping-cough, 47 from measles, 15 from infantile diarrhœal diseases, 7 each from scarlet fever and diphtheria, and 1 from enteric fever, but not one from small-pox. The mean annual death rate from these diseases was equal to 3 2, against a corresponding rate of 1 6 per 1000 in the large English towns The deaths attributed to whooping-cough, which had been 90 75 and 82 in the three preceding weeks, declined to 65 last week, and included 34 in Glasgow 10 in Edinburgh, 9 in Dundee, and 3 in Greenock The deaths referred to measles, which had been 19 26, and 36 in the three preceding weeks further rose to 47 last week, of which 35 were registered in Glasgow, 7 in Aberdeen and 2 in Clydebank The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 10, 12, and 9 in the three preceding weeks rose to 15 last week, and included 6 in Glasgow and 2 each in Aberdeen and Leith The deaths attributed to scarlet fever, which had been 7, 7, and 11 in the three preceding weeks fell to 7 last week, and comprised 3 in Glasgow, and 2 each in Aberdeen and Paisley The deaths referred to diphtheria, which had been 7, 6, and 12 in the three preceding weeks fell to 7 last week and included 2 each in Glasgow, Paisley and Motherwell The fatal case of enteric fever occurred in Edinburgh

The deaths referred to diseases of the respiratory organs, which had been 178 145 and 153 in the three preceding weeks, declined to 118 in the week under notice, but were 2 in excess of the number in the corresponding week of last year The deaths attributed to violence numbered 23, against 30 and 25 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland, with an aggregate population estimated at 1 212 380 persons at the middle of this year 592 births and 463 deaths were registered during the week ended Saturday, May 8th The annual rate of mortality in these towns, which had been 22 1, 22 4 and 19 1 per 1000 in the three preceding weeks, rose to 19·9 per 1000 in the week under notice During the first five weeks of the current quarter the mean annual death rate in these towns averaged 21 5, against corresponding rates of 17 8 and 19 7 per 1000 in the English and Scotch towns respectively The death rate last week was equal to 25 7 in Dublin (against 16·0 in London and 18 4 in Glasgow), 16 7 in Belfast, 20 4 in Cork, 15 2 in Londonderry, 23·0 in Limerick, and 13 3 in Waterford, while in the 21 smaller towns the mean death rate was 19·7 per 1000

The 463 deaths from all causes were 19 in excess of the number in the previous week, and included 33 which were referred to the principal epidemic diseases against 41 and 35 in the two preceding weeks Of these 33 deaths, 10 resulted from measles, 9 each from whooping-cough and infantile diarrhœal diseases 3 from diphtheria and 1 each from enteric fever and scarlet fever but not one from small pox. The mean annual death rate from these diseases was equal to 1 4, against corresponding rates of 1 6 and 3 2 per 1000 in the English and Scotch towns respectively The deaths attributed to measles, which had been 5 13, and 11 in the three preceding weeks, were 10 last week, of which 8 occurred in Belfast. The deaths referred to whooping-cough which had been 11 20 and 9 in the three preceding weeks were again 9 last week, and included 5 in Dublin and 2 in Belfast. The fatal cases of diarrhœa and enteritis (among infants under 2 years) which had increased from 3 to 10 in the four preceding weeks, were 9 last week and comprised 6 in Dublin, 2 in Belfast and 1 in Londonderry The 3 deaths from diphtheria occurred in Dublin, and were slightly in excess of the average in recent weeks The fatal case of enteric fever was registered in Dublin and that of scarlet fever in Waterford

The deaths referred to diseases of the respiratory system, which had declined from 158 to 84 in the four preceding weeks, further fell to 76 in the week under notice Of the 463 deaths from all causes, 137, or 30 per cent, occurred in public institutions, and 6 resulted from various forms of violence The causes of 15, or 3·2 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the large English towns the proportion of uncertified causes did not exceed 0·6 per cent

Stafford Mouritz Cox to be temporary Major (dated April 19th)

The undermentioned are granted temporary rank as follows whilst serving with the War Hospitals named — Dated April 21st Napsbury War Hospital Lancelot William Rolleston to be Major, Arthur O'Neill to be Captain Springfield War Hospital Reginald Worth to be Major, Gayton Warwick Smith to be Captain

The undermentioned to be temporary Captains Dated April 7th John Davidson Duncan, late Captain, 5th Battalion, The Black Watch (Royal Highlanders), Territorial Force Dated April 17th George Herbert Ward Humphreys, late Surgeon Captain, 1st Gloucestershire Engineers, Territorial Force Dated April 18th Matthew Leslie Guy Hallwright Dated April 19th Harry Young Cameron Taylor, Charles Coley Choyce Dated May 12th Temporary Lieutenant Edward A Evans, Temporary Lieutenant James A Torrens

The undermentioned to be temporary Lieutenants Dated April 9th Alexander Hugh Dickson Smith Dated April 12th Michael Thomas MacMahon and Captain Charles Francis White, 6th Battalion, The Cheshire Regiment Dated April 14th Neil Campbell, Lorne Benjamin Graham Percy Herbert Delamere, Arthur Lincoln Thornley, Arthur Henry Priestley, James Robert Robertson, John Hay Moir, Arthur Thomson, Arthur William Hare, Alexander Mitchell Cowie, Reginald Newton Weekes, Lindsey Willett Batten, Charles Harold Walker McCullagh, Alfred Douglas Bigland, Cyril Meredith Willmott, Alexander Fisher, Joseph McGowan, and Edward Mapother Dated April 15th, George Harold Wood, Philip Northcote Vellacott Norman Stephen Gilchrist, Guy Budd Courtney, Frederick John Blackley Charles Herdman Newton, Robert McCorran Service, John Porter, Frederick James Pierce, Robert John Merson, Frederick William Smith Stone, John Eills Gething, William Alexander Gordon Russell, Langford George Davies, James Hinton Robertson, Thomas Steven McIntosh, Robert Barsham Debenham, and John Caruthers Sale Dated April 16th John Scott Dated April 17th Theodore Francis Dillon, Herbert Mather Spoor, Herbert Frederick Nolan, Walter Halli Burton MacDonald, Hugh Hamilton Moffat, Alexander Waugh, Edwin Fryer, George Hellyard Darlington, Frederick George Thompson, Frank Graham Wrigley, James Hay Marshall, Arthur Leonard Weakley, Victor Jenner Batteson, and Guy Stuart Goodwin Dated April 19th John Rowat, Evan Lewis Hickey, James Jenkins Robb, Alphonsus McGrath, William Claude Percy Barrett, Arthur Macgregor Warwick, Bertram Ernest Wright, Crawford Smith Crichton, Thomas Leathard Wormald, William George Hopkins, Francis Charlesworth, George Stanley Applegate Robert Macnair Walker, Arthur Herbert Butcher, Arthur Edward Druitt Herbert Arthur Hancock, Michael Joseph Petty, Richard Kenefick, George Robertson Lipp, John William Nelson Roberts, Tom Stansfield, and Wilberforce John James Arnold Dated April 20th William Carnes, Gerald William Stone, Riccardo Stephens, James Clarkson Waithman, George Basil Price, and William Robert Etches Dated April 21st Geoffrey Ward Thompson Henry Carter Thorp, William Arthur Shann, Cunison Charles Finlater, Ralph Paul Williams, William Peach Taylor, Norman Grellier, Hugh Stevenson Davidson, Tom Entwisle Ferguson, John Forbes, David Johnston, and James Charles Martin

James Erlank is granted temporarily the honorary rank of Lieutenant whilst serving with the Duchess of Westminster's War Hospital (dated May 6th)

Lieutenant Reginald P Cockin relinquishes his temporary commission (dated April 23rd) Lieutenant Charles B Pearson, having ceased to serve with the British Red Cross Hospital, relinquishes his temporary commission (dated May 7th)

The undermentioned temporary and honorary Lieutenants are granted the temporary and honorary rank of Captain — Dated May 7th Lionel Edward Close Norbury, James Forbes Mackay, and James Duncan Lyle

INDIAN MEDICAL SERVICE

Major R A. Lloyd relinquishes the temporary rank of Lieutenant-Colonel (dated April 15th, 1915)

SPECIAL RESERVE OF OFFICERS

Major Charles Roberts, having ceased to perform duty with No 18 Field Ambulance, resigns his commission Captain Wilson Harold Percy Hey, 2nd Western General Hospital, Royal Army Medical Corps, Territorial Force, to be Captain

The undermentioned Lieutenants to be Captains William F McLean, Robert M Beath, Thomas Walker, William St. L. Dowse, William McN Walker, William McK H McCullagh, Harry D Rollinson, and Samuel R Armstrong

The undermentioned Lieutenants are confirmed in their rank William T Hare, John D MacCormack, Henry R Sheppard, and Donald C Macdonald

Supplementary to Regular Units or Corps R A M C — Lieutenant James T Cameron resigns his commission

The undermentioned ex Cadets of the Officers Training Corps to be Lieutenants (on probation) James Lawson Norman Bell Graham, Arthur Eaton Richmond, and Geoffrey Bede Egerton To be Lieutenants (on probation) Patrick Alexander Clements, Robert Orr Colquhoun Thomson, and William Murdoch

TERRITORIAL FORCE

Royal Army Medical Corps

3rd East Anglian Field Ambulance Captain James Turtle to be temporary Major

2nd East Lancashire Field Ambulance Graham Stevenson to be Lieutenant

1st Lowland Field Ambulance Captain John W Leitch to be temporary Major

2nd Northumbrian Field Ambulance Cecil Dermot Rogers to be Lieutenant

3rd Northumbrian Field Ambulance Robert Raffle and John Steedman Horn to be Lieutenants

3rd Northern General Hospital To be Lieutenants Balfour McKean and Robert Pringle Anderson

3rd Southern General Hospital William Stobie to be Lieutenant

Sanitary Service Arthur Hamilton Lowe to be Captain, whose services will be available on mobilisation

Highland Casualty Clearing Station To be Lieutenants Joseph Ellis Milne, Charles Forbes, and Alexander Jaffrey Presslie

5th Northern General Hospital Lieutenant-Colonel George C Franklin relinquishes his commission

Eastern Mounted Brigade Field Ambulance Vernon Montague Wallis to be Lieutenant

1st Home Counties Field Ambulance William Thomas Henderson to be Lieutenant

1st Southern General Hospital The undermentioned to be Captains, whose services will be available on mobilisation George Percival Mills, Andrew Russell Bearn, and Arthur Augustus Russell Green To be Lieutenant William Albert Stokes

2nd London Sanitary Company To be Lieutenants Edwin Josiah Messent, Arthur George Whitfeild, and Owen Herbert Peters

East Anglian Casualty Clearing Station James Mowat (late Fleet-Surgeon, Royal Navy) to be Major (temporary) To be Lieutenants Robert Charles Standring Smith and William Joseph Deighan

Lowland Mounted Brigade Field Ambulance To be Lieutenants John Richmond Herbertson, Stuart Spence Meighan, and Thomas Cameron Houston

4th Northern General Hospital Christopher Wilfred Sharpley to be Lieutenant

4th Southern General Hospital Robert Jaques to be Captain, whose services will be available on mobilisation

Lowland Casualty Clearing Station Major John McKie, from the 2nd Lowland Field Ambulance to be Lieutenant-Colonel

Northumbrian Casualty Clearing Station Captain William Simpson, from the 1st Northumbrian Field Ambulance, to be Captain

Highland Mounted Brigade Field Ambulance Captain John W Mackenzie to be temporary Major Lieutenant Lachlan M V Mitchell and Lieutenant Alexander F Lee to be temporary Captains

Welsh Border Mounted Brigade Field Ambulance Lieutenant Walter S Snell resigns his commission

Attached to Units other than Medical Units —Lieutenant Isaac B Bernstein resigns his commission Lieutenant Percival T Rutherford to be Captain To be Lieutenants Thomas Dobson Bell, Thomas Porter, Edmund Henri Gonin, and Edward Peter Dawes

PROMOTION IN THE MEDICAL CORPS OF THE UNITED STATES NAVY

The United States is considering a Bill to increase the efficiency of the personnel of the navy, and its proposals regarding the Naval Medical Corps even if complicated, are interesting to the officers concerned and should give hope to the juniors Medical officers are in future to be commissioned as surgeons with the rank of lieutenant (junior grade) for three years, lieutenant for nine years and lieutenant commander for ten years Officers with less than 22 years' service are promoted to the higher ranks by seniority if there are vacancies for them But if there are no vacancies and officers of over 22 years' seniority accumulate at the top of the list and the seniority of the senior 12 averages 22 years a special system for promotion is employed For each of these 12 a figure of merit is to be calculated, marks being assigned to each for "professional record, knowledge, and reputation" and those with the highest figures shall be promoted into the available vacancies (six, it is expected) according to seniority, the others being retired. The President in order to make vacancies, may retire officers from each of the two highest ranks, but not more than three from each in any one year And thus medical officers in the United States navy will get on to the administrative ranks four years or so earlier than do our medical officers, which should make the service there more efficient and the officers on the active list younger and more contented report on the nature of the establishment of which I am the medical superintendent, and an account of the facilities as regards baths and physiotherapy available. On Feb. 22nd I received a further letter intimating that the following resolution had been just passed at a meeting of the committee:—

> That no bathing establishment should be placed on the list of the War Office which does not allow medical men other than the resident physician to send their patients freely for treatment.

I was asked to state definitely the practice of the hydro in this respect without delay. I did so, and intimated that I was medical superintendent of the hydro and took charge of all details with regard to the treatment of invalids, and informed them that the lay manager of the hotel—albeit a very competent and energetic gentleman—took no charge whatever of the baths or treatment arrangements. As regards patients from outside doctors, I intimated that nine-tenths of my patients were sent me through the kindness of "outside men" in all parts of the country, as well as from Peebles (town and county). These gentlemen invariably left me to deal with the patients according to my own discretion, making some suggestion perhaps occasionally by 'phone message or letter. In short, I intimated what seemed almost superfluous, that I actually discharged the duties of a medical superintendent. I also stated that I would be glad to hear that the committee had no intention of starting a boycott—which under the circumstances I considered most uncalled for—as I had expressed complete willingness to place the establishment, so far as my directors would permit and was humanly possible, at the disposal of wounded soldiers and officers, and to treat the former, at any rate, gratuitously.

I begged for an early reply, but received none whatever until, on my again writing about March 24th to Dr. Fox, personally, expressing rather pointed criticism of the methods on which the whole business was being conducted, I got a personal reply from Dr. Fox. This began as follows:—

By this time you would have received Dr. McClure's letter, and understand the real position. He will write you further . . . ", with some other remarks which I need not repeat. As Dr. Fox had placed a late postage extra ½*d.* stamp on his note he evidently considered the matter urgent, so I wired at once that I had received no letter, first or second, from Dr. Campbell McClure. I confirmed the wire by letter, and received no response whatever from either secretary. I waited a week and then wrote stating exactly where we stood, and requested the further letter from Dr. McClure promised. On April 1st I received one as follows signed by Dr. Fox: "On receipt of your letter of 24th my colleagues and I were regretfully obliged to conclude that the establishment of medical baths at Peebles was not of such a nature as described in the resolution of which I sent you a copy on Feb. 22nd." I replied, expressing regret at the very ill considered action of the committee, and have since been in communication with the War Office direct.

Now, Sir, I would like to point out one or two further facts having a bearing on this matter. Last summer Dr. Fox visited this establishment and had a long interview with me and at that date expressed a desire that it should be "thrown open" so that any medical man could come and prescribe baths or physical treatment for his or her patients, and generally take a hand in "running the show." I do sincerely hope I am not unusually selfish, but as I happen to be physician in charge and have a monopoly of the practice—which is really what the Americans call "referred" practice—I did not then happen to see Dr. Fox's point of view as regards private patients. The hotel company might have something to say also if I turned the place inside out and broke my contract with them. Dr. Fox's idea, first promulgated to me last August, now turns up again from the Balneological Committee, dated from 35, Devonshire-place—Dr. Fox's house.

In his letter of March 22nd Dr. Fox tells me "all the considerable bathing establishments have opened their doors in this emergency." I have investigated this matter, and two days ago received a letter from the physician in charge of the largest establishment of its kind in the country, possessing very elaborate and extensive baths which cost upwards of £20,000, and my friend informs me that, quite apart from "opening their doors" in the manner described, they had never even been communicated with, but in any case they were packed with visitors, very largely patients. I find difficulty in reconciling the two statements.

Some years ago you gave me the courtesy of your columns (August 12th, 1911) for a short article on Institutional Hydropathic Treatment and Spa Treatment, in which I endeavoured to show there was a special field for each. I have personally been only engaged in the former branch of hydrotherapeutic practice, but it has always struck me that the spa physician has not only adopted, for the most part, an attitude almost contemptuous to such men as myself, but further in regard to institution work he is largely "without understanding." He appears to be incapable of absorbing the idea that such an establishment might be run by a medical man much after the manner of a tuberculosis sanatorium—or a private asylum—with, of course, lay assistance, in various ways.

Dr. F. A. de Thierry Mouillot, a past president of the Balneological Society, judging from a recent article in the *British Medical Journal*, would seem to be waking up to the possibility. But past experience of spa physicians would lead me to conclude that men engaged like myself in *institution* treatment are by them regarded as "very small beer." Possibly on the ground that Dr. Mouillot refers to—viz., that the institution is run in large measure for the profit of lay shareholders, and also advertises itself in the medical journals at times. But might I remind Dr. Mouillot and Dr. *Fox* and other spa physicians that while they themselves *do* not have such advertisements the baths committee of this or that municipality sometimes advertises its "Queen of watering places" profusely in railway stations and by posters, while the *spa* physician reaps the benefit.

Now Dr. Fortescue Fox, a quondam spa physician, wishes to coerce me, to run the medical side of this establishment on *his* lines or suffer *military* boycott at any rate. I cannot meet his views. Several hundred "Tommies" have had baths of sorts each week here since early March at a charge of one halfpenny for a towel! This has led to much overtime and Sunday labour for the staff, but the men, now gone, were very appreciative, as were their officers.

I hope, in spite of the Balneological Committee, to have many opportunities of doing "my bit" during the coming year, but I cannot

Correspondence.

"Audi alteram partem"

SANITATION IN INDIA

To the Editor of THE LANCET

SIR,—In your issue of March 6th a joint letter from Professor R Tanner Hewlett, Colonel W. G King, and Professor W J Simpson was published under the above heading The responsible positions that these three gentlemen occupy in educational sanitary circles in London secure every consideration for contributions from their pen, and I am authorised to say that the Government of India are in entire agreement with the views set forth in the joint letter in question as regards the value of British Diplomas in Public Health Indeed, in the resolution to which the writers refer it is clearly laid down that a British Diploma in Public Health is a *sine quâ non* for appointment either as a Deputy Sanitary Commissioner, or, for the present at least, as a first class health officer The Government of India, too, fully concur in the view that it is distinctly desirable that Indian candidates for important sanitary appointments should regard training in Great Britain as the foundation of their careers In this connexion I may state that since 1912, 27 Indians holding British Diplomas in Public Health have been appointed to the Sanitary Department—11 as Deputy Sanitary Commissioners and 16 as first class health officers In these circumstances it is scarcely fair to hold the Government of India responsible for the private opinions of a Provincial Sanitary Commissioner, especially when it is borne in mind that the only evidence as to the existence of such opinions is that furnished by the unsupported statements of a disappointed candidate.

I am, Sir, yours faithfully,
P LUKIS, M D, F R C S (Surgeon General),
Director-General Indian Medical Service

Simla, April 15th, 1915

CEREBRO-SPINAL MENINGITIS MENINGOCOCCI FOUND IN PERIPHERAL BLOOD FILMS

To the Editor of THE LANCET

SIR,—At the end of a short article under the above title in THE LANCET of April 10th I asked the question, "Are the organisms to be commonly found in films made from the peripheral blood in cases of cerebro spinal fever, and is this a practical method of diagnosis, or are the meningococci only to be found in the septicæmic type of the disease?"

In view of the frequent inquiries I receive from various correspondents, I think it would save some confusion if I now tried to answer that question 1 Sir William Osler kindly wrote "I was very much interested in the figures in your paper in to day's LANCET, as the first demonstration of the meningococci in the blood was made in my wards We never had a case with so many in the leucocytes, as shown in your Figures 4, 5, and 6 On several occasions we got the cultures when it was difficult to find the organisms by simple staining" 2 Dr Mary Williams, judging from her letters in the *British Medical Journal* of April 3rd and THE LANCET of April 17th, seems to have been exceptionally fortunate She says "I found the germ in 80 consecutive cases, and found it more readily in this manner than from the throat If there were any symptoms showing involvement of the nervous system, we found the germ in the blood We had cases of every degree of severity—from a man who started with agonising pain in the head and was dead in a few hours to cases in which diarrhœa, giddiness, and malaise of a slight degree were the only symptoms In many cases the latter (meningococci) were in the leucocytes In blood the meningococci I have seen often have a capsule. Personally I believe this to be the method of diagnosis which will shortly be widely adopted." 3 I have heard from two or three bacteriologists, who all state they have entirely failed to find the organisms in the blood of any of the cases they have examined. 4 Thanks to Dr. A. D Edwards, medical officer of health of Bournemouth, I have had an opportunity of examining films made from ear or finger blood of six undoubted cases of cerebro spinal fever. One of these was a fulminating, rapidly fatal one After a prolonged and careful search of these films I have been quite unable to recognise any meningococci, either free or intracellular in position, in any of these The only case in which I found the organism is the one described and that was an intensely septicæmic type The patient had "a purpuric rash on the brow and face," and later on extravasation of blood on the trunk I should think that meningococci could have been found in the blood taken from any part of the body, but what I did notice casually at the time was that when I pricked the lobe of the left ear it felt firm, and somewhat indurated, and it might even have been the seat of the purpuric rash, or even an area in which there was extravasation of blood, but the ward was somewhat dimly lighted and I did not observe this However, it occurred to me afterwards that it would be a good plan to make the film from the blood taken from a spot of the rash I therefore wrote to Dr Edwards "Please do not trouble to send me any more films from cases of cerebro spinal fever, unless you happen to meet with another of the septicæmic type It might, in future, be worth while taking the blood from a spot should the rash be present, just as is done in making cultures from the blood of the rose coloured spots in the case of typhoid fever"

I think we may, therefore, conclude 1 That meningococci may be occasionally found in the peripheral blood, but only in rare cases 2 That this method of examination cannot be used as a means of diagnosis 3 That Dr Mary Williams's remarkably successful results have not been obtained by other observers during the present epidemic

I am, Sir, yours faithfully,
ALFRED C COLES

Bournemouth May 6th, 1915

THE BALNEOLOGICAL COMMITTEE OF THE ROYAL SOCIETY OF MEDICINE AND ITS METHODS

To the Editor of THE LANCET

SIR,—Early in February of this year I received a letter from the secretaries of the above recently formed committee—Dr R Fortescue Fox and Dr J Campbell McClure—intimating the formation of the committee, on the suggestion of the War Office, to collect information and give advice to the War Office regarding "the scientific distribution of wounded soldiers among the British health resorts." In accordance with the request made I furnished a preliminary

TREATMENT OF "INCRUSTED CYSTITIS" BY SUPRAPUBIC DRAIN AND INTRA-VESICAL INJECTION OF LACTIC BACILLI

To the Editor of THE LANCET

SIR,—With reference to the letters on this subject in THE LANCET of May 1st and 8th the following may be of interest During 1905 and 1906 while working at the subject of suprapubic drainage I frequently washed out patients' bladders affected with "incrusted cystitis' with acidum aceticum dilutum (℥ ii ad O i) and acidum hydrochloricum dilutum (℥ i. ad O i), and the solution of the phosphates was rapid and painless unless the acid happened to flow over an ulcer or crack in the skin when it would give rise to considerable pain It seemed to me at the time that the action of the acid gave rise to a much larger quantity of mucus in the urine than had been present before Whether this was due to mere chemical precipitation from the alkaline solution or to a stimulation of the cells to produce more was not clear, but the persistence of excess of mucus after lavage was stopped pointed to the latter as being the cause The results were better if the bladder was washed out with a dilute solution of sodium hydrate after the acid had acted, and if this washing out was also done before the acid was employed, so as to dissolve the mucin, the solution of the phosphates by the acid was very rapid

It would be valuable to hear the opinions of those who have used the lactic bacilli method on these points—viz., Does the treatment give rise to more or less mucin formation than does treatment by lactic acid alone, and is the action of the acid which is produced bacteriologically in a nascent state greater and more rapid on phosphates and bacilli *in vitro* than the action of ordinary lactic acid in solutions of equal strength? It seems to me that the question of disinfection in such cases is so closely bound up with the removal of the foreign body (phosphate) that observations on these points will be most valuable This is especially true just now when bullet wounds of the bladder and surrounding bones and soft tissues are giving rise to so much misery, suffering, and death

I am, Sir, yours faithfully,

Aberdeen May 10th 1915 G H. COLT

STOMACH V HEART IN RELATION TO PRÆCORDIAL PAIN AND SUDDEN DEATH

To the Editor of THE LANCET

SIR,—The following passage occurring in Sir R Douglas Powell s interesting letter in THE LANCET of May 1st confers upon the algesic symptom the status of a recognised place in the contents of the angina pectoris syndrome "There is, of course, no doubt as to the existence and in some degree the diagnostic value of localised 'algesia, or, as I should prefer to say, surface pains, and points of tenderness in angina pectoris, as in association with most forms of visceral suffering, and a nerve centre may become hypersensitive from repeated excitation' A state of hypersensitiveness in nerve centres is in other words a state of neurosis This view is in accordance with that expressed in my letters to THE LANCET of April 3rd and 24th But if the presence of a neurosis be admitted, the conclusion follows that the status of the neurosis in the syndrome is that of predisposing cause Sir Douglas Powell refers to another solution to which he attaches greater importance—namely, that coronary disease is the operative causal agency in the case which had been reported by me With submission to the better opinion of Sir Douglas Powell, I would bring certain facts before your notice for consideration which appear to me to place insuperable obstacles in the way of the application of the Jennerian doctrine to cases of the type which I have described

Precise methods of cardiographic record recently introduced and employed in research furnish ample proof that the myocardial functions of Gaskell, without exception, are working after a normal manner during the course of the anginal seizure Hence the theories of claudication and cardiac spasm become untenable The hypothesis of the "tender' artery is open to the objection that arteries lying near the surface which offer direct means of examination may pass through all stages of degenerative change without manifesting any signs of tenderness upon pressure Moreover, post mortem examination not infrequently reveals extensive coronary and aortic disease in cases which had sustained for many months previous to death exceedingly high blood pressure without the patient having been conscious of any præcordial or other thoracic pain

Difficulties which beset the explanation of the following list of phenomena occurring in the angina pectoris upon any hypothesis based upon coronary or aortic disease, as the predisposing cause, are apparent

1 Pain in the course of intercostal nerves. Spasm of intercostal and recti abdominis muscles, algesia, vaso motor disturbances including increased systemic blood pressure, cardiac symptoms, vagal inhibition, eructations of flatus, retching, vomiting, the influence of gastric hypertension in the excitation of seizures, and the effects of gastric deflation in determining the subsidence of seizures

2 Post mortem statistics indicate that the frequency of coronary disease is not in greater ratio in subjects of angina pectoris than in subjects of indifferent visceral arterial disease In a series of 398 cases of visceral arterial disease, the subjects dying at an average age of 45 years, Dr Harlow Brooks, professor of pathology, New York University, observed in the course of his ordinary necropsial duties 270 instances of coronary disease, a ratio equal to 67 8 per cent[1] Some figures relating to the frequency of coronary disease in the angina pectoris are available for comparison In 244 cases of angina pectoris collected by Tacchi,[2] Sir John Forbes,[3] Lussana,[4] Wilde,[5] Gothair,[6] Huchard,[6] and Osler,[7] coronary disease was observed in 52 per cent of the subjects The largest ratio appears in Professor Osler s list, in which coronary disease was found in 13 out of 17 cases, the percentage being 76 4

3 Professor Osler gives the age periods of mortality from angina pectoris I quote from his Lumleian lectures on the subject Under 30 years, 9 cases, between 30 and 40, 41 cases, between 40 and 50, 59 cases, between 50 and 60, 80 cases, between 60 and 70, 62 cases, between 70 and 80, 13 cases, above 80, 3 cases[8]

According to Professor Osler s figures, which correspond fairly accurately with those of the face the inevitable confusion and upset which the carrying out of the wishes of Dr Fox and his colleagues would cause in a place of this kind—among the bath attendants and the ordinary *clientèle* I am, Sir, yours faithfully,

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[1] American Journal of the Medical Sciences, May 1906, p. 721.

[2] Twentieth Century Practice of Medicine, vol. iv., p 441.

[3] Ibid p 473 [4] Ibid., p. 473. [5] Ibid., p. 439 [6] Ibid., p 439

[7] Lumleian Lectures, 1910.

[8] Ibid. THE LANCET, March 12th, 1910 p. 693.

THOMAS D LUKE, M D R U I

The Hydro Hotel, Peebles, May 1st, 1915

THE TREATMENT OF CORNS

To the Editor of THE LANCET

SIR,—Measures for the treatment of this often extremely painful affection must be divided into two groups (1) those which get rid of the corns and (2) those which prevent their recurrence The ordinary treatment for a painful corn is to cut it down as much as possible, without causing bleeding, either straight away or after a preliminary soaking with hot water or some chemical, and then for a few days apply a protective dressing, such as a corn-plaster or lint and strapping, until the pain and tenderness have gone out of it The patient then resumes his ordinary vocation entirely relieved, but after a few weeks or months the corn re appears as before, and treatment is again required Such merely palliative treatment, the stock in trade of thousands of chiropodists, should only be carried out alone in exceptional cases, we should aim at *curing* the corn—i e, removing it and *preventing its recurrence*

1 *To get rid of the corn* —The foot is soaked in hot water (105° F) for half an hour, the hard part of the corn is then gently rubbed away with a file, and glacial acetic acid applied to the base of it It is then covered with india rubber sheeting, of the same quality as that used by dentists in making a rubber dam, fixed in position by two elastic bands around the foot or toe, one distal and one proximal to the corn This is removed morning and evening and the acid reapplied for two to three days until the site of the corn begins to feel tender, application of the acid is then stopped and the rubber covering used alone By this time the corn with the immediately surrounding skin is white and dead looking, after another two days, if not before, the core of it can be completetly removed by rubbing firmly with a gauze swab The rubber is now left off altogether, lint spread with boric ointment is applied to the site of the corn, and reapplied twice daily for two or three days more The surrounding parts then soon regain their normal appearance For this treatment to be effectual the patient should not use the foot while it is being applied If the corn is inflamed the inflammation must be entirely relieved by fomentations and rest in bed before this treatment can be carried out

2. *To prevent its recurrence* —To do this one must remove the causes producing it, the two commonest being a contracted state of the toes and improperly shaped boots A condition frequently met with is where the toe is hyper extended at the metatarso-phalangeal joint and flexed at the proximal interphalangeal joint, this deformity, when exaggerated, as it often is in the case of the second digit, is known as "hammer toe" The result of this deformity is a corn on the sole of the foot beneath the head of the metatarsal and another on the dorsum of the toe over the prominent interphalangeal joint No amount of treatment directed to the region of the corn will prevent its recurrence if the contracted state of the toes be not remedied The extensor tendons of each contracted toe must therefore be divided subcutaneously, in a severe case it may be necessary to divide the flexor tendons too There after the toes must be prevented from contracting again by gentle passive stretching morning and evening If there be present an actual condition of "hammer toe" it must be dealt with by excision of the joint in the ordinary manner

Having got the toes straight, and having removed the corns, it is now essential that the patient be fitted with boots the shape of his feet These must be made to measure on fresh lasts by a skilled bootmaker, it is useless to attempt to fit such a patient with ready made boots or shoes For often one foot is ¼ in to ½ in longer than the other, and when one boot is a good fit the other is too big or too small Also, only rarely is the boot broad enough in the tread to allow the foot to spread properly, and it is almost invariably the wrong shape—that is instead of being "straight on the inside" with the end of the boot opposite to the big toe, the end is opposite the third toe, so that the former is pushed out, producing in time the deformity of hallux valgus When the big toe is pushed out by an improperly shaped boot it either pushes the other toes out, so that the whole foot "treads over" the outer side of the boot, or less commonly it overrides the second toe or causes such cramping of the toes that any toe may overlap or be overlapped by the next one No permanent improvement can be effected in these deformities, and in the corns produced by them, unless the patient be fitted with correct footwear Apart from the latter, the best treatment for slight hallux valgus or for overlapping toes is the wearing of digitated socks or stockings during the daytime and the use of indiarubber "toe dividers" at night, which treatment must be persisted in for some years

When consulted by a chronic case of painful corns our practice should be to send the patient to hospital or nursing home and at once commence the acetic acid treatment On the second or third day if any toes be contracted the tendons keeping them so are divided subcutaneously with a fine short-bladed sharp-pointed tenotome, under gas and oxygen, and on the fifth or sixth day the bootmaker arrives to measure the now much improved feet for suitable boots, at the end of another week the boots are ready, the corns have been got rid of, the shortened tendons have now all become lengthened, and the patient can leave for a week s convalescence at home The only after treatment necessary is gentle stretching of the toes into the over corrected position, carried out by the patient s own fingers for a minute or two morning and evening for some months, and the long-continued wearing of boots and shoes made on the new lasts The patient thus obtains permanent relief from painful corns from which he may have been suffering for a generation

With regard to digitated socks—1 Their use is seldom necessary for all the toes, as a rule, only one or at the most two toes require restraint 2 Unless they fit perfectly they soon cause sores and blisters 3 It is better, therefore, for the patient to wear ordinary socks half a size larger than he usually takes, and convert them into digitated socks for the particular toes required by sewing the plantar and dorsal parts of the sock together parallel to and on either side of the toe which is to be kept straight A pocket is thus formed into which the affected toe can be slipped 4 When digitated socks are worn, whether of the kind just described or not, foot powder must be sprinkled between the toes every morning to avoid chafing

Hallux valgus —As regards the treatment of the corn produced by this deformity, much depends on the position of the abnormal bony projection beneath it, and upon the presence or absence of a bursa beneath the corn If the bony projection is quite clear of the ground when the patient is standing, as is usually the case, it should be removed by operation, the corn having been previously got rid of as described, but if it form part of the bone on which the patient stands removal by operation is contra indicated Then again, if there be a bursa beneath the corn—that is, if the condition known as bunion be present—no amount of local treatment can get rid of both the corn and the bursa, and after a course of local treatment to the former the latter must be excised by operation Such an operation is, however, not worth doing if the bony projection beneath cannot for the reason given above, be chiselled away, and therefore there are some cases of this condition which *cannot be cured* these must be treated palliatively by the wearing of a rubber or papier maché shield to protect the part, in conjunction with specially shaped boots and shoes of soft leather

It may be added that the circular corn plasters are often very useful in protecting a corn from pressure, especially in the sole of the foot, under the head of a metatarsal bone Such a corn is difficult to cure, because the patient will not lie up for a sufficient length of time, and protection is often the only treatment he will accept.

I am, Sir, yours faithfully,

PAUL BERNARD ROTH, F R C S Eng,

Surgeon Kensington General Hospital Senior Orthopædic Clinical Assistant, London Hospital; Captain, R A M C (S R.)

Harley-street, W, April 30th, 1915

The War.

THE CASUALTY LIST

THE casualty lists published since our last issue contain the following names of medical officers:—

Wounded: Lieutenant P. Cagney, R.A.M.C. (attached 2nd Essex Regiment), Lieutenant R. C. Neil, R.A.M.C. (attached 6th Middlesex Regiment), Surgeon Charles F. A. Hereford, R.N.V.R.

Missing (believed to be prisoner): Surgeon Probationer William W. K. Brown, R.N.V.R. (H.M.S. *Maori*).

Captain Howard Tomlin Hunter, 6th Northumberland Fusiliers, T.F., who was killed at Ypres on April 26th, was an M.B., B.S. Durham, 1910. He received his first commission in the Territorial Forces in 1905 and was gazetted captain in 1912.

MEDICAL ORGANISATION AT THE FRONT

A most timely article has been communicated to the press by an "Eye Witness present with General Headquarters," in which the whole subject of the treatment and evacuation of the wounded is ably dealt with. The fortunes of the wounded man from the time of his wound until the reception in a base hospital have been described in these columns. In a war the whole story will be familiar to medical men and to some extent to the public, but "Eye-Witness" has given a consecutive narrative, while hitherto only chapters dealing with this, that, or the other point have been published, and considerable experience has sometimes been assumed for the reader.

The narrative begins by describing the organisation in the field, at the head of which is the Director General. "Eye Witness" says:—

> The medical organisation in the field consists at the front of two kinds of formations, those of armies and those of divisions. The former are under a Director of Medical Services who, while responsible for the technical working of all units and branches of the medical service within his army, has under his direct control the large clearing stations established within easy reach of the railway, the motor ambulance convoys, and all sanitary arrangements in the particular army area. The divisional formations are under the Assistant D.M.S. of the division, who controls the field ambulances, dressing stations, aid posts, and sanitary sections in the divisional area.
>
> To show exactly how these formations work, it will be as well to trace the normal progress to the rear of a man who has been struck down in the firing line. Wounded while advancing, he has possibly been left lying in the open under a hail of shrapnel bullets which are striking the ground all round. From this hazardous position he is rescued by two stretcher bearers, who, choosing their moment, rush across, pick him up, and carry him back to the shelter of a trench. These bearers may either be from his own unit—16 men of which in the case of an infantry battalion have been trained in first aid and stretcher drill—or they may be men of the Royal Army Medical Corps belonging to a bearer subdivision of a field ambulance. They will take him to his "regimental aid post," probably situated in a dug-out, in a cellar, or in some sheltered spot giving cover from fire, where he will receive first aid from the R.A.M.C. officer attached to the battalion. From there he will be conveyed either on a stretcher or, if circumstances permit and a road is handy, in a horsed ambulance wagon to the nearest dressing station.

Divisional Field Ambulances

The wounded man now passes into the charge of the divisional field ambulances, the bearer subdivisions of which collect the wounded, while the tent subdivisions form dressing stations. At the dressing stations, which are pushed as near as possible to the front, his wound is attended to and he is injected with antitetanic serum. He is then removed by motor or horsed wagon to a larger dressing station further to the rear, where he must remain for some time during the process of sorting the wounded, but where he receives food and drink and is made as comfortable as the circumstances allow. He is now prepared for transport to the

Casualty Clearing Station

> So soon as he is placed on a motor ambulance wagon (says "Eye-Witness") belonging to a detachment of the Motor Ambulance Convoy and starts on the next stage of his journey he passes out of the hands of the division into the formations which are under the direct control of the army. These motor convoys, the first units of the kind that have ever been used in war, each consist of a large number of vehicles, with the necessary officers and other ranks. A proportion of these units are allotted to each army. The Casualty Clearing Stations, to one of which the wounded man is now brought, are under existing conditions generally situated at the railheads, so that patients can be carried direct from them to the ambulance trains, though this would not always be the case in field warfare, for instance, where troops were advancing every day. Their position, however, is always chosen with a view to facilitate despatch by ambulance or train. They are not hospitals in the true sense of the word, but a proportion of serious cases, such as those of certain kinds of injury to the head or abdomen, which cannot be moved without danger may be retained in them for a considerable time. Although equipped and staffed to deal normally with 200 patients they have a sufficiently elastic organisation to be able, if necessary, to cope with much larger numbers during the progress of a battle, and special arrangements are made for temporarily augmenting the staff when severe pressure is expected.

"Eye Witness" mentions here that during the operations at Neuve Chapelle one clearing station admitted on an average nearly 800 wounded daily for four consecutive days, passing 3553 cases to the base in six days. At the clearing station, where nursing sisters and beds first appear on the scene, the length of stay is determined partly, as has been mentioned, by the nature of the wound, but mainly by the railway facilities. Once on board the train the patient leaves the "collecting zone" and enters the "evacuating zone."

Ambulance Trains

"Eye-Witness" continues:—

> There are 14 ambulance trains now running. Each has a personnel of 3 officers and 47 other ranks of the Royal Army Medical Corps, and 3 nursing sisters. The number of wounded conveyed on any journey depends on the nature of the injuries—i.e., whether the sitting up or lying-down cases predominate. With the exception of certain specially designed trains, which have been built by some of the great railway companies in England, the rolling stock is made up of various kinds of coaches and "fourgons" belonging to the French railways, which have been adapted for the accommodation of wounded, staff, kitchens, dispensaries, and stores. The number of trains will eventually be made up to 24, the coaches for the additional units required being now under construction in England, or already in transit to France. Several of these trains have been presented to the nation by private donors.

On arrival at a base the wounded man is carried by motor ambulance to a permanent hospital.

Permanent Hospitals

> These hospitals are of two kinds, says "Eye Witness"—general and stationary—the difference between the two lying chiefly in the number of patients they are designed to accommodate. The first are the largest and are elaborately equipped, being fitted with all the modern appliances of the first-class hospitals met with in civil communities. Stationary hospitals are not necessarily situated at a base, but may be located at different points on the lines of communication, and in spite of their title are intended to be more mobile than the general hospitals.

Registrar General, the incidence of death from angina pectoris after [illegible] years of age declines year by year until at 80 it approaches nullity, whereas during the same age periods among the general public the incidence of coronary disease is increasing year by year until it reaches universality[9]

Sir Douglas Powell observes that the fact of præcordial pain appearing after marked exertion is suggestive of aortic disease But permit me, Sir, to point out to you that muscular effort excites paroxysms in a class of cases which boast for their pathology the segmentary neuroses I refer to the class of paroxysmal spasmodic complaints associated with the musculature of the alimentary canal and other abdominal visceral cavities Included in this class are trismus of tetanus, palato pharyngeal spasm of hydrophobia, œsophagismus, gastrismus, entero spasm, biliary and renal colic, colismus, tenesmus, strangury and utero spasm; paroxysms in all these instances alike are induced or aggravated by muscular effort I may also add in this connexion that the spasm in certain of these disorders is reduced, as in the angina pectoris, by administrations of nitro glycerine

If the angina pectoris be included in this class of paroxysmal spasmodic disorders, as suggested by Heberden, a rational explanation is furnished for every symptom of the complaint and for every phase of it —I am, Sir, yours faithfully,

Streatham Hill, May 4th 1915. H. WALTER VERDON

THE MEDICAL PROFESSION AND THE NEEDS OF THE ARMY

To the Editor of THE LANCET

SIR,—May I be allowed some space in your columns to suggest to your readers, including those in authority, a few points as to why there exists dissatisfaction among medical men who have already given their services to the army, and also why some who have not yet joined are hanging back from so doing

The leading article in THE LANCET of May 8th puts the case of the War Office plainly and judicially, but from what I gather from those who are serving as medical officers in the Territorial Forces the causes of dissatisfaction are other than those to which you refer

I can vouch for the following matters —Grievances settle round two points, pay and promotion, not so much *per se* but as regards the inequality between the Territorial Forces and the forces popularly known as Kitchener's Army A lieutenant in the R A.M.C (Territorial) gets 14*s* per diem, together with 3*s* for billet and 1*s* 9*d* per diem for rations. A lieutenant in "Kitchener's Army" gets £1 4s per diem and £60 on release from service Promotion, too, is slow, I know of at least one instance in which an officer was gazetted some seven months ago, he is still a lieutenant, although he has been doing a major s work (in command of a section) all the winter and spring A recent application for promotion, backed by his commanding officer, was refused on the ground that by the Territorial Forces Regulations a lieutenant R A M C must have seen at least three years' service Other executive branches of the service get rapid promotion, for instance, a man who was gazetted second lieutenant in October, 1914, in the Army Service Corps is now a captain

The Territorial R A M C men only joined originally for home service, but an Army Order has been made insisting on service anywhere required, whether abroad on active service or in India, and it must be remembered that Territorial R A M C are frequently almost all elderly men, for the younger men naturally join Kitchener s Army The question of pay is not the only grievance The question of promotion is felt to rankle, for the refusal of it seems to show a grudging recognition of the spirit which led elderly practitioners to volunteer, and which the War Office would do well to foster rather than, as it is doing, to dash

I am, Sir, yours faithfully,

May 11th 1915 H. P CHOLMELEY

To the Editor of THE LANCET

SIR,—Many eligible men still abstain from giving up lucrative practices and offering their services for the following reasons —

1 All medical officers, though their work and risks may be identical, are not treated alike. Treatment depends on whether a man is (*a*) a temporary Royal Army Medical, in which case he receives the rank of lieutenant but the pay of 25*s* a day (major s pay), (*b*) a permanent Royal Army Medical, in which case he receives the rank of captain and draws captain's pay, or (*c*) a Territorial Royal Army Medical, in which case he receives the rank and pay of lieutenant (14*s* a day pay and 4*s* 9*d* allowances at times) The Territorial medical officer has almost invariably made bigger sacrifices, yet receives the least pay

2 Certain medical officers acting in a combatant capacity have offered to transfer to the R A M C and have not been permitted to (Their applications have not even been forwarded)

3 Many R A M C, both Regulars, Temporary, and Territorial, have for months past been kept at home only partially employed when they have repeatedly asked to be allowed to go abroad, their work being carried on at home by civilian doctors Is it not reasonable for them to ask themselves whether the War Office can really be so very short, as it does not appear to make the best use of what material it already has at its disposal.

I suggest the following as a remedy 1. Do away with the arbitrary distinction between Territorial and Regular Classify, if necessary, into home and imperial service medical officers, but let all army doctors come under the same departmental control and let them all receive the same scale of pay 2 As it takes approximately five months to train a combatant officer, but five years to train a medical officer, let all doctors at present serving in a combatant capacity revert to their professional work 3 Do away with the medical officer for regimental work at home and substitute the part time civilian practitioner, who could, without much heavier work, see the 20–30 army at the same time as he sees his panel patients And lastly, if it were found that the Admiralty have a surplus of medical officers, could no amicable arrangement be arrived at whereby either a united medical service could be formed or even a united medical reserve service on which either could draw as requirements arose?

I am, Sir, yours faithfully,

May 7th 1915 LIEUTENANT R A.M C (T F).

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reconciled to coöperation in unison against the perennial adversary, insanitation and disease

Quod felix faustumque sit was the aspiration evoked by this humanitarian forecast from the crowded audience, professional and lay, that hailed with successive salvoes of applause the veteran orator as he resumed his seat

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TYPHUS FEVER IN PRISONERS' CAMPS IN GERMANY

The United States Ambassador in Berlin has warned the British Foreign Office through the United States Ambassador in London that typhus fever has broken out in the following prisoners camps in Germany —

Altdamm.	Sagan
Cassel	Schneidermuhl
Chemnitz.	Wittenberg
Gardelegen	Zerbst
Langensalza	Zossen.

Letters will not be despatched from these camps owing to the risk of transmitting the disease

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THE DENTAL NEEDS OF THE ARMY

That more dental surgeons should be attached to the Expeditionary Force has been the opinion of a good many observers A vast amount of dental work is waiting to be done This will cause no surprise to those acquainted with the dental conditions of this country, and more especially to those who have had the opportunity of seeing the condition of the mouths of those accepted as recruits Man after man has been returned from France suffering from conditions traceable to the teeth, conditions which could easily have been avoided by a little foresight It is known that during the Boer War nearly 2500 soldiers were invalided home from South Africa on account of teeth, and it has been computed that this meant a financial loss of nearly a quarter of a million to the nation Yet the lesson was not learnt, and no adequate steps were taken.

On the outbreak of the present war there was no machinery for dealing with this serious question of dental disease in the soldiers, and the work of attempting to deal with it devolved mainly on the philanthropy of the dental hospitals and of private practitioners, and to their credit be it said that they did all that was possible Subsequently, during September and October, about 12 dental surgeons were sent to France, and since then others have gradually been appointed to various centres The number appointed is, however, quite inadequate to deal with the extraordinary amount of dental disease, and reliance has still to be placed on the charitable institutions which in many instances have, we believe, entered into business arrangements with the War Office The provision made is still inadequate and in many ways most unsatisfactory In the first place, dentistry, although a branch of medicine, requires special knowledge, and it would therefore seem advisable that for this section of the army medical work the Director General of the Army Medical Service should be able to call for the best expert aid in general organisation. In the second place, the work which is being done by the various officials of dental hospitals and by dental surgeons attached to the general hospitals is not officially recognised. In many cases these officials are medical men, and it would be more satisfactory if they were accorded rank as it is accorded to other civilian medical men employed on war service The absence of proper recognition of the workers makes it extremely difficult to obtain the service of the younger men To our knowledge there has been a great trouble in persuading young dentists that they are doing better work by remaining at home and attending to the dental needs of the soldiers than by joining the forces as combatants

At the recent meeting of the Edinburgh Dental Hospital Lieutenant-Colonel Sir Joseph Fayrer, colonel in command at Craigleith Military Hospital, referred to the want of a properly organised Army Dental Department, and hoped that at every examination of the Royal Army Medical Corps there would be vacancies for dental surgeons who should also be qualified otherwise, we presume he meant medically qualified. There is much in this suggestion The army dental surgeon does not need to be an expert in dental mechanics, but rather one capable of performing surgical operations on the teeth, knowledge which a medical man can acquire in a period of possibly six months It is quite clear that the near future will see a demand for dental surgeons for the naval, military, and civil services, such men will not require the elaborate mechanical training now demanded by the various licensing bodies, rather will these dental surgeons be required to possess a good knowledge of allied medical conditions, so as to give them a basis for forming general conclusions We think that those responsible for dental education should seriously consider the question and make the curriculum of the dental students less mechanical and more medical in its character

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THE Metropolitan Counties Branch of the British Medical Association have appointed a War Emergency Committee, and a circular has been sent to the members asking them to fill up and return a form indicating their ability to offer to the War Office whole-time or part-time service

THE KING GEORGE HOSPITAL.—The working of the dental department of the King George Hospital has now been arranged so that one of the honorary dental surgeons will be in attendance on each morning of the week. Each dental surgeon has strengthened his department by the appointment (with the approval of the committee of management of the hospital) of a qualified clinical assistant, and he has, moreover, been specially provided with an anæsthetist In this way the work of the dental department ought to be carried on with equal smoothness and efficiency

The three rooms which have been set aside for the dental work are upon the top floor (the fifth) of the hospital, and are provided with large windows with a north aspect. In the afternoon these same rooms will be at the disposal of the surgeons who are in charge of the laryngeal and aural cases Apparently, it has not yet been decided if qualified clinical assistants will be called for in connexion with these cases, but inasmuch as a great deal of important operative work will be taking place such appointments might prove of great value and importance, whilst the ordinary resident medical officer can hardly be expected to possess that special knowledge which might be desirable.

THE SCOTTISH WOMEN'S HOSPITALS —The scope, character, and services of the Scottish Women's Hospitals were well explained by Dr. A. Louise McIlroy recently to a meeting at Airdrie, near Glasgow Dr McIlroy referred to the objections that had been promulgated against the Scottish Women's Hospital scheme. To the charge that it was competing with the Red Cross Hospitals it was replied that the British Red Cross was occupied in the service of our own troops, who were the best looked after troops in the world, while the women's hospitals were devoting their attention to our Allies The Red Cross itself had materially assisted them and there was no

A third category of hospitals found at the bases is composed of Red Cross or voluntary hospitals The personnel and equipment of these are provided by the society or subscribers who organised the unit, but each is under the command of an officer of the Royal Army Medical Corps These establishments vary in capacity Some are directly provided by the British Red Cross Society, and others work under its auspices The remainder are the Australian Voluntary Hospital, which was the first of its class to land in France during the early part of the war, and the Liverpool Merchants' Hospital, which has only quite recently arrived The Allied Forces Base Hospital, which has rendered useful service, has been temporarily closed, but will reopen at an early date

All the base hospitals are established in huts, tents, or in buildings suitable for the purpose, such as hotels or casinos The duration of the patient's sojourn in one varies directly with the nature of his wound Very severe cases, which it would be inexpedient to move, and slight cases likely to be fit for duty or discharge to a convalescent camp within three weeks are retained Those which are unlikely to recover within three weeks, and will not be harmed by further transport—and by far the largest number comes within this category—are sent to England so soon as accommodation is available on board a hospital ship

"Eye Witness" concludes his bird's eye view of the medical work at the front by pointing out that it is founded on two leading principles the maintenance of the mobility of the army by relieving the fighting troops quickly of non effectives, and secondly, the rapid removal of the sick and wounded to places where they can be treated in the most favourable conditions The arrangements for the evacuation of the sick and wounded along lines of communication, which are also required for the bringing up of food and ammunition, necessarily require a high degree of organisation By pointing out that, inasmuch as nothing can be allowed to interfere with the needs of the fighting troops, the care of the wounded will now and again depend upon circumstances out of the control of the Army Medical Service, "Eye Witness" answers in a sentence a great deal of ill informed criticism

How general the feeling is that the Royal Army Medical Corps has highly distinguished itself during the war is shown by the statement that "Amongst the many and diverse duties which fall upon the Royal Army Medical Corps during war perhaps none present more intricate problems than those which arise in connexion with the evacuation of wounded And it is safe to say that during the present campaign none have been performed with greater efficiency, often in the face of immense difficulties imposed by the nature of the military operations"

He concludes by alluding to the conveyance of the wounded by barges, a method which has been employed in Northern France for the evacuation from Casualty Clearing Stations of seriously wounded men The lives of such men might have been endangered by the jolting associated with train or motor journeys, and many critical cases have been carried by barge from the neighbourhood of the front to hospitals on the lines of communication, the barges having been specially converted into hospital craft and fitted with operating tables and necessary accessories

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ITALY AND THE WAR ADDRESS BY PROFESSOR BACCELLI.

While the "Third Italy" was unveiling the memorial in marble on the Genoese seaboard, whence Garibaldi and his "thousand" embarked for the emancipation of the two Sicilies, she was at the same hour (writes an Italian correspondent) bidding Godspeed to her medical youth on the mission reserved for them in the consummation of her unity The eloquence of D Annunzio before the one assembly had its echo in the glowing words of Guido Baccelli before the other—words addressed to the Roman students at the close of the Medicus Annus in the *Policlinico*—Baccelli's own creation

Baccelli's theme was the "Medico Soldato," and in developing it he expatiated on the whole field of medicine in its relation to war, starting from the Hellenic foretime, when the death of Machaon, the surgeon general of the Greek army before Troy, shed dismay throughout the camp, down to the second decade of last century, when the great Napoleon pronounced his monumental *eloge* on Baron Larrey, the head of the medico military staff The Emperor's tribute to the service of that staff in maintaining the moral as well as the physical efficiency of his troops inspired the Roman physician to a luminous illustration of what the medical art can achieve under the far more complicated and difficult conditions of twentieth century warfare, winding up with authentic instances of such achievement drawn from Italy's recent annals, in which the regimental surgeon under fire, after exhausting the resources of his *metier* in tending the wounded, had himself to become a soldier, and by his prowess and skill in the fighting line, against overwhelming numbers, aided his combatant compatriots to retrieve the day when seemingly lost Very significant in the present phase of what Italians call this "inhuman contra human war," was Baccelli's allusion to Rome's victories over her barbarous enemies beyond the Alps, victories culminating in the triumphs recorded on the Antonine Column, in words still legible—

> Marcus Aurelius Imperator
> Armenis parthis *Germanique*
> Bello maximo devictis
> Triumphalem hanc columnam
> Rebus gestis insignem
> *Antonino Pio* patri dedicavit

In connexion with this allusion Baccelli recalled as a "historical incident," the request made to him by the Kaiser Wilhelm for a description of the habiliments of the Marcomanni, as engraved on the column when these were prisoners of war at the hands of the Roman legions From this digression the orator proceeded to show how, if the military art can devise her methods of inflicting wounds and extinguishing life, the medical art is not behindhand in coping with these Over and above the superior sanitary conditions in which the soldier lives in camp or quarters, the advance in medicaments and the means of introducing them into the system is not less conspicuous, as illustrated by the largely extended and reinforced "armamentarium chirurgicum" and the methods of treating what, for instance, used to be an "opprobrium" of military surgery—tetanus Amplifying this thesis with illustrations from his own clinique, particularly in the field of intravenous injection, Baccelli paid a glowing tribute to the work of all the belligerent nations now at war, and drew from it the hopeful, the reassuring, augury that the humanely inspired function of the healing art will one day react in a moral sense on the destructive instincts still present in man, pressing home the conviction that civilisation has nobler ends to aim at and to achieve than those of international jealousy and antagonism, and that the forces now at deadly variance may yet be

Obituary.

Sir WILLIAM RICHARD GOWERS, M.D Lond and Dub, F R C P Lond, LL D Edin, F R S,

CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, LONDON, AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC QUEEN SQUARE, W C

William Richard Gowers was born on March 20th, 1845, and was educated at Christ Church College School, Oxford, and at University College Hospital, London He was apprenticed for some time to Dr Simpson, a practitioner in Essex. He had a brilliant career at his hospital and at the University of London He qualified M R C S in 1867, took his M.B degree in 1869, and his M D in 1870, winning the gold medal in that year In 1879 he was elected a Fellow of the Royal College of Physicians of London, and was appointed Goulstonian lecturer, taking as his subject "Epilepsy" In these lectures he embodied the results of a careful, methodical, and laborious investigation of 1450 cases of epilepsy, and the volume containing the substance of the lectures, published a year later, remains still one of the classical works on this subject A second edition, embodying the results of observations on over 1500 additional cases, 3000 in all, was published in 1901 He was elected to the staff of University College Hospital and of the National Hospital for Paralysis and Epilepsy He had previously acted as registrar at the latter institution Although his early work was on diseases of the heart and blood, on which subject he contributed articles to Reynolds's "System," he had already been attracted to the study of nervous disease, and he made his great reputation chiefly on account of his work on these diseases During the first part of his time at University College Hospital he was closely associated with Sir William Jenner, for whose character and abilities he always retained an almost reverent admiration He was also for many years on terms of almost affectionate intimacy with his relative, Sir John Russell Reynolds and these two masters of clinical medicine counted for much in his methods of work

It is difficult now to realise the state of chaos in which the knowledge of nervous diseases, especially as regards pathology, was at the time Gowers began to work at them, and it is in great degree due to the extraordinary character of his work in investigating and systematising that our knowledge of these diseases is now perhaps more complete than of any other branch of medical science The first great step in this systematisation was a lecture which he published in 1879 on the Diagnosis of Diseases of the Spinal Cord This lecture, afterwards published as a separate volume, attracted much attention at the time It was illustrated by the representation of a series of sections of the spinal cord, in one of which was represented the area of ascending degeneration which Bechterew subsequently described and named "Gowers's tract" But the lecture was really epoch-making because of the manner in which pathological anatomy and clinical symptomatology were brought into relation, and it laid the foundation of the wonderfully complete knowledge which we now possess of the organic diseases of the spinal cord His volume on "Medical Ophthalmoscopy" was published soon afterwards and was of inestimable value and interest

Sir William R Gowers, F R S

In 1885 Dr Gowers published a volume on "Diagnosis of Diseases of the Brain" By this time the clinical and pathological observations of Hughlings Jackson, and the experimental work of Fritsch, Hitzig, and Ferrier had completely altered the conceptions of cerebral physiology and function, and Gowers's acute mind readily grasped the significance of their observations In the volume referred to, which consists of 18 lectures, principles overlapping As to the expressions of apprehension concerning the fitness of women doctors to engage in such strenuous and arduous work and to undertake the very grave operations, Dr McIlroy said that at first the British War Office would not employ women, so one little band of women doctors had gone out on their own account, and had done so well among the soldiers that they were taken on to Boulogne They had since come back to London, where the War Office had given them a hospital of 500 beds to look after, staffed entirely by women Dr McIlroy described the hospitals of the Scottish women, which were divided up into units of 100 beds with a fully equipped staff of women doctors, nurses, X ray apparatus, and laboratories on as complete a scale as the large infirmaries at home The efficiency of all this equipment had been absolutely dependent on the generosity of the Scottish people Dr McIlroy contrasted the system and provision in Flanders and France where they were remarkably well provided for and attended to, with that in Serbia, where they had to deal with, not only the wounded, but small pox, diphtheria, and, it was said, plague, which was beginning to appear in some parts of Southern Europe More than half of the Serbian doctors had died from typhus fever, and daily 10 15, and 20 patients were dying The great need of Serbia was more doctors and trained nurses, especially those with experience in fevers They were now providing fully equipped tents and marquees as hospitals They were fighting the disease that would follow the war, which it was their duty to keep from spreading to the other side of Europe

Zeppelins in the Mouth of the Thames —Southend on Sea was visited by Zeppelins just before daybreak on Monday morning, and about 100 bombs, mostly of an incendiary character, were dropped on the town and its outskirts Outbreaks of fire occurred in five or six places, and damage estimated at £20,000 was done One woman unfortunately lost her life, a bomb coming through the roof just over the bed in which she was lying asleep with her husband The husband escaped with considerable injuries about the head and neck. One of the houses which was partly burnt out was that of Mr H W Hull, a local medical practitioner, who is at present serving in the Royal Navy as surgeon on a hospital ship in the North Sea. He happened to be at home on 48 hours' leave of absence, and was awakened to find his house on fire

Russian Vital Statistics —The Russian *Government Gazette* has just made a statement with regard to the organisation of medical aid in Russia, based on published information from the Chief Medical Inspector The figures do not deal with a later date than the end of 1912, but allow us, none the less, to gauge to some extent the national health of our great ally The vast size of Russia as well as the backwardness of enormous districts of the empire, accounts for the impossibility of acquiring and publishing more recent figures The mortality in Russia fell in 1912 to 25 9 per 1000, or 3 2 per 1000 lower than the average mortality of the preceding 10 years 1902-1911 The birth rate, which was 43 per 1000, was 2 5 per 1000 lower than the average of the preceding 10 years The natural increase of the population was 17 1 or 0·7 per mille more than the average of the period named.

The mortality from infectious diseases in European Russia declined considerably in 1912, amounting to 397 per 100 000 of the population, whilst in the preceding year it was 467, and in 1910 635 Similarly there was a great decline in the cases of infectious diseases excepting measles and whooping cough Of the total number of cases of sickness registered 67 per cent consulted doctors, and 33 per cent assistants, who are recognized in Russia as a lower order of practitioners 18 4 per cent. of the diseases registered referred to the alimentary canal, infectious cases accounted for 16 3 per cent

The statistics concerning the medical profession are very interesting as they indicate that the difficulty of finding medical officers for the Russian army may have been considerable The members of the civilian medical profession at the end of 1912 numbered 22,772, plus 28 500 assistants, 14,194 maternity assistants, 7238 dental surgeons and dentists And the number of pharmacists was 13 357 Of the medical men, 72 per cent were in the towns and 28 per cent in the rural communities There was one medical man to 1450 people in the towns, but only one to 21,600 in the country The average number of inhabitants in the empire per doctor was 7200—viz., 6500 in European Russia and 13,100 in Asiatic Russia.

The number of hospitals and refuges was 8110, with 219,978 beds, of which 171,514 were in general hospitals There were 41,404 beds in psychiatric hospitals and 7060 in lying in establishments In all the hospitals there were 3,311,637 cases during 1912, of which 162,446, or 4 9 per cent, were fatal The deaths in hospital made 3 8 per cent of the total in the Empire In the psychiatric institutions there were 92 989 cases, with a mortality of 9 2 per cent In the lying in houses and refuges there were 309,626 cases The number of births was 256,374, or 3 6 per cent, of the total births in the empire, the mortality was 0 4 per cent At 28 Pasteur institutions 37 935 subjects were treated, and the deaths numbered only 136

Vacancies for Medical Officers —Three medical officers are urgently required to complete the establishment of the 2/1st Highland Mounted Brigade Field Ambulance Particulars of duty, pay, &c, will be given on application to the Officer Commanding 2/1st Highland Mounted Brigade Field Ambulance, R A M C, Houghton Hill House, Houghton, Huntingdon

Wounded Allies Relief Committee —Dr Isabel Ormiston, chief medical inspector of schools to the Government of Tasmania, and Mrs Patton Bethune, who were sent as a Sanitary Commission to Montenegro, have arrived at Cettigne and report that the Montenegrin Government request the despatch of a self supporting hospital unit and a supply of vaccines as well as disinfectants, to combat the typhus epidemic in Ipek and the surrounding country The committee is proceeding to equip a suitable unit.

The Belgian Army Medical Commission has requested the Committee to undertake the care of a number of tuberculous Belgian soldiers who have acquired the disease during the hardships endured last winter in the trenches The Committee appeals urgently for premises in which to establish a home If any owner of a house on high ground and at the seaside would be so generous as to lend it for this purpose particulars will be gratefully received by Mr Albert Van der Velde, honorary hospital superintendent, Wounded Allies Relief Committee, Sardinia House, Kingsway, W.C

A Motor-car Volunteer Corps in Edinburgh —A meeting of motor car owners was held on May 10th in the North British Station Hotel, Edinburgh, to consider the question of forming an Edinburgh section of the National Motor Volunteer Corps Mr W L Sleigh, who had been invited by the headquarters of the force to form a local section, explained that the principal objects of the body were to provide local assistance to the regular army transport in the event of attack, assistance to recruiting officers and officers visiting lines of communications, hospital and Red Cross work, &c He stated that the services of the force had been regularly used by the War Office in districts where companies were organised and that it was desired to have local centres formed so that the provinces should be linked together Following the discussion of the proposal the meeting resolved to form an Edinburgh section of the force, and further resolved itself into a committee to obtain members A subcommittee, consisting of Baillie Rusk, Mr Sleigh, and Mr J Scott Law, were appointed to make arrangements for the proper organisation of the movement.

The British Hospital at Port Said —At all times the provision of adequate hospital accommodation at Port Said, that gate between the East and West is an object of great importance, but it is easy to understand that it becomes an imperative necessity for our wounded soldiers and sailors in the Near East at the present time. The hospital is now making an urgent appeal for £10 000 for its completion and equipment, and those who wish to contribute may address themselves to Mr Arthur Stanley, M P London Chamber of Commerce 1 and 2, Oxford court, Cannon street, E C

The Belgian Field Hospital —Mr H W Morrison has been appointed commandant of the Belgian Field Hospital, in succession to Mr W S Perrin several of his brothers practised, he studied at Foyle College, Londonderry, and at Queen s College, Belfast, and in 1868 he became L.R C.P & S of Edinburgh. After assisting his father for a time, Mr Moore settled in Lurgan, where he built up a large working class practice He also took a prominent part in the business and educational affairs of Lurgan He is survived by an only son, his wife having pre-deceased him some years ago

Death of Lieutenant-Colonel Robert Mark Bradford A.M S (retired)—Lieutenant-Colonel R M Bradford died recently at his residence, Bradford Peverell, near Dorchester He was the son of the late Rev J Bradford, formerly vicar of Pinhoe, Devon, and received his medical education at St Bartholomew s Hospital. He qualified as L R.C P Edin. and M.R C S Eng in 1868, and shortly afterwards entered the Army Medical Service On his retirement he took up his residence at Bradford Peverell, where he was highly esteemed He was on the committee of the Dorset County Hospital and was secretary of the Dorset Orchestral Association

Death of Professor G Heinricius—Professor Heinricius, who held the chair of midwifery and diseases of children in the University of Helsingfors, died recently, at the age of 62 years

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE Fund has received in the last fortnight some large additions, these, however, have not been the result of recent subscriptions, but represent the paying to the treasurer of money collected over a considerable range of time by local funds A splendid donation from the Canadian Committee brings the contributions from this source to nearly £1500

The money in the hands of the Executive Committee is sufficient for immediate wants, as will have been gathered from the weekly reports in the medical and pharmaceutical press, but it is most important to understand that the calls upon the Fund in the future will be heavy

The Liverpool Fund

At a recent meeting of the committee formed under the auspices of the Liverpool Medical Institution it was resolved to remit £400 to the treasurer, Dr H. A. Des Vœux. The Liverpool Fund still remains open, and attention may be drawn here to the fact that a considerable number of the medical profession in Liverpool and district, as well as of the members of the Liverpool Medical Institution, have not yet sent in their subscriptions These will be gratefully welcomed by the local honorary treasurer, Dr T R. Bradshaw The following list is the third, the first and second were published in THE LANCET of Jan. 23rd and Feb 13th respectively

	£	s	d
T P Cowen Rainhill	4	4	0
Charles J Macalister ..	3	3	0
J P Bligh ..	2	2	0
W McIntyre Brown West Kirby ..	2	2	0
W E. Livsey	2	2	0
Robert Stevenson Bootle	2	2	0
Wallasey Medical Society per Dr Seymour Davies ...	2	2	0
Anon	1	1	0
Percy Ashworth, Southport (2nd subscription)	1	1	0
G T Bogle	1	1	0
H Haward Bywater ...	1	1	0
Mrs H. Haward Bywater ...	1	1	0
A. Ross Carmichael ..	1	1	0
W C Cosine	1	1	0
William Crooke Liscard	1	1	0
Seymour Davies, Liscard	1	1	0
Walter Dawson	1	1	0
Percy Edwards	1	1	0
R. P Edwards Mold ..	1	1	0
J H. Fardon Birkenhead..	1	1	0
William Irvine	1	1	0
Henry Jones	1	1	0
Leslie Kingsford ..	1	1	0
W McAfee West Kirby	1	1	0
R. I Richardson	1	1	0
F W Taylor Blackburn	1	1	0
John Twiston Davies Liscard	0	10	6
W Howie	0	10	6
J Leggate (second subscription)	0	10	6
F G McCaughey	0	10	6
S Wilkinson ...	0	10	6

The Scottish Fund

The third list of subscriptions to the Scottish Fund brings the total subscribed to £1113 18*s* The first and second list of subscriptions were published in our issues of March 13th and April 10th respectively

	£	s	d
Dr N Sydney Williams India	2	0	0
Dr T. Burn Murdoch	1	1	0
Dr A. J Ballantyne	1	1	0
Dr Thos. McGregor ..	1	1	0
Dr James Parker	5	5	0
Dr A. White Cassie	1	1	0
Dr Jas. W Cook	1	1	0
Dr John Rowan	3	3	0
Dr Wm Snodgrass	2	2	0
Dr L. R Gray..	1	1	0
Per Dundee Branch of British Medical Association—			
Dr Julia L Pringle.	5	0	0
Dr Emily C Thomson	5	0	0
Dr J H. W Laing (second donation)	2	2	0
Dr J K Tulloch	5	0	0
Dr G A Rorie	2	2	0
Dr C Shoon	1	1	0
Dr M F Anderson	1	1	0
Dr C Kerr	3	3	0
Dr D N Anton	1	1	0
Dr H E Fraser	1	1	0
Dr C S Young	1	1	0
Dr W C Anderson ..	1	1	0
Dr J M Whyte	1	1	0
Dr J Crawford ..	1	1	0
Mr R P Mathers	3	3	0
Dr W S Malcolm ..	3	3	0
Mr J Anderson	2	2	0
Dr A. B Dalgetty	0	10	6
Dr D Laing	1	1	0
Dr J A. Dewar	1	1	0
Dr J Richardson	1	1	0
Dr J Ewan Taylor	1	0	0
Dr W E. Foggie	1	1	0
Dr F M. Milne	1	1	0
Dr C R Marshall	1	1	0
Dr S W Smith	1	1	0
Dr R. Johnston.. ..	2	2	0
Anonymous ..	0	10	6
Dr James Watt Ventnor	0	10	6
Dr John Anderson	1	1	0
Dr J Isdale Greig	1	1	0
Dr John McLaren	1	1	0
Association of School Medical Officers of Scotland (per Dr Hunter) second contribution ...	5	5	0
West Lothian Local Medical Committee (per Dr Hunter) ...	3	3	0
Dr J J Robertson	1	1	0
Dr W Oliphant Walker	1	1	0
Sister J W Watt Royal Infirmary Edinburgh	1	0	0
Dundee and E of Scotland Pharmaceutical Assoc. per Mr Jas Robertson ..	5	0	0
Mr William Dow	1	1	0
Mr R G Howat ..	1	1	0
Mr S G Crowden	0	10	0
Miss E Miller ..	0	10	0
An Assistant" (anonymous)	0	5	0
Mr M. Hoppenstein	0	2	6

The Week's Subscriptions

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, are as follows —

	£	s	d
Mr J P Ellerington (La Pharmacie Française) (seventh donation, total £50)	5	0	0
Mr A. W Sanders ..	1	0	0
Southern Branch B M A. (per Dr James Green Hon. Sec.) (sixth donation total £61 4s 6*d*)—			
Dr Chas. C Jeffery	1	1	0
Dr Archibald Leishman ..	1	1	0
Dr J G Blackman	1	0	0
Dr R A. Weston ..	1	1	0
Dr E F S Green	1	0	0
Canadian Committee (per Dr J Gibb Wishart Hon. Treas) (*fifth donation total* £1427 3s 11*d*) ...	500	0	0
United Hospitals Club (per Dr J R Bosworth Hon. Sec) (second donation, total £50) ..	25	0	0
Dr H. Clifton Hughes	1	0	0
A Friend" (per H C H)	1	0	0
Mr R. Broadhead ..	0	10	6
Shropshire and Mid Wales Branch B M.A. (per Dr A. G Mackenzie Hon Sec.) (eighth donation total £46 14s)—			
Dr R. A. F Exham	0	10	6
North of England Branch of Belgian Doctors and Pharmacists Relief Fund (per Dr James Don and Mr A. S Perceval Hon. Secs) (tenth donation total £369 18s. 6*d*.)—			
Dr Munro	1	1	0
Part proceeds of Belgian Flag Day given by the Women Workers at Wheatley Hill (per W W. Jones)	18	18	6
Miss J Phillips	0	5	0
Mr H R Carson ..	0	5	0
Mr F W Sadler ..	0	10	0
Orange Free State Pharmaceutical Society Bloemfontein (per Mr H H. Greenwood Hon. Sec.)	5	0	0
Australasian Pharmaceutical Conference (per the Agent-General) New South Wales	152	0	0
Holderness and Howdenshire Pharmacists Association (per Mr C Morrow)...	1	0	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A. Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd

The Appeal for Surgical Instruments

The Master of the Society of Apothecaries begs to acknowledge the receipt of surgical instruments kindly contributed by the following donors since the publication of the last list —

Miss C W Hyde Southampton, Dr C W Buckley Brixton, Mr A. Broomhall Hull (per the Voluntary Aid Committee), and Mrs. C J Kayser, Fleet were laid down and rules enunciated which at the present day are perhaps a little extended but scarcely in any way altered This book will remain for many years an indispensable part of every neurologist's library

It would be impossible to enumerate all the articles which in this and in preceding years, and to a less extent in subsequent years, seemed to pour from Gowers's pen We need only mention such articles as those on pseudohypertrophic paralysis, on canine chorea, on hydrophobia, and on many other subjects These, admirable and valuable in themselves, were only facets, so to speak, of the great work on which he was engaged—the "Manual of Diseases of the Nervous System" The first volume of this, on Spinal Cord Diseases, was published in 1886, the second, on Diseases of the Brain and Functional Disease, in 1888 With the publication of the first of these volumes the author stepped at once into the very first rank of neurologists, and on its completion the great value of the work was recognised both in America and in Europe It was reprinted in the United States, and it was translated into German, Italian, and Spanish Second and third editions of the first volume were subsequently published, a second edition also of the second volume appeared A third edition of the second volume, which was in contemplation, was never completed Gowers also had it in his mind to cut down the "Manual" to one volume by omitting the anatomical and physiological parts There is little doubt that this would have made an exceedingly useful clinical manual of nervous diseases, and one cannot but regret that it was never completed In 1892 he also published his Lettsomian lectures on Syphilis of the Nervous System, delivered three years earlier

The immense work which all the above publications involved, coupled with the anxieties of a large practice, unfortunately led to a breakdown in Sir William Gowers's health, which had never been very robust This necessitated a voyage to South Africa, from which he returned much improved In spite of the engrossing claims of his practice he continued to publish much useful matter His Bradshaw lecture on Subjective Sensations of Sound, given before the Royal College of Physicians of London, and his Bowman lecture on Subjective Sensations of Sight, given before the Ophthalmological Society of the United Kingdom, are both valuable for the investigations and observations described in them, and suggestive because of the conclusions drawn from them, and a small volume on the "Borderland of Epilepsy" contains much that is interesting and useful It has been translated into German Several volumes of clinical lectures have also been published

We are still too near the epoch in neurology so closely associated with the work of Gowers to estimate properly his position in it Yet the scientific advances in that department of medicine have been so great and rapid as to make it easier perhaps to appreciate his great work without the danger of over estimating its importance It may be stated without fear of contradiction that Gowers was an extraordinary observer, accurate and painstaking, with a wide horizon and a sound judgment which made his deductions from observations both definite and reliable He had a marvellous power of what might be called intensive deduction He was a rapid reader and worker, and could crystallise the gist of much reading in a very few sentences He had great capacity for work, and although he was not always an easy man to work with (for he did not "suffer fools gladly") yet no one was more appreciative of help and assistance than he was His position in neurology was unique, because he was a great observer and a still greater expounder His teaching power was remarkable, and to his out-patient afternoons at the National Hospital in Queen square in the "eighties" must be traced in large degree the deservedly high reputation which that hospital enjoys as the chief centre of neurological teaching in this country at the present time And in his publications, especially in his "Manual," this extraordinary power of assimilation of knowledge from all quarters, always enriching, sometimes modifying his own observations, together with the faculty of setting it all out in clear and graphic language, is peculiarly striking The late Dr Hughlings Jackson often remarked that he would always be grateful to Gowers because of the manner in which Gowers had expounded the Jacksonian theories Yet if Gowers had not been the wonderful teacher and expounder that he was he would have been recognised as a great investigator and observer

He was the recipient of many honours He was elected a Fellow of the Royal Society He received the Hon M.D of Dublin and was elected an honorary Fellow of the Royal College of Physicians of Ireland, he was an honorary member of the American Neurological Association, of the Netherlands Society of Psychiatry and Neurology, of the Russian Society of Medicine, of the Royal Society of Science of Upsala, of the Society of International Medicine of Vienna, and he was LL D of the University of Edinburgh He received the honour of knighthood in 1897

It might well be thought that a man who was responsible for so much medical work had no time to indulge in hobbies But Gowers was a diligent and skilful etcher, devoting much of his holiday time to this art His work, some of which has been exhibited at the Royal Academy, is characterised by artistic feeling as well as by technical skill He was also much interested in mosses, and his knowledge of them was extensive and minute Indeed, it may be said that all aspects of nature held a strong appeal for him The beauties of nature were a constant joy to him, and it is interesting to know that from early days he was a devoted admirer of Ruskin and a constant student of his works He was an enthusiastic advocate of the use of shorthand, and himself an excellent stenographer, using shorthand for all his notes both of hospital and private patients

Sir William Gowers married the daughter of Mr Frederick Baines, of Leeds She died in 1913, leaving four children—two sons and two daughters It may be mentioned without impertinence that Sir William Gowers was peculiarly happy in his married life and a devoted husband and father

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JAMES MILLEN MOORE, L R C P & S EDIN —Great regret has been caused in Lurgan and the surrounding district by the sudden death on April 25th at his residence in Lurgan, of a well known practitioner, Mr J M Moore Mr Moore who was 68 years of age, had attended service in the parish church of Lurgan in the morning, but later in the day while walking in his garden, he was suddenly taken ill Making his way to his house, he was in the act of drinking a glass of water when he fell to the floor and died in a few minutes from cardiac failure, in the presence of two of his medical friends, who had been hastily summoned A native of Dungiven, co Londonderry, where his father and

HOUSE OF COMMONS

WEDNESDAY MAY 5TH

Anti inoculation Literature

Mr **RONALD MCNEILL** asked the Under Secretary for War whether he was prepared to take proceedings under the Defence of the Realm Act against persons attempting by the distribution of literature or otherwise, to incite soldiers to endanger their own and their comrades' lives by refusing to undergo antityphoid inoculation —Mr **TENNANT** replied The very satisfactory results which have been obtained by the combined efforts of officers of all ranks both medical and regimental as regards inoculation render it unnecessary to consider the question of taking proceedings under the Defence of the Realm Act

Consultant Surgeons for the Navy

Commander **BELLAIRS** asked the Secretary to the Treasury whether the amounts of £5000 a year paid to the six consultant surgeons now specially employed by the Admiralty came before the Treasury before the war broke out the arrangement to employ them having been sanctioned in 1908 —Mr **ACLAND** said in reply No, sir, the salary was not submitted to the Treasury until the appointments were made The Treasury gave general approval for the engagement of distinguished surgeons to look after sailors and other naval ratings who might be in need of their help The scheme for doing this was proposed to the Treasury and sanctioned in principle in 1908, but the amounts intended to be paid were not at that time fixed.

Commander **BELLAIRS** In view of the fact that no similar arrangement was made by the War Office, and the fact that the navy has not one-hundredth part of the casualties or the problems arising from casualties which the army has to face, will the Treasury take the fact into consideration and terminate this arrangement?—Mr **ACLAND** No sir, the Treasury will not terminate this arrangement. It is surely of the utmost importance that our wounded men should have at their disposal the services of these extremely distinguished persons and I cannot see my way to terminate this arrangement

Commander **BELLAIRS** Will the honourable Member take into consideration the fact that very distinguished surgeons and medical men are now serving in the army upon the pay of an ordinary colonel, and does he not see how undesirable it is that these comparisons should be drawn?—The **DEPUTY SPEAKER** Order, order That is a matter for debate

Commander **BELLAIRS** asked the Secretary to the Admiralty whether, in view of the fact that there were so few casualties in the navy which had not been dealt with by the regular surgeons of the navy he would consent to transfer the services of these six consultant surgeons to the War Office—Mr **MACNAMARA** answered That is covered by a reply which has already been given

Commander **BELLAIRS** Is the right honourable gentleman aware that there are two gentlemen at the Admiralty, Fellows of the Royal College of Surgeons, who are doing nothing but clerical work? Will he consent to give a return of the number of operations performed by these gentlemen and the number performed by surgeons at the regular hospitals?

The **DEPUTY SPEAKER** That is rather a subject for debate

Commander **BELLAIRS** I will put a question down

Nitric Acid Fumes

Mr **ROWLANDS** asked the Home Secretary whether his attention had been called to the inquest held at Dartford on April 29th into the death of a workman while employed in some gun-cotton works from the effects of nitric acid fumes, whether he had had a report of the case, and whether the precautions taken were such as to prevent a recurrence.—Mr **MCKENNA** replied I have received a report from the medical inspector of factories who investigated the case and attended the inquest It appears that the workman had full opportunity of escaping from the fumes, but was unaware of their dangerous nature The inspector has recommended the issue of instructions to the workmen and certain other precautions which should prevent a recurrence of any similar accident, and the firm has undertaken to adopt the necessary precautions The matter will be carefully watched.

THURSDAY MAY 6TH

Civilian Medical Men and the War Office

Mr **JOYNSON HICKS** asked the Under Secretary for War whether any civilian doctors were employed by the army at salaries of upwards of £3000 per annum, if so, who were they and what were they paid and how many civilian doctors were receiving rates of pay higher than doctors of corresponding rank in the Royal Army Medical Corps.—Mr **TENNANT** answered There are no civilian medical men receiving higher rates of pay than officers of corresponding rank in the Royal Army Medical Corps and the Army Medical Service.

Commander **BELLAIRS** Will not inconvenience arise from the fact that the Admiralty are paying four times as much as the Army?

The **DEPUTY SPEAKER** I would remind the honourable member that this is not the time for argument

Bangour Asylum

Mr **HOGGE** asked the Under Secretary for War whether Bangour Asylum was being converted into a military hospital, and if so, what arrangements were being made so that the treatment of the present inmates was not interfered with —Mr **TENNANT** answered Yes sir, Bangour Asylum is being converted into a military hospital I should be glad if my honourable friend would address the second part of the question to the Secretary for Scotland

Exhaustion and Nerve Shock in the Army

Colonel **WHITE** asked the Under Secretary for War whether arrangements had now been made whereby men, and more especially non-commissioned officers who had been serving in the firing line for many months, and who were suffering from exhaustion and nerve shock, might be granted furloughs of six weeks to two months in cases where the reserve units of their regiments could supply the deficiency so caused —Mr **TENNANT** said in reply All non-commissioned officers and men who in the opinion of the medical authorities are suffering from exhaustion and nervous shock and require rest are sent home until they are recovered

Artificial Limbs for Wounded Soldiers

Replying to Mr **PARTINGTON** Mr **TENNANT** said Arrangements have been in existence for many years whereby a soldier who has while serving, lost a limb in consequence of disease or injury is provided with an artificial limb at the public expense The Commissioners of the Royal Hospital, Chelsea, arrange for the supply of artificial limbs to such soldiers

Asphyxiating Gases

Colonel **WHITE** asked the Under Secretary for War whether protective helmets or masks against asphyxiating gas had actually been issued to the troops at the front —Mr **TENNANT** replied. When the Germans first introduced gas as a weapon of warfare we sent out 1 000 000 respirators which were supplied to us originally from the Admiralty These respirators were not found to be so efficacious as we desired, and they were supplemented by another form of respirator, the cotton waste, which was saturated with a solution of carbonate of soda and hyposulphite of soda, being held in place by a veil That is now being used by the troops. The question has arisen whether it would not be preferable to have a helmet such as is used by fishermen which is made of woollen material with talc spaces for the eyes, the cotton waste inside being saturated with the same solution Dr Haldane has again gone to the front to conduct experiments with these various materials and methods

The Duty on Medicinal Alcohol

Mr **HORNER** asked the Chancellor of the Exchequer whether, having regard to the fact that ethyl-alcohol, upon which duty was payable, was essential in the manufacture of many medicines used in both human and veterinary practice, the Government would allow a rebate to be granted to the manufacturers or other means adopted by which this duty would not become a tax upon the alcohol used in their preparation, seeing that otherwise the imposition of the contemplated duties would largely increase the cost of these medicines to all users, and thus press with excessive severity upon the poor and add enormously to the expenses of hospitals and charitable institutions —Mr **LLOYD GEORGE** answered The whole question is under consideration

International Opium Conference

Sir J D **REES** asked the Secretary of State for Foreign Affairs whether any and, if so, what action was to be taken upon the correspondence respecting the Third International Opium Conference whether it was proposed to pursue this matter further during the continuance of the war and, if not, with what object the report of the British delegates was to be presented to Parliament as soon as the *protocol de clôture* was officially received from the Netherlands Government.—Sir **EDWARD GREY** replied No further action has been taken beyond depositing the ratification of the signature of the British delegates, nor is it practicable to take any further action at present The correspondence respecting the third conference, including the report of the British delegates and the *protocol de clôture*, was laid before the House in February last in accordance with an undertaking given in the House with the object of making all the available information accessible to those members and the general public who are interested in this question

TUESDAY, MAY 11TH

Release of Medical Personnel

Lord **ROBERT CECIL** asked the Secretary of State for Foreign Affairs what progress had been made for the

Medical News.

Royal College of Surgeons of England — At the First Professional Examination for the Licence in Dental Surgery on April 29th and 30th the following candidates were approved in the undermentioned subjects —

Mechanical Dentistry and Dental Metallurgy —Leslie Douglas Crabb Edward Tong Crosoer Richard John Gustavus Handel and John Herbert, Guy's Hospital Frank Hiam Royal Dental Hospital William Trevor Johnson, Birmingham University Clifford Andrew Loveluck Philip Henry Marsh, and William Mercer Guy's Hospital Ernest George Parkinson Manchester University Herbert Alfred Potter Royal Dental Hospital Harold John Powell and Bertie Moorwood Tonkin Guy s Hospital and Frederick Charles Truman and Ernest Arthur West Birmingham University

Mechanical Dentistry —Albert William Ewart Chapple Manchester University William Ashley Cooper Birmingham University and Guy s Hospital Alfred Innes Cox Royal Dental Hospital Edmund Percy Deverall, Jenkin Albert Evans and George Frederick Faustmann Guy's Hospital William Grant Milton Bristol University Johann Lodewijk te Water Naudé Royal Dental Hospital Arthur Arnold Osman Guy's Hospital Robert Wolff Royal Dental Hospital Walter Reginald Wotton Guy's Hospital and Malcolm Wykes Birmingham University

Dental Metallurgy —Douglas William Smale Adams Guy's Hospital Harold John Allen National Dental Hospital Hubert John Vere Raywood Allin Birmingham University William Blair Spence Andrew Royal Dental Hospital Victor Henry Ball London Hospital John Laurence Barber Liverpool University Cyril Arthur Duvall Bishop Guy s Hospital Hubert Bruckmann Royal Dental Hospital Alfred Joseph Chiappa, National Dental Hospital Eric Norman Commander Birmingham University Bertram Poole Cousins Guy s Hospital Thomas John Davies London Hospital Harold James Dawes B.A. Cantab Birmingham University Pieter Jacob Stephanus de Wet and Hyman Fox, Guy's Hospital Edwin Stowell Gawne Liverpool University Ralph Byron Gibson, Sheffield University Lacy Norman Glaisby Royal Dental Hospital Edwin Spencer Goodwin and Philippus Elisa Grobbelaar Guy's Hospital Arthur Robert Hill Royal Dental Hospital John Christopher Johnson Hugh Llywelyn Jones Roy Victor Kingham and Felix Reginald Knowler Guy's Hospital Frank Lawrence London Hospital John Leslie Lean, Guy's Hospital Georges Maes Brussels and Royal Dental Hospital Harihar Gangadhar Moghe, L M S Bombay Bombay and National Dental Hospital Edward Alfred Penney Parker Guy's Hospital Withiel Herbert Leslie Phillips Birmingham University, Richard Stanislaus Roche and Ernest Findlay Shaw Guy's Hospital Cyril Fryer Smith Liverpool University and Herbert Victor Vogt Albert Weinberg George Wilshere Thomas Alexander Moffat Wilson D M D Harvard and William Adam Woodward Guy's Hospital.

Apothecaries' Hall of Ireland —The next examination for candidates seeking the licence in medicine, surgery, midwifery, and pharmacy will begin as follows — Primary Examination, Monday, June 7th, Intermediate, Part I, Monday June 14th, Intermediate, Part II., Monday, June 21st, and Final Examination, Monday, June 28th.

Bristol Children's Hospital —The annual meeting of the Ladies' Auxiliary in connexion with this hospital was held recently under the presidency of the Duchess of Beaufort The report showed that during 1914 38,000 houses had been canvassed with the result that the sum of £1023 was raised for the funds of the institution This is the largest amount collected in any year by the Ladies' Auxiliary

Pharmacists and the Medical Curriculum — The secretary of the Pharmaceutical Society has written to the Registrar of the General Medical Council to inquire whether, in view of the shortage of medical men, the Council would be prepared to consider favourably the suggestion th t duly qualified pharmacists who desire to enter upon the medical curriculum might be excused the medical preliminary examination and such parts of the qualifying examination as are included in the subjects which the pharmacist has to pass in order to qualify under the Pharmacy Acts

Leicester Royal Infirmary —The number of in patients received by this hospital, as shown by the 142nd annual report for the year 1914, was greater than that recorded in any previous year—namely, 4003 The average number of beds occupied during the year was 250 9 The total number of attendances in the out-patient department was 35 091, made up of 10,910 new cases, 22 034 old cases, and 2147 cases remaining on the books on Jan 1st It is satisfactory to note that the income has about equalled the expenditure while the whole of the sources of income have been well maintained For the building and equipment of a new pathological department a sum of £1800 has been promised, leaving a sum of £2400 to be obtained With reference to the reconstruction of the Children s Hospital, which has resulted in the improved health both of patients and nurses, it is pointed out that a debt of £2200 remains to be liquidated, and the board hope that the hospital may be placed on the list of all subscribers to the infirmary for annual subscriptions and contributions

The annual general meeting of the Asylum Workers' Association will be held at 11, Chandos-street, Cavendish square, W, on Wednesday next, May 19th. The chair will be taken at 3 P M. by Sir John Jardine K C I E M P, LL D, president of the association. The annual report will be submitted, officers elected, and presentations will be made of medals for long and meritorious nursing service Matters of much importance to asylum workers will be discussed, and it is hoped that there will be a large and representative gathering of members and friends of the association All communications should be made to Dr G E Shuttleworth honorary secretary, or Mr J F Powell, acting honorary secretary, at 8, Lancaster place, Hampstead

Royal Mineral Water Hospital, Bath — The annual meeting of the subscribers to this hospital was held recently The medical report was satisfactory, and the financial statement showed a deficit remained at the end of 1914 of £427 It is proposed to improve the accommodation of the institution and to provide radiant and other baths at an estimated cost of about £3000 Sir William Osler was elected a governor of the hospital

Convalescent Home for Children, Weston super Mare —The twenty first annual meeting of the subscribers to this home at Weston super Mare, in connexion with the Bristol Children's Hospital, was held on May 5th The medical report stated that during the year 285 boys and girls had been admitted, of these, 204 were cured 60 much improved, 12 improved, and 4 had not improved, and 3 were transferred to the statutory hospital The financial statement showed the expenditure exceeded the income by £89, and this sum had been met by the Bristol Children's Hospital

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

The Government and the Drink Problem

The Government have decided to abandon their proposals to impose additional taxation on beer, wine, and spirits What they are now asking Parliament to do is to enact the compulsory bonding of whisky and most other spirits for a period of three years For one year, in order to permit the trade to adapt itself to the new conditions, the withdrawal of spirits ranging from two to three years of age is to be permitted, but a surtax of 1s a gallon will be enforced in this case Rum and gin, which usually pass into consumption without detention for the purposes of being matured, are still to be allowed to escape compulsory bonding, but they are to be subject to an additional tax in order that they may not be placed at an advantage in regard to other spirits The Government are proceeding with their Bill to invest them with special powers to control the licensed trade in munition areas

Army Medical Service

Some objection was taken in the House of Commons to the proposal in the Army Act (Amendment) Bill which allows a general officer commanding to transfer men from one branch of the military medical service, including the Army Medical Service, to another branch An amendment was moved with the object of preventing the transfer of men from the Army Medical Service to a combatant unit The argument was that it was unfair to utilise men who had enlisted on the understanding that they were not to be employed as combatants for the purpose of actual fighting It was explained that the provision applied only to men not officers Mr Tennant, the Under Secretary for War said that where there were sufficient men and circumstances demanded their transfer it ought to be in the hands of the general officer commanding to make the transfer He intimated that the Director General of the Medical Service concurred in this view The amendment was negatived without a division

Milk and Dairies (Consolidation) Bill

Mr Herbert Lewis, the Parliamentary Secretary to the Local Government Board, has presented a Bill in the House of Commons " to consolidate certain enactments relating to milk and dairies " It has been read a first time

Denbigh, North Wales Counties Asylum.—Second Assistant Medical Officer Salary £220 per annum with apartments board attendance and washing

Derbyshire County Council.—Three School Medical Officers. Salary £400 per annum Also Assistant in Sanatorium Salary £250 per annum, with board laundry and lodging

Derby Mickleover County Asylum.—Medical Superintendent. Salary £550 per annum with house laundry &c

Dumfries Crichton Royal.—Temporary Assistant Physician unmarried Salary at rate of 5 guineas a week with apartments board laundry and attendance

Essex Education Committee.—Temporary Female School Medical Inspector Salary £300 per annum

Exeter, Royal Devon and Exeter Hospital.—House Physician for six months Salary at rate of £150 per annum with board apartments, and washing

Gravesend Hospital.—House Surgeon. Liberal salary with board, residence and washing

Great Northern Central Hospital, Holloway N—House Surgeon for six months Salary at rate of £60 per annum with board residence, and laundry

Guildford Royal Surrey County Hospital.—House Surgeon Salary £150 per annum with board residence and laundry

Hemel Hempstead Herts West Herts Hospital.—Resident Medical Officer Salary to be a matter of arrangement With rooms board and washing

Hospital for Consumption and Diseases of the Chest Brompton —House Physician for six months. Salary 30 guineas

Hospital for Sick Children Great Ormond street, London W C—House Surgeon unmarried, for six months Salary £50 with board, residence &c.

Hull Royal Infirmary—House Physician unmarried. Salary £105 per annum with board and apartments. Also Assistant House Surgeon. Salary at rate of £100 per annum with board and lodging Also Casualty House Surgeon Salary at rate of £80 with board and lodging

Indian Medical Service.—Ten Commissions

Ipswich Borough Mental Hospital.—Resident Medical Superintendent. Salary £400 per annum with residence washing &c.

King Edward VII Sanatorium Midhurst, Sussex.—Second Assistant Medical Officer Salary £150 per annum with board lodging and attendance

Leeds General Infirmary—Resident Casualty Officer Salary £125 per annum with board residence, and laundry Also Resident Aural Officer Salary £100 per annum with board residence and laundry

Liverpool, Brownlow Hill Institution—Resident Assistant Medical Officer Salary at rate of £300 per annum with rations, &c.

Lochgoilhead and Kilmorich Parish.—Medical Officer and Vaccinator Salary £100 per annum.

London Skin Hospital, 40 Fitzroy-square W—Honorary Assistant Physician or Assistant Surgeon.

Manchester, Ancoats Hospital.—Two Residents.

Manchester, County Asylum Prestwich.—Assistant Medical Officer unmarried Salary £250 per annum with board, apartments, attendance, and washing

Manchester Northern Hospital for Women and Children Park place Cheetham Hill-road.—House Surgeon. Salary £120 per annum with apartments and board

Mile End Old Town Infirmary—Assistant Medical Officer Salary £275 per annum with board lodging and washing

Newark Borough and Rural District—Medical Officer of Health who would also be appointed School Medical Officer for the Borough, Medical Officer in charge of Isolation Hospital and Medical Officer to the Borough Police. Salary £430 per annum.

Northumberland County Council.—Temporary Tuberculosis Officer Salary 7 guineas a week.

Nottingham Children's Hospital.—Female House Surgeon Salary at rate of £150 per annum with apartments, board, and washing

Nottingham General Hospital.—Assistant House Surgeon. Salary at rate of £250 per annum, with board, residence and laundry

Plymouth South Devon and East Cornwall Hospital.—House Surgeon Salary £120 per annum with board, residence, and washing

Portsmouth Corporation Mental Hospital.—Assistant Medical Officer Salary £250 per annum with board apartments, attendance and washing

Portsmouth Royal Hospital.—House Surgeon for six months Salary £150 per annum with board &c.

Queen Charlotte's Lying-in Hospital, Marylebone-road, N W—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum with board, residence and washing

Queen's Hospital for Children Hackney-road Bethnal Green, E—House Physician and House Surgeon for six months Salary £100 per annum, with board, residence and washing Also Assistant Physician.

Rotherham Hospital.—Senior and Junior House Surgeons Salary £200 and £125 per annum respectively with board lodgings, and washing

Royal College of Surgeons of England—Hunterian Professors and the Arris and Gale Lecturer

Royal National Orthopædic Hospital, 234 Great Portland street, W—Resident Medical Officer

St Mary's Hospital for Women and Children Plaistow E.—Resident Medical Officer and Assistant Resident Medical Officer Salary at rate of £110 and £90 per annum respectively, with board, residence and laundry

St Pancras Dispensary 39 Oakley-square, N W—Resident Medical Officer unmarried. Salary £300 per annum, with residence and attendance.

Salisbury General Infirmary—House Surgeon and Assistant House Surgeon, unmarried. Salary £100 and £75 per annum respectively with apartments, board lodging and washing

Scarborough Borough.—Temporary Medical Officer of Health Salary at rate of £400 per annum.

Scarborough Hospital and Dispensary—Senior and Junior House Surgeons Salary £100 and £80 per annum respectively with board residence &c.

Sheffield Royal Infirmary—House Surgeon and Assistant House Physician. Salary £100 per annum with board and residence.

Sheffield Wharncliffe War Hospital, Middlewood road—Resident Medical Officers

Shrewsbury Royal Salop Infirmary—House Physician Salary at rate of £110 per annum with board and apartments

Somaliland—Medical Officer Salary £400 per annum with free quarters.

Southampton Parish Infirmary Shirley Warren—Resident Assistant Medical Officer Salary £200 per annum with apartments rations washing and attendance

South Shields Ingham Infirmary and South Shields and Westoe Dispensary—Female House Surgeon. Salary £150 per annum, with residence board, and washing

Stepney Tuberculosis Dispensary—Medical Officer Salary £500 per annum

Swansea Education Committee—Temporary Assistant School Medical Officer Salary £300 per annum.

Tunbridge Wells General Hospital.—House Surgeon unmarried. Salary £100 per annum with board, residence, &c

Ventnor, Royal National Hospital for Consumption and Diseases of the Chest on the Separate Principle.—Assistant Resident Medical Officer unmarried. Salary £150 per annum with board lodging &c

Walsall and District Hospital.—Assistant House Surgeon and Anæsthetist. Salary £150 per annum with board, residence and laundry

Warrington Infirmary and Dispensary—Junior House Surgeon Salary at rate of £120 per annum, with board apartments and laundry

West Bromwich and District Hospital.—House Surgeon and Assistant House Surgeon unmarried. Salary £150 and £120 per annum respectively with residence board and laundry

West Ham and Eastern General Hospital, Stratford E—House Physicians Salary £120 and £100 per annum with board, residence, and washing

West Ham Union—Fourth Female Assistant Medical Officer at Infirmary Whipps Cross road, Leytonstone N E Salary £160 per annum. Also Female Assistant Medical Officer at Workhouse Union road Leytonstone N.E Salary £140 per annum. Each with usual residential allowances.

Wigan Royal Albert Edward Infirmary and Dispensary—Junior House Surgeon. Salary £150 per annum, with board apartments and washing

Wolverhampton and Staffordshire General Hospital.—Female Resident Medical Officer for six months. Salary at rate of £150 per annum with board, rooms and laundry

Worcester County and City Asylum.—Assistant Medical Officer Salary £250 per annum, all found.

Worcester General Infirmary—Resident Medical Officer Salary £150 per annum with board residence and washing

Wounded Allies Relief Committee, Sardinia House, Kingsway—Medical Men to proceed to Montenegro to combat Typhus Epidemic.

Births, Marriages, and Deaths.

BIRTHS

Broadbent—On May 7th, at Muswell rise Muswell hill N to Dr and Mrs Reginald Broadbent, a daughter

Bromley—On May 7th at The Warden's House, Guy's Hospital, the wife of Lancelot Bromley M.C F.R.C S., of a daughter

Gaskell.—On May 10th, at the Royal Naval College, Greenwich, the wife of Fleet-Surgeon Arthur Gaskell, R N of a son.

MacGlashan—On May 4th at *Hartley hill,* Leeds the wife of Dr Keith B MacGlashan, of a daughter

Seymour.—On May 7th at Rosslyn hill, Hampstead, the wife of Dr E A. Seymour of a son

Smith.—On May 2nd at the Taunton Nursing Home, Taunton, the wife of Lieutenant C E. H. Smith R.A.M.C of a son.

Sowry—On May 6th at Newcastle Staffs the wife of George H. Sowry M.D., F R.C S., of a son

Turner.—On May 8th at Anerley road Upper Norwood, the wife of Captain A. Scott Turner R.A.M.C. of a daughter

MARRIAGES

Bremner—Lillico—On May 8th, at the Parish Church Croydon Lieutenant Colonel James Morrison Gardiner Bremner M.B to Kathleen, second daughter of Alderman William Lillico J.P Coombe Hill House Croydon.

Lukyn Williams—MacDonald—On May 5th at Guilden Morden Parish Church Herbert Temple Lukyn Williams, M.B., Lieutenant R A M C., to Matilda Kate daughter of the late Rev O J MacDonald B.A.

Mawson—O'Farrell.—On April 28th at the Catholic Church Haddington road Dublin Dr Owen Mawson to Ellen, eldest daughter of Surgeon-General O'Farrell.

DEATHS

Baillie.—On May 3rd, at The Larches, Tiverton Peter Baillie M.D Edin *formerly* of Whitworth Lancashire.

Jefferson—On May 4th, at West-street, Rochdale, Arthur John Jefferson, M.D Lond., aged 59 years.

Locker.—On May 7th at Kirby Cross, Essex Edward Hawke Locker M.R.C S., L.R.C.P late Surgeon R.A.M.C., aged 57 years

Mason—On May 7th at Waxham Cottage Gorleston, Alfred Leighton Mason, L.D.S Eng aged 34 years.

Stivens.—On May 9th at Park-street, Grosvenor-square, W., Bertram Herbert Lyne Stivens M.D of Garlogs, Stockbridge, Hants, in his 60th year

N.B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths release of medical personnel detained in the various belligerent countries —Sir EDWARD GREY replied As will be seen from White Paper No 8 (Miscellaneous) His Majesty's Government accepted in its main outline the interpretation placed by the German Government on the provisions of the Geneva Convention dealing with the release of medical personnel with the reservation that such personnel should not be detained in connexion with new work. The German Government pointed out that there were certain epidemics amongst the prisoners in German detention camps which require expert assistance This referred principally to typhus, which had broken out amongst Russian prisoners, and in which disease Russian doctors were more expert than German doctors On further consideration, His Majesty's Government decided that circumstances, such as the outbreak of obscure epidemics among prisoners, might arise in which the captors might be justified by humane considerations in retaining medical personnel who are thoroughly competent to deal with the disease for a period longer than that which is ordinarily permissible A note to this effect was addressed to the United States Ambassador on April 30th, and an answer has not yet been received

Medical Consultants to the Navy

Commander BELLAIRS asked the Secretary to the Admiralty whether the highest medical rank in the Navy was that of surgeon general at a full pay rate of £1300 per annum, and, if so, whether this fact was taken into full consideration when the arrangement was made to remunerate consultants for short duty at the rate of £5000 per annum —Mr MACNAMARA replied A surgeon general of the Navy when employed at any of our naval hospitals draws a salary of £1300 and charge pay at the rate of £182 10s per annum He is also in the occupation of a house valued at £70 per annum All the facts bearing on the question were taken into consideration when deciding on the remuneration to be paid to consultants

Mr JAMES HOPE asked the Secretary to the Admiralty whether the number of civilian doctors now in the service of the Navy was in excess of the needs of that service, and whether he would sanction the transfer of a limited number of such doctors to the service of the army —Mr MACNAMARA replied The answer to the first part of the question is in the negative In these circumstances it would not be possible to adopt the suggestion contained in the second part As regards the special consultants to whom reference has been made in an earlier question, if a specific request were made for help of one of them for any particular operation or for any special consultation, it would be certainly acceded to if it was possible, but the daily duty that has to be performed by these gentlemen in naval hospitals would not allow of the utilisation of their services by the army to a greater extent than this

The Drug Fund

Mr SNOWDEN asked the Chancellor of the Duchy of Lancaster whether he had received a resolution passed by the Insurance Committee for the borough of Blackburn appreciating the action proposed to be taken by the Insurance Commissioners respecting the deficits in the drug funds of the various overspent Insurance Committees for the year 1913, and expressing the desire that a Departmental Committee be appointed to inquire into the causes of and remedies for the continuing deficiencies in the Drug Fund in insurance areas, and for an amendment of Article 40 of the Medical Benefit Regulations, and whether it was intended to carry out these suggestions —Mr MONTAGU replied The answer to the first part of the question is in the affirmative In reply to the last part, the cost of the supply of drugs under the Insurance Act is already the subject of inquiry by a Departmental Committee which has been specially appointed for the purpose Before considering any further action I am awaiting their report

Salaries of Cork Panel Practitioners

Mr CREAN asked the Chancellor of the Duchy of Lancaster whether he was aware that the salaries of the panel doctors of the city of Cork are now six months in arrear, whether the Insurance Commissioners in dealing with the county panel doctors paid only three months' salary about three months ago, six months' salary being then due, and whether he would have this state of things attended to immediately in the interest of the service —Mr MONTAGU said in reply I am informed by the Irish Insurance Commissioners that further payments on account will be made to the doctors referred to both in the county borough and the county in a few days

WEDNESDAY, MAY 12TH

Consulting Surgeons with the Army

Commander BELLAIRS asked the Financial Secretary to the War Office in view of the fact that the Admiralty were paying six consultant physicians and surgeons serving on shore in Great Britain at a rate equal to 3·9 times the pay of the highest salaried surgeon generals of the navy, in addition to the earnings of a certain amount of private practice, whether any difficulties had thereby resulted in regard to the distinguished civil surgeons who so patriotically went to France at the ordinary rates of army pay —Mr H BAKER answered No, sir There have been no difficulties with regard to the pay and status of the consulting physicians and surgeons working with the army in France

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication.*

ANDERSON A. W M.D C M Edin has been appointed Medical Officer of the Stewartry Parish of Kirkgunzeon

BARLOW SIR THOMAS M D Lond F R S has been elected to serve on the Senate of the University of London

BLIGH J A. MURRAY M D Liverp has been appointed Honorary Physician to the David Lewis Northern Hospital

DAWSON J MAXWELL, M D C M Edin. D P H. has been appointed Medical Officer of Health for the Burgh of Buckhaven and Medical Superintendent of the Cameron Hospital

HARPER JOHN MAURICE, M R C S has been appointed temporary Medical Officer of Health for the Bath Rural District

JUDD CHARLES F M B B Ch. Dubl. has been appointed Medical Officer for the Stillorgan Dispensary District

MITCHELL, T C M.R C S L.R.C.P Lond has been appointed Medical Officer of Health for the Wath Rural District.

PARSONS LEONARD G M.D Lond. M R C P, has been appointed Lecturer in Infant Hygiene and the Diseases Peculiar to Children in the University of Birmingham

WELLS S R M.D Lond has been elected to serve on the Senate of the University of London.

WILLIAMSON JAMES M.B Ch B has been appointed an Honorary Ophthalmic Surgeon to the Bury Infirmary

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

ALTON HANTS LORD MAYOR TRELOAR CRIPPLES' HOSPITAL —Two Assistant Resident Medical Officers Salary as arranged with board residence and laundry

BIRKENHEAD BOROUGH HOSPITAL.—Female Senior and Junior House Surgeons Salary £180 and £150 per annum respectively with board and laundry

BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer unmarried. Salary £250 per annum with apartments attendance, &c.

BIRMINGHAM JAFFRAY BRANCH OF GENERAL HOSPITAL, Gravelly Hill —Resident Medical and Surgical Officer Salary £150 per annum, with board residence, and washing

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Senior House Surgeon Salary £110 per annum with board residence and attendance

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES —Clinical Assistant for three months Salary at rate of 52 guineas per annum Also Clinical Assistant for six months, to Electrical Department Salary at rate of 52 guineas per annum.

BIRMINGHAM ROMSLEY HILL SANATORIUM FOR CONSUMPTIVES —Assistant Resident Medical Officer unmarried Salary £250 per annum with board apartments and laundry

BOLINGBROKE HOSPITAL, Wandsworth Common S W —Resident Medical Officer Salary £300 per annum. Also House Surgeon Salary £100 per annum with board residence

BOLTON INFIRMARY AND DISPENSARY —Third House Surgeon. Salary £170 per annum with apartments board and attendance

BOURNEMOUTH, ROYAL VICTORIA AND WEST HANTS HOSPITAL (BOSCOMBE BRANCH) —House Surgeon for six months Salary £100 per annum with board lodging washing &c

BRIGHTON EDUCATION COMMITTEE —Temporary Junior School Doctor Salary at rate of £350 per annum

BRISTOL, BEAUFORT WAR HOSPITAL.—Chief Resident Physician

BRISTOL GENERAL HOSPITAL.—Second House Physician House Surgeon Casualty House Surgeon and Resident Obstetric Officer all for six months Salary at rate of £150 per annum, with board residence &c

BRISTOL ROYAL INFIRMARY —Throat Nose and Ear House Surgeon for six months Salary at rate of £120 per annum with board apartments and laundry

BURNLEY UNION WORKHOUSE.—Resident Assistant Medical Officer or Locum Tenens Salary £200 per annum with apartments rations washing and attendance

BURNLEY VICTORIA HOSPITAL.—House Surgeon Salary £135 per annum with residence board and washing

BURY INFIRMARY —Senior and Junior House Surgeons Salary £175 and £150 per annum respectively with board residence and washing

BUXTON DERBYSHIRE DEVONSHIRE HOSPITAL.—Assistant House Physician for six months Salary £100 per annum with apartments board and laundry

CARLISLE NON PROVIDENT DISPENSARY —Resident Medical Officer Salary £200 per annum with apartments (not board)

CARMARTHEN JOINT COUNTIES ASYLUM —Temporary Second Assistant Medical Officer Salary at rate of £210 per annum with board lodging washing &c

CROYDON BOROUGH HOSPITAL.—Senior Resident Medical Officer and Bacteriologist Salary £200 per annum with board residence and washing Also Assistant Resident Medical Officer Salary £[illegible] per annum with board residence and laundry

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY Burlington House London W

THURSDAY —Papers —Mr H Moore On the Corpuscular Radiation liberated in Vapours by Homogeneous X Radiation (communicated by Prof O W Richardson) —Mr H Richardson The Absorption in Lead of γ Rays emitted by Radium B and Radium C (communicated by Sir E. Rutherford) —Mr T R. Merton On the Application of Interference Methods to the Study of the Origin of Certain Spectrum Lines (communicated by Prof A. Fowler)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

TUESDAY

GENERAL MEETING OF FELLOWS at 5 P M.
Ballot for the Election of Candidates to the Fellowship

SECTION OF PSYCHIATRY (Hon. Secretaries—Bernard Hart, G F Barham) at 5 P.M

Annual General Meeting —Election of Officers and Council for Session 1915–1916

WEDNESDAY

SECTION OF THE HISTORY OF MEDICINE (Hon. Secretaries—Raymond Crawfurd, Leonard G Guthrie) at 5 P.M.

Annual General Meeting —Election of Officers and Council for Session 1915–1916

Papers

Dr George C Peachey William Bromfield Surgeon.
Dr Charles Mercier Paracelsus and Van Helmont
Dr Hector A. Colwell Lionel Lockyer

Exhibits

Mr Macleod Yearsley: Two Documents concerning Touching for the King's Evil.

THURSDAY

SECTION OF DERMATOLOGY (Hon. Secretaries—S E Dore, A. M. H Gray): at 5 P.M.

Exhibition of Cases (at 4.30 P.M.):

Annual General Meeting —Election of Officers and Council for Session 1915–1916.

Dr J J Pringle Pemphigus Vegetans (shown before)
Dr J M. H. MacLeod (1) Dermatitis Herpetiformis (2) Chronic Pemphigus (?)
Dr H. W Barber Lichen Planus Atrophicus in an Infant
Dr Parkes Weber (1) Spurious Erythromelalgia: Non-syphilitic (2) Arteritis Obliterans in a Jew
Dr D Walsh Pompholyx.
Dr H. C Semon Mycetoma Pedis.

YAL SOCIETY OF ARTS John-street, Adelphi W C

MONDAY —8 P.M., Cantor Lecture —*Dr D Sommerville* Foodstuffs. (Lecture IV)

LUMINATING ENGINEERING SOCIETY House of the Royal ociety of Arts 18, John-street Adelphi, W C

TUESDAY —8.15 P.M., Discussion on Some Points in Connexion with the Lighting of Rifle Ranges.

CIETY OF TROPICAL MEDICINE AND HYGIENE 11 Chandos treet Cavendish-square, W

FRIDAY —8.30 P.M. *Papers*:—An Epidemic of African Tick Fever among the Troops in British Somaliland.—American Leishmaniasis.—Treatment of Bilharziasis by Thymo-Benzol.—Treatment of Ankylostomiasis by Milk of Higueron.

CTURES, ADDRESSES, DEMONSTRATIONS, &c.

ST-GRADUATE COLLEGE West London Hospital, Hammersmith oad, W

MONDAY —10 A.M. *Dr Simson* Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Mr D Armour Operations. Dr Pritchard Bacterial Therapy Department. Mr B Harman and Mr Gibb: Diseases of the Eye.

TUESDAY —2 P.M., Medical and Surgical Clinics. X Rays Mr Baldwin: Operations. Dr Davis: Diseases of the Throat, Nose, and Ear Dr Pernet: Diseases of the Skin.

WEDNESDAY —10 A.M., Dr Saunders Diseases of Children. Dr Davis: Operations of the Throat Nose, and Ear 2 P.M., Medical and Surgical Clinics. X Rays. Mr Pardoe Operations Dr. Simson: Diseases of Women. Mr Gibb Diseases of the Eye.

THURSDAY —9 A.M., Dr Bernstein: Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr D Armour Operations. Mr B Harman Diseases of the Eye.

FRIDAY —10 A.M., Dr Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Davis Diseases of the Throat, Nose and Ear Dr Pernet: Diseases of the Skin.

SATURDAY —10 A.M. Dr Saunders Diseases of Children. Dr Davis: Operations of the Throat Nose and Ear Mr B Harman: Eye Operations. 2 P.M. Medical and Surgical Clinics X Rays. Mr Pardoe: Operations.

E THROAT HOSPITAL, Golden-square W

MONDAY —5.15 P.M., Special Demonstration of Selected Cases.

THURSDAY —5.15 P.M. Clinical Lecture.

or further particulars of the above Lectures &c. see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows —

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD	
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TO COLONIAL AND FOREIGN SUBSCRIBERS

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO 51, Fifth Avenue, New York, U S.A

The following magazines, journals, &c., have been received —
St Thomas's Hospital Gazette, Journal d'Urologie, Clinique Ophtalmologique, Dublin Journal of Medical Science Medico-Legal Journal, Pharmaceutical Journal American Journal of Medical Sciences, Journal of Nervous and Mental Disease Indian Medical Gazette South African Nursing Record, Asylum News &c.

Notes, Short Comments, and Answers to Correspondents.

WINKLES

IN the appeal of *Leavett v Clark* heard by the Divisional Court recently, the appellant had been convicted under the Larceny Act, 1861, of which Section 24 imposes a penalty upon a person taking "fish" in any water which is private property or in which there is a private right of fishery In this instance the defendant was picking up winkles upon certain mud flats, gathering some which had been left dry by the tide and others which were still in the water The magistrates had decided that a winkle was a fish, and the Divisional Court was asked to hold that it was not and declined to do so The difficulty arose out of the Act in question giving no definition of the word ' fish, as to which the legislature seems to have been equally silent on other occasions Counsel contended that a fish ' must be vertebrate and that the Act was designed to protect the ownership of something capable of being taken by angling The principal case referred to was that of Caygill v Thwaite, decided 30 years ago by a court consisting of Mr Justice Mathew and Mr Justice A L Smith, both of whom, it will be remembered, sat later in their lives in the Court of Appeal In Caygill v Thwaite the point was whether a "crayfish" was a fish The name, of course, indicates nothing, as crayfish is a corruption of écrevisse,' and Mr Justice Mathew, as Lord Reading pointed out in his judgment in Leavett v Clark, could only say, "It is, perhaps, difficult to give any definite reason except that crayfish are fish " The Lord Chief Justice, Mr Justice Avory, and Mr Justice Low appear to have found scarcely better grounds for their decision, which was to follow Caygill v Thwaite, as it had been so long held to be good law The last-named judge is reported to have observed that he "saw no reason why a winkle should not be a fish " It may be suggested that some day definition should prevent the possibility of a man, who might honestly not know that he was doing wrong, being convicted as a fish poacher by establishing the true position of the "fractious penny winkle" and other molluscs

WORK OF SCHOOLS FOR MOTHERS IN EDINBURGH

IN the provincial Training College at Edinburgh a lecture was delivered recently under the auspices of the Edinburgh Child Study Association, entitled "Schools for Mothers as Centres for Social and Educational Work,' by Miss E V Eckhard, Manchester The lecturer said new enterprises were usually initiated by private effort, and when the value of an enterprise had been fully proved the State stepped in and offered help Schools for mothers had now passed the experimental stage, and the State was giving financial help in England The aim was to educate the mother through the child

Since Jan 1st five infant health centres have been opened in various parts of Edinburgh Nine baby consultations a week are held, with a doctor in attendance In addition, the centres are opened five other afternoons for health classes for mothers and instruction in infant clothing and feeding

THE INHALATION OF CHLOROFORM IN BRONCHIAL CATARRH

To the Editor of THE LANCET

SIR,—I read with much pleasure Dr Alfred S Gubb's letter in your issue of April 24th on the value of chloroform inhalation in cases of violent paroxysmal cough and in the cough in cases of phthisis In the "sixties" Dr Churchill, of this city, recommended whiffs of chloroform to cut short paroxysmal cough in pertussis and phthisis, and for the past 30 years I have prescribed it in such cases I recommend five or ten drops to be inhaled from a piece of fine cotton wool I may add that I have also prescribed it in cases of paroxysmal cough in the early stages of measles, and in no single instance have I seen any unpleasant results

Dr Richard Pearson physician to the General Hospital near Birmingham, writing in 1795 ("Miscellaneous Observations on Certain Remedies Used in Consumption," R Baldwin No 47, Paternoster row, London), says that he has found the *vapour of æther* remarkably serviceable in phthisical cases Patients who have inhaled it two or three times find it so grateful to their feelings that they are disposed to have recourse to it too often His mode of applying was as follows "One or two tea spoonfuls of æther to be poured into a tea saucer, which is held up to the mouth, and the vapour arising from it is drawn in with the breath The inhalation is continued till the saucer becomes dry "

We learn from "La Grande Chirurgie de Guy de Chauliac," of 1363, that Theodoric used the vapour of hot water impregnated with an extract prepared from hypnotics and analgesics, such as mandragora, hemlock, and opium, which was inhaled until sleep was induced Theodoric or Teodorico was an Italian surgeon and ecclesiastic who rose to be Bishop of Cervia He enjoyed a high reputation for his skill in surgery, and wrote, in Latin, a treatise "On Surgery according to the System of Hugo de Lucca " He died in 1298 I am, Sir, yours faithfully,

Dublin, April 26th 1915 GEORGE FOY

THE HOSPITAL ACCOMMODATION OF ENGLAND AND WALES

MR Herbert Lewis, M P , stated at Hemel Hempstead on May 6th that according to a Census by the Local Government Board the hospital accommodation of England and Wales is as follows —

	Hospitals	Beds
General	593	31,313
Special	222	13,654
Fever	755	31,149
Small pox	362	7,946
Port Sanitary	30	418
Poor law	700	94,001
Total	2662	178,481

COLONIAL VEGETABLE DRUGS

THE current issue of the quarterly *Bulletin of the Imperial Institute* (Vol XIII , No 1) contains an interesting article, covering nearly 40 pages on Investigations of Vegetable Drugs and Poisonous Plants made by the staff of the scientific and technical department of the Institute and by other investigators during recent years The drugs examined include many which have a reputation among natives and all the drugs have their source in the British possessions Most of the native drugs are disappointing from the point of view of European medicine, but there are some notable exceptions Podophyllum emodi, an Indian plant recognised in the British Pharmacopœia, being one of them Other examples are the Egyptian plant Hyoscyamus muticus a valuable source of the alkaloid atropine, the seeds of Peganum Harmala, which have long been used as an anthelmintic in the East, and the seeds of Croton Elliottianus, which Professor J T Cash of Aberdeen University, and Mr W J Dilling have found to be a useful laxative A special article by Mr W R Dunlop of the Imperial Department of Agriculture for the West Indies, deals with the lime and lemon as sources of citric acid and essential oils The *Bulletin* can be obtained from Mr John Murray, Albemarle street, W , price 2*s* 6*d* net

"KHAKI A TOPICAL MAGAZINE

THE May number of *Khaki*, a magazine written for our sailors and soldiers, which is supplied gratis to them while on active service, contains, in addition to fiction, several articles of topical interest Among the latter is the story of Turkey's influence in the East, with remarks on the probable site of the Garden of Eden The magazine is published at Imperial House, Kingsway, London, W C , at the price of 6*d* net, and it deserves support, not only on account of its contents but also for the good work which the management of the journal is doing in helping British prisoners in Germany who have no relatives or friends

COMMUNICATIONS not noticed in our present issue will receive attention in our next

METEOROLOGICAL READINGS

(Taken daily at 9.30 a m. by Steward's Instruments)

THE LANCET Office May 12th 1915

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall.	Solar Radio in Vacuo	Maximum Temp Shade	Min. Temp.	Wet Bulb.	Dry Bulb	Remarks.
May 6	29·920	S	1 76	107	76	65	57	60	Hazy
7	30·010	E		116	74	63	57	59	Fine
8	30·133	E		114	73	54	55	61	Fine
9	30·290	E		107	60	44	49	52	Fine
10	30 340	N E		109	66	42	48	56	Fine
11	30·052	E.		103	69	45	49	56	Fine
12	29 724	S W		112	69	54	54	56	Cloudy

Arris and Gale Lecture

ON

THE INFLUENCE OF THE ARBOREAL HABIT IN THE EVOLUTION OF THE REPRODUCTIVE SYSTEM

Delivered at the Royal College of Surgeons of England on March 22nd, 1915,

BY FREDERIC WOOD JONES, D Sc LOND,
PROFESSOR OF ANATOMY UNIVERSITY OF LONDON LECTURER TO THE LONDON SCHOOL OF MEDICINE FOR WOMEN

MR PRESIDENT, LADIES, AND GENTLEMEN,—The influence of environment upon the structure and organisation of animals is a matter upon which nowadays everybody is well informed. Like so many of the ideas popularised from the work of Darwin, this factor of evolution has tended to become condensed into words and phrases which often hinder, rather than help, the progress of new thought and further research upon the subject. In 1846 when, as newly appointed professor, John Goodsir delivered his first opening address, he chose for his subject "The Progress of Anatomy." "There is nothing," he told his audience on that occasion, "which has more retarded science and philosophy, and the kindred subjects on which human reason has been employed, than the introduction of terms with conventional meanings. Men come at last to defend the terms, as if they were the truth, and to mistake an artificial shadow for the substance required." Goodsir's warning was doubtless needed in 1846, but its need was very much the greater during the upheaval of the next few decades, and to-day no better text could be taken by any man embarking upon a career of teaching others.

THE ARBOREAL HABIT AND EVOLUTION

That habits and surroundings produce their effects in alteration of animal structure is perfectly obvious. The sum total of the outward appearance of an animal tells very truly, as a rule, what sort of life the animal leads and amidst what surroundings it leads it. But it is when we go beyond the mere outward appearance of the animal and examine the more minute details of its separate systems and organs that the wonder of adaptation is forced upon us, and the futility of any catch phrase to sum up this wonderful influence becomes apparent.

If we turn to Man and examine his special peculiarities and compare them with those of his nearest neighbours, and these in turn with those of their more remote kinsfolk, we see a sequence of modifications impressed upon the plastic animal body by life habit and environment; and if we were to ask what special life habit has been at work to produce the distinct configuration of the human body, we should probably be told by most people that it was the assumption of the orthograde posture—the habit of standing and walking upright. No doubt this assumption of the upright posture has done much in putting the finishing touches upon the evolution of the human stock, but we must be careful to give it no more than its real value. Long before the fashion of walking upright had been even foreshadowed in the crouching gait of the half finished product, a potent factor was at work producing those changes which ultimately permitted, and culminated in, the erect carriage. This factor which paved the way, and to which most of the general changes of human and primate bodily conformation are due, was undoubtedly the arboreal habit—the habit of climbing and living up trees, instead of dwelling upon the ground beneath.

We are apt to lay too much stress upon Man's descent from the branches. It was not coming down the tree that was so important in the evolution of the human stock; it was the climbing up, the first step towards the freedom of the branches, that counted in the progress of the mammalian stock from which Man has sprung. In brief manner it might be said that this line of mammalian development could be summed up in the saying that some small and humble Insectivore—probably not very unlike our modern Tree Shrew—climbed a tree, lived and evolved among its branches, and, after long ages, walked down to the earth again in the guise of the highest of the Primates.

If the influence of the arboreal habit is not always obvious when we regard only the changes in the general bodily conformation of those Mammals which are upon the line of human evolution, it is, nevertheless, very clearly indicated when we turn to the details of change in separate systems and organs. With regard to the reproductive system, with which this paper is especially concerned, it seems to me that we can never understand the evolution of this system unless we appreciate the necessity for change of habit, and for adaptation of structure, imposed by maternity among the branches.

This, then, is the scope of my lecture—the study of those modifications brought about in the reproductive system by arboreal life, and this especially among those Mammals which are upon the line of the evolution of Man. It is when we attempt to define what Mammals are here considered to be landmarks on the path along which the human stock has evolved that difficulty is encountered. This difficulty I propose to overcome in a somewhat dogmatic manner by appealing to the type of external genitalia as the criterion by which a Mammal is regarded as being upon the line of the human stock or no.

TYPES OF MAMMALIAN EXTERNAL GENITALIA

In the Arris and Gale lectures which I had the privilege of delivering last year,[1] I discussed this question and arrived at the conclusion that there were two main types of mammalian external genitalia, and these two types I labelled for the purpose of the moment, and purely for convenience, as Type A and Type B. Perhaps it is justifiable now, as a mere matter of temporary expediency, to give more convenient names to these two types; and I propose to designate Type A as Cloacaexplicata, and Type B as Cloacaimplicata. This tentative nomenclature is proposed as indicating the main features of cloacal evolution which takes place in these two types; for in Type A the cloaca is obliterated during development by eversion, while in Type B the cloaca is obliterated by the infolding of the cloacal margins. I will go no further into this question now than to say that Type A is that which is characteristic of Man, and with Man an assemblage of lower mammalian forms. It is therefore those lower animals of which the external genitalia conform to this Type A that are considered here as being upon the line along which Man has evolved.

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[1] THE LANCET, April 11th and 18th, 1914.

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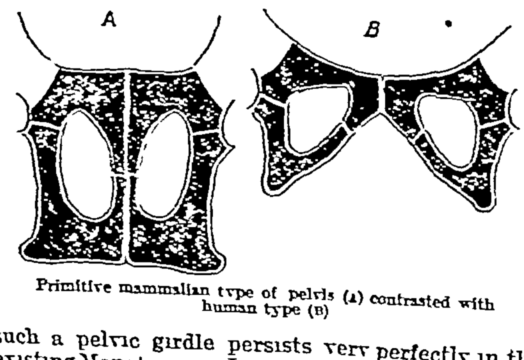
the Cloacaexplicata are essentially tree climbing creatures In attempting to unravel this story we are led by easy stages through the Lemurs to *Tupaia*, a typically arboreal animal, but we also find ranged in this series other animals which, though thorough tree climbers, seem to be linked by no easy stages with the stock we are considering

Although in the finding of Primate linkages in steady sequence back into the Insectivora one may feel tolerably certain that one is dealing with true phylogenetic affinities, some doubts and some questions must arise when such aberrant animals as certain of the Edentates fall into the same group But even should I suggest that, judged by their external genitalia alone, the Sloths were allied to the Primate stock, I should be going no further than others have gone by using altogether different criteria. Still, in the face of the possibility of this being a case of convergence due to the common arboreal nature of the two sets of animals, a great many questions must be asked and answered before we make any suggestion as to the zoological affinities of certain Edentates and Primates from the study of their genitalia. Is it possible that the arboreal habit can in itself create, or alter, a special type of external genitalia such as I have described under the name of *Cloacaexplicata*? I believe that the answer to this question may be attempted, not by the study of the external genitalia in themselves, but rather from a review of those general pelvic conditions which are found in association with the different types of external genitalia.

The bony framework of the pelvic cavity varies enormously in its general architecture among the different mammalian orders, and in some ways this variation appears to be haphazard and to bear but little relation to accepted zoological affinities We may assume that the most primitive of the Mammals possessed a pelvic girdle akin to that seen in Sphenodon and in the imbricate reptiles, indeed, such a pelvic girdle persists very perfectly in the existing Monotremes. In such a pelvis two elements, the pubis and the ischium, meet ventrally, forming an ischio pubic symphysis (See Fig 1, A) This form of pelvis, in which there is an ischiatic as well as a pubic symphysis, is found with various modifications in Ungulates, in Rodents, in most Marsupials, in most Carnivores, and in some of the Insectivora. The ventral wall of the bony pelvis is long in all these animals, and this factor in itself produces some important characteristics of the reproductive system The female genital tract between the pelvic uterus and the post-ischiatic vulva must be long, and the copulatory organ of the male must be of proportionate length. These changes will be referred to again, but we might instance here the long female vaginal and urogenital sinus segment, and the elongated copulatory organ in the male associated with the elongated symphysial area of the typical Ungulate

FIG 1



Primitive mammalian type of pelvis (A) contrasted with human type (B)

If we turn at once to the human pelvis the outstanding fact is that the ischia have ceased to meet in the middle line, and with their splaying aside only a comparatively small portion of the pubis itself enters into the formation of the symphysis (See Fig 1, B) Here the ventral wall of the pelvis has, as it were, been split open from its caudal end, and the ischia and also a part of the pubis have been thrust aside With this shortening of the ventral wall of the pelvis the female genital tract has become very considerably shortened, the urogenital sinus is entirely lacking, and the copulatory organ of the male is reduced in harmony

Influence of the Arboreal Habit on the Pelvis

All sorts of intermediate stages exist between the partial pubic symphysis of Man and the complete ischio pubic symphysis of the Ungulates and Rodents We have been accustomed to regard the pelvis of Man as the typical orthograde pelvis—the outcome of the erect posture, but I would rather look upon it as the perfected tree climbing pelvis—the pelvis that has been evolved by the arboreal habit If in respect to symphysial development we try to match the human pelvis with any example taken from the lower Mammals we shall find it paralleled and even surpassed in the Sloths

Within the limits of the Primate series the evolution of the human type of pelvis is particularly well seen, a pure pubic symphysis (in which the pubis only enters and to a varying degree) is present in all arboreal types, but in such pronograde forms as *Cynocephalus* and all the dog like baboons there is a very complete return to the ischio pubic type of symphysis A striking contrast in the study of adaptations as opposed to status in zoological classifications is seen in the "open" pelvis of the arboreal *Lemur varia* and the "closed pelvis of the pronograde *Cynocephalus anubis* Among the Rodents, the Squirrels exhibit a more open type of pelvis than do their more terrestrial relations, and the semi arboreal Felines have made a distinct start in the same direction.

Although there are some striking exceptions in the general application of any theory, I believe that it is, on the whole, the altered poise of the body upon the hind limbs that occasions this variation in the development of the symphysis This alteration of poise is, for the most part, the outcome of the habit of climbing as opposed to mere pronograde four footed progression upon the level surface of the earth As a general rule we may say that where the hind limbs bear the weight of the body in the pronograde position there tends to be a complete ischio pubic symphysis, where the hind limbs bear the weight of the body in the modified position of tree climbing there tends to be a reduction of the symphysis, culminating in an abbreviated pubic symphysis, and where the hind limbs take no share whatever in supporting the weight of the animal the symphysis tends to be wanting altogether

We may therefore say that it is, at any rate, a possibility that the arboreal habit has influenced the extent of development of the ventral junction of the bones of the pelvic girdle, that it has tended to bring about a shortening of the area of contact and to limit this area to a portion of the pubis only In this way a shortening of the female genital tract has been effected, and hand in hand

In my previous lectures I did not attempt to give any detailed list of the individual mammalian forms which fall into this line Any classification furnished now must of necessity be incomplete, for until the developmental phases of the external genitalia of any particular Mammal are studied some uncertainty may be entertained concerning its true position Nevertheless, sufficient material has already been examined to enable the general outline to be perceived, and to detect the presence of Mammals having this Type (A) of external genitalia in retrograde series from Man downwards

Tracing this type towards its parent stock we are led to that primitive and central group of Eutherian Mammals, the Insectivora It was Huxley's opinion as a young man that a primitive member of this group represented as nearly as possible the picture of the root stock of the Eutherian Mammals, and after another 30 years of work this view, put forward in his youth, was still more strongly adhered to A more recent pronouncement of the same idea is that of Matthew (1909), who has declared that "the Insectivora represent more nearly than any other order the central stock from which the various groups of placental Mammals have descended"

TYPES OF EXTERNAL GENITALIA IN INSECTIVORA.

One interesting fact that has emerged from the present investigation into the method of formation of the external genitalia is that within the limits of this group are comprised not only animals whose cloacal closure is carried out as in Type A and as in Type B, but several forms in which the cloaca remains permanent throughout life Here, then, is evidence of a primitive and generalised central position of the Insectivora such as was believed in by Huxley The Insectivora form the basal meeting point of the Cloacaexplicata and Cloacaimplicata, and at this meeting point is found the simple cloacal Eutherian Mammal from which presumably both were derived We might, if this matter of tentative nomenclature and classification has not already gone far enough, say that the members of the great Order of Insectivora might be divided into three groups—the most primitive group having the cloaca as a permanent structure (Cloacaperta), the second with outfolded cloaca (Cloacaexplicata), and the third with infolded cloaca (Cloacaimplicata)

There are several species of inconspicuous and little studied Shrews in which the cloaca persists in as perfect a form as that seen in the Reptile or Bird I think that these small cloacal Eutherians have not had sufficient importance assigned to them in the study of the phylogeny of the Mammals There appears a tendency to assume that the cloaca of these animals is not a true one, or is a mere adaptation in some cases to an aquatic habit By no means all these cloacal forms are aquatic, and there seems to me no doubt that the cloaca of the Insectivora is in every way as true a cloaca as that of the Reptiles or of *Ornithorhynchus* or *Echidna* So far I have examined the microscopic details of *Blarina meridensis* from Venezuela and *Crocidura bottegi* from Abyssinia, and there remains a very large number of other forms still to be examined

Again, a large number of species of Insectivora pass from the cloacal stage to the non cloacal during embryonic development in the manner that I have described as typical of the Cloacaimplicata and in this way mark the road which the Rodentia and Ungulata follow in their development Some forms, such as the common mole (*Talpa europæa*), have carried this method of development to an extraordinary degree, so that the males and females come to possess an outward sexual appearance that is identical, and again in this they are the pioneers of a development that is also displayed in Rodentia (*Capromys pilorides*), and even Carnivora (*Hyæna crocuta*) But of more interest to us in the present study is the fact that some Insectivora—or animals usually classed among the Insectivora—close the cloaca during embryonic development in the manner typical of the Cloacaexplicata, typical of the Primates and of Man

The Tree Shrews

These interesting animals are those known as the Tree Shrews, and called by the Malays "*Tupai*," a name which they share with the squirrels, that are true Rodents They are of more than a dozen species, all inhabiting the Indo Malayan region, and all possessing that rough general likeness to squirrels which has led to this very simple case of convergence being foolishly magnified into an example of protective mimicry on the part of the Insectivore The *Tupaias* are active little animals, hunting their insect food amongst jungle from sea level to the tops of mountains 5000 feet high Like most arboreal forms, they have so far emancipated the fore limb from the duties of mere progression as to use their hands for conveying food to their mouths, and most have the feathered tail which, like that of the squirrels, aids them in their arboreal activities

They have been assigned to rather different zoological positions by systematic zoologists Their affinities are so varied that now one character and now another has been taken as indicating near kinship with several different types From the rest of the Insectivora they and the *Macroscelididæ* are distinguished by possessing a cæcum, and these two groups are now, as a rule, combined as the *Menotyphla* (Lecke, 1884) From the *Macroscelididæ* (Cape Jumping Shrews) they differ anatomically in several characters, one of the most important being that whereas the orbits of the Jumping Shrews are not completely encircled by bone, those of the Tree Shrews approach the Lemurs and higher orders in this respect and have an entire bony ring

It is not alone in the form of its external genitalia that the *Tupaias* show conditions unlike those seen in other insectivores and approximate those found in other and higher orders In many features of the skull and the brain they are very much advanced from the moles and shrews and their allies, and in these features as well as in some of their dental characters they show definite affinities not only with the Lemurs, but also with Galeopithecus and the Bats

But there is one point of the greatest interest in the conformation of the external genitalia of the male *Tupaia*, the testes, unlike those of the Insectivora as a class, are permanently descended into a scrotum, but this scrotum is situated unusually far forward so that the testes lie to the sides of the penis rather than behind it—a condition that can only be described as intermediate between that seen in the Marsupials and that typical of the Eutherian Mammals

THE DEVELOPMENT OF THE PELVIS

One fact has become more and more striking to me as I have attempted to follow mammalian affinities by the criterion of the external genitalia and it is that the animals which follow the type of partial solution of the continuity, of the pelvic ligaments go on to such a degree that the pelvis becomes more or less unstable as a pivot for the hind limbs, and ordinary terrestrial progression becomes reduced to a mere waddle Such a condition of the female is obviously unsuited to activities among the branches

Large families can therefore only be indulged in, as a rule, by animals the females of which may be exempted from any very exacting activity during pregnancy Such is a general axiom among the Mammals, and leaving altogether the stock with which we are most concerned, examples of its truth are readily furnished in many Orders Herbert Spencer gave much thought to the well known instance of the relative fertility of the hare and the rabbit Much of his speculation was no doubt true, but we must not overlook the fact that a doe rabbit s home is safe in a burrow, while the female hare has no such protection. And the same cause that has led to the reduction of the hare's litter has been at work, with even greater force, among the Ungulates Again, in aquatic life the same disability is felt, and the picture of the pelagic life of the whales makes the second axion—that where there is no nursery there will be no large families—more real

This factor would no doubt be felt severely by the pioneers of arboreal life, for it is easy to imagine the difficulty of dealing with large numbers of helpless offspring which are unable to follow their mother about the branches The difficulty is one which the animals with a leaning towards arboreal life have attempted to overcome in more ways than one Of course, the female may descend from the trees at this time and produce and rear her young upon the ground, but this leads at best to a life that is only semi arboreal, and there are many animals (such as several Felidæ for example) which lead such a life

Nest Building

The next step is the attempt to provide some nursery for the progeny in the adopted home of the parent, *this is the dawn of nest building* Most of the terrestrial Insectivora construct rather more than a mere lining for the retreat in which the young are born, and many are distinguished as nest builders Those shrews whose domestic habits have been at all studied are known to rear their young in very well constructed nests Such ability in nest building may be carried further even by terrestrial forms Our common English Shrew (*Sorex araneus*), although as a rule resting on the ground, is capable of an advance in the direction we have been imagining and it has been known to construct a very good nest 3 feet up in the branches of a young spruce fir

What *Sorex* can do on occasion it would seem *Tupaia* does under ordinary circumstances The nests of some of these animals have been studied, and although with regard to *Tupaia minor* Charles Hose did not feel *certain* if the *Tupaia* had made its own nest or used one already built by a bird, there would seem every reason to believe that with most species the nest is the work of the animal itself Our hypothetical Insectivore, therefore, probably found nest making easily within its powers and so made the *conquest* of the branches more certain

Turning again to other stocks we see how readily nest building is adopted by arboreal or semi arboreal Mammals Our harvest mice (*Mus minutus*) are adepts, and dormice (*Muscardinus*) and squirrels (*Sciurus*) and many other Rodents construct extremely good arboreal nurseries Again, among the Marsupials certain species of *Phascologale* adopt the habit of arboreal nest building, and these animals suggest some speculations that will be dealt with in their proper place

Reduction of Number of Offspring at a Birth

Nest making was an early solution of the arboreal nursery problem among the forerunners of the Primate stock *Tupaia* retains the habit, and more remarkable still that aberrant Lemur, *Chiromys*, resorts also to the same practice, according to Mr L Baron "it builds a nest about two feet in diameter of twigs and dried leaves in the dense foliage of the upper branches of trees The nest is entered by a hole in the side"

Nevertheless nesting is obviously a habit that must be left behind in the progress of evolution, although convenient for small animals with large litters, it becomes exceedingly inconvenient for larger species, and nest building we may look upon as merely a temporary expedient in the development of the Primate stock—an expedient adopted only so long as the production of large litters was prevalent The typical Lemurs have, so far as I can learn, abandoned the habit, and it is to be noted that in the special case of *Chiromys* the nest that is built is probably not merely a simple nursery, for it provides a shelter for the adult in the same manner as the branch platforms constructed by some of the higher apes In *Chiromys* the ultimate factor—the reduction of the family—has already come into play and only a solitary offspring is produced at each birth, nevertheless, the retention of the nest nursery has probably led in this instance to the development of one anatomical peculiarity which will be discussed later

The end of all the adaptations of reproductive habit to arboreal life is the reduction of the number of offspring produced at a birth. All those truly arboreal Mammals which mark the line of human descent display this relative infertility Among the Lemurs, although two young are occasionally produced at a birth, it is the rule that only one offspring is born With all the *Cebidæ*, *Cercopithecidæ*, and *Simiidæ*—the whole class of the Monkeys and Apes—a solitary baby is alone produced at each pregnancy, as a rule, but upon occasion two are born

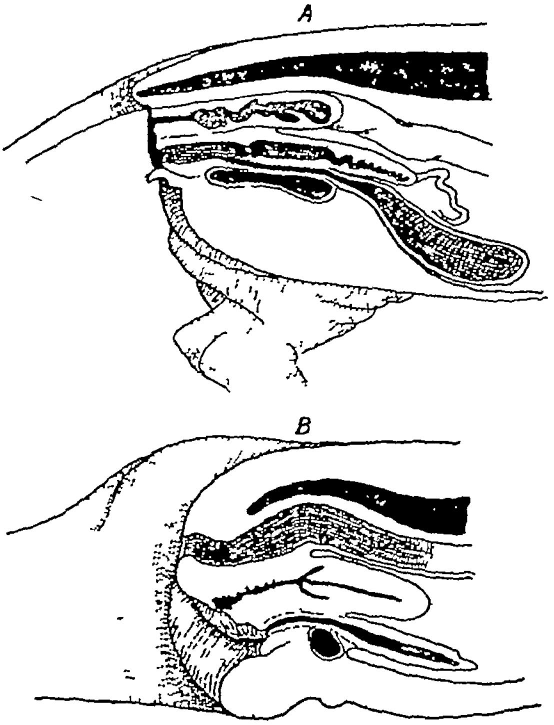
There is a very widespread belief among the natives of Java that when a monkey has a family of more than one it is the custom for the mother to let them cling to a branch, and to rear only that one which remains clinging after the branch has been well shaken I know not what reliance is to be placed upon the accuracy of this story, but it has been vouched for by a very observant Englishman, and it is not unlikely that the tradition represents, at any rate, a summary of the working of one factor causing the reduction of arboreal families

Further back in the mammalian story among the Endentata such truly arboreal animals as the Sloths (*Bradypodidæ*) produce but one young at a birth, and the arboreal Pangolins (*Manidæ*) not more than two

The Emancipation of the Fore Limb

There is another, and a most important, change produced by arboreal life and although this new factor has primarily no relation whatever to reproductive habit, and ultimately leads to the most with this abbreviation a corresponding reduction of the male copulatory organ has taken place (See Fig 2, A and B)

FIG 2



Median sections of the pelvis of (A) a full term female pig embryo and (B) a full term female human embryo Note the apparent outfolding of the female genital tract in (B) where the symphysial area is reduced.

The Pelvis and the Type of External Genitalia

But I suspect that the splaying out of the ventral portion of the pelvis has done more than this, and that it has, in some measure, influenced the type of external genitalia just as it has modified the type of the lower segment of the internal genitalia of the female by reducing and finally suppressing the long chamber which is common both to the urinary and the reproductive systems

The fate of the Mammalian cloaca is bound up with the modifications of that portion of the body upon which it is primarily situated, and in the early embryo the cloacal site involves that area in which the ventral union of the pelvic elements ultimately takes place It is therefore not unlikely that the evolution of the cloaca will in some measure be modified by the extent of this ventral union There is certainly very definite evidence to show that with the opening out of the symphysis the cloaca tends to be outfolded (type of Cloacaexplicata) in the wide space left between the diverging ischiopubic rami, while with the complete closing up of the symphysis the cloaca tends to be infolded (type of Cloacaimplicata) behind the united ischiatic rami

In this way it is possible that the arboreal Sloths merely show a convergence towards a Primate condition, and that type Cloacaexplicata may (in such cases) be the result of symphysial modifications produced by the arboreal habit We shall see later that in several other features of their reproductive systems the Sloths approach the Primate condition, but in these other features also we may see the influence of the common arboreal habit as a rival to the claims of real zoological affinity

TRANSITIONS FROM TERRESTRIAL TO ARBOREAL LIFE.

Apart altogether from these modifications which may be induced by mere bodily poise, and the discussion of which must be left for the present in a rather problematical stage, there are others impressed upon the reproductive system by the stern realities of the arboreal life In order to follow these modifications we may picture a primitive Eutherian Mammal, situated right at the base of the Cloacaexplicata, and trace the influence of the arboreal habit upon its general reproductive activities Such a hypothetical animal is perhaps most nearly represented by those fossil remains of Shrews which occur in the Oligocene of North America and Europe, or going still further back to the Insectivora primitiva of Osborn, which, including the Stylacodontidæ, are as old as the Jurassic

Like modern Shrews this animal, while hunting for its insect prey upon the ground, would nevertheless show an extraordinary activity, and a highly developed power of climbing such, for instance, as is often manifested by *Sorex minutus* We must now imagine it becoming the pioneer of the route which *Tupaia* has followed and adopting the habit of ascending trees in search of its insect food Such transitions from terrestrial to arboreal searches for insects are seen, of course, very beautifully in other orders, such as Reptilia and Amphibia.

It is now necessary to see what was the probable condition of the reproductive system, and what would be the probable effect of an arboreal life upon such a creature

Factors Influencing the Number of Offspring

In the first place we may assume that, like most terrestrial Insectivora with which we are acquainted, this animal would produce large numbers of offspring at a birth. Among the terrestrial Insectivora the maximum of mammalian fertility is displayed, very large litters are produced by many species, and *Centetes* is known to produce 20 young at a birth This is, however, an unusually large family for a Mammal, and taking our common English Shrew (*Sorex araneus*) as a guide we might suppose its litters to average seven or eight with a common advance to ten or even more young We would picture it as having a large series of nipples, thoracic, abdominal, and inguinal, to supply the wants of this large family, and we would expect the female to possess a uterus consisting in the main of two long "uterine horns" in which these multiple embryos could be accommodated

How will arboreal life affect such an animal with such a family? It is no mere speculation to say that large families become inconveniences among the branches, and that the disadvantage of large families will be felt in two ways There is first the disability imposed by pregnancy, and secondly the difficulty of accommodating and nursing a large family up a tree It is not only in arboreal life that these difficulties are encountered, and in many different types of Mammals and in many different situations they have been solved The solution has always ultimately been the same—the reduction of the family

That the climbing activities of the female, when pregnant of a large litter, would be hampered seriously seems obvious, and yet the reality of the disability becomes still more striking when we study those curious pelvic changes which are well known to occur during pregnancy in many large littered animals In some Rodents stretching, and members of the series undergo an atrophy, either complete or in part, nipples may persist, but milk secreting glands disappear when function does not demand their existence As a general rule it may be said that reduction of the mammary series first takes place in the intermediate—lower thoracic and abdominal—regions, the functioning glands persisting at the extremities of the series The election of the distal members of the series as permanent mammary structures is demonstrated widely in the most diverse types of Mammals in which mammary reduction takes place in response to the lessened demands of a smaller family

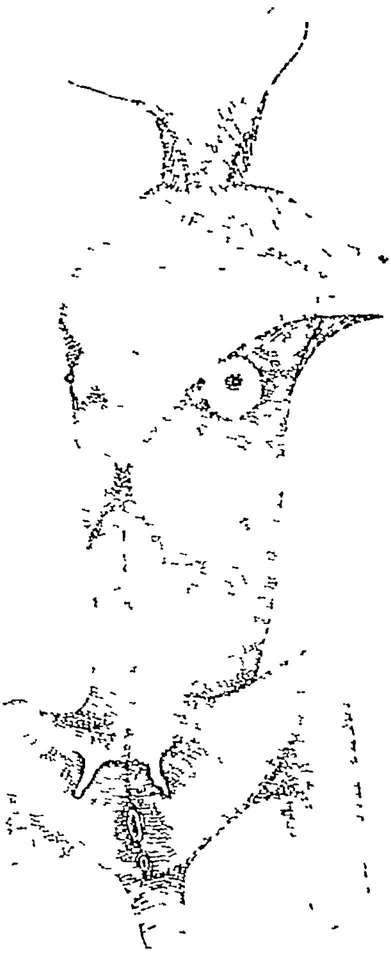
The functional element of convenience is perhaps best seen by turning at first to members of other stocks than that with which we are mainly concerned In the mare, as an example of the true Ungulates, the mammary glands and nipples are just in advance of the vulva—a fact which arrested (and to good purpose) the attention of John Hunter As a mare suckles the foal she can look all round for danger, she can keep her eye on the foal, she is able to graze unimpeded by her suckling offspring, and she can at once break into a trot if alarmed With the elephant, on the other hand, it is the most cephalic pair of the mammary series that is retained An elephant cannot flex its spine as a mare can, she could not look behind her at a calf suckling from inguinal nipples, nor could she control it with her trunk as nursing elephants are accustomed to do The elephant calf therefore suckles from axillary nipples, where its mother can take care of it while she grazes with her trunk unimpeded by the presence of the suckling The difference in position of the permanent mammary glands in the mare and elephant is therefore probably the outcome of convenience, ruled by the bodily conformation and life habits of the parent animal

Anchoring Nipples

Among the lower members of the Primate stock a mammary condition of the greatest interest is present We have seen that among the Lemurs the young clings to the ventral fur of the mother with its back downwards and its head either directed towards the mother's head or towards her tail This habit has led in most of the Lemurs to the retention of two pairs of distal nipples—a pectoral pair and an inguinal pair The subsequent history of these nipples is correlated with the nursing habits of the different species In some Lemurs the pectoral pair becomes predominant, while the inguinal pair degenerates, and in at least one species the reverse development is seen.

In captive specimens of *Nycticebus tardigradus* I have studied the functional meaning of these nipples When the mother is moving about climbing, eating, or searching for food, the young one, as a rule, has its head pressed against her inguinal region, and mother and offspring are opposed head to tail In this attitude the young buries its face in the inguinal fur and grasps an inguinal nipple in its mouth The position assumed by the young under these circumstances is doubtless to permit a greater freedom of movement to the mother when leading an active life among the branches I do not know if the young *Nycticebus* obtains any nourishment from these inguinal teats, but I am inclined to believe that it does not, for obvious suckling takes place when the mother is at rest, and the baby, reversing its position, seizes a pectoral nipple Doubtless in some forms these inguinal nipples are associated with functioning mammary glands and are a source of nourishment for the young, but I know no observations on this point It is certain, however, that the general fate of these structures is that they become mere skin appendages unassociated with mammary glandular tissue, and thus cease to function as organs for the conveyance of milk to the offspring (See Fig 3)

FIG 3



Reduction of the mammary series as it is seen in most Lemurs and some Bats The pectoral mammary glands are functional milk secreting structures but the inguinal pair are reduced to the condition of "anchoring nipples"

Such nipples I shall call "anchoring nipples," for they serve merely to provide a firm basis to which the young may tether itself by its mouth "Anchoring nipples" do not by any means degenerate, but become firm and elongated structures, which, though mere skin appendages, are reminiscent in their form of the Marsupial teat, which is an anchoring as well as a milk supplying organ

It is, perhaps, best to note here that anchoring nipples are not confined to the Lemurs Among certain families of the Bats they are well developed, for the young of these animals clings to the mother's ventral surface and attaches itself to an inguinal anchoring nipple while the mother is in flight, but suckles from a pectoral nipple when the mother is at rest This condition is exemplified in most of the common species of rhinolophid Bats, but the details have been especially noted in the literature in the case of *Rhinolophus ferrum-equinum* by Rollinat and Trouessart, who have named these nipples as the "faux tétons du pubis" far reaching developments altogether outside this function, nevertheless it exerts its influence upon the reproductive system in some remarkable ways This new factor may be named 'the emancipation of the fore limb", and it makes itself evident in varying degree in all arboreal types The fore limb becomes freed from the sole use as an instrument of mere progression in arboreal life The important story of the emancipation of the fore limb, and all that it leads to, cannot be told here, but a brief summary of the steps, in as far as they concern the reproductive habit, is necessary

In arboreal progression the hand grasps the branches, instead of the hoof or the paw being planted upon the ground, and from this beginning it becomes a member capable of grasping other things, of being used for a multiplicity of purposes from catching insects or picking leaves to conveying the food, so obtained, to the mouth Among other results of this modification is the ability of the mother to grasp the young and the young to grasp the mother *This is the dawn of nursing*

Among the Lemurs it is the rule for the young to grasp the ventral fur of the mother, and in many species the mother displays but little ability to hold or carry its offspring in its arms, indeed, according to Charles Hose, *Tarsius spectrum* has made so little progress in this direction that at times it carries its young in its mouth after the fashion prevalent among cats

The young of *Nycticebus tardigradus* is so small, and clings so closely among the dense fur of its mother's ventral surface, that it is extremely difficult to find and dislodge Even native dealers will occasionally sell two animals as one, so difficult is it to detect the tightly clinging young In this species, and, I believe, in other Lemurs, the young one sometimes has its head towards its mother's head and sometimes towards her tail In the animals that I have had in captivity the common position was for the infant to grasp the mother's chest with its legs, and cling to the abdomen with its hands, its head being pressed against the mother's inguinal region With *Lemur catta*, apparently, the tail of the young assists it to hold on to its mother, a method that has been carried to great perfection in truly prehensile tailed animals of other stocks such as *Didelphys lanigera* among the Marsupials

Care of their Young by Monkeys

Among all the Anthropoidea not only can the baby cling to its mother, but the emancipation of the fore limb has proceeded so far that the mother can hold and nurse the young In most monkeys the young clings to the mother with its face against the mother's chest, its hands gripping the fur of her sides and the feet grasping her loins, and so travels back downwards in ordinary progression This is the method in all the Old World monkeys that I have seen either in a state of nature or in captivity, and it is that usually described as typical, but Bates, speaking of *Uacaria calva*, says 'The mother, as in other species of the monkey order, carries her young upon her back ' If this indicates that there is a real difference in the nursing habit of Old and New World monkeys, or simply means that Bates was observing rather older infants, I have not sufficient evidence to decide

When the mother is at rest, however, there is no doubt as to the method of holding the young, and everyone must have noticed what Owen describes as "a very human fashion" of nursing typical of all monkeys The very perfection of its likeness to human nursing renders any description superfluous but nevertheless the influences of this factor must be noted, for in some ways they are so very far reaching in the advance towards higher conditions

We have noted before that in situations other than the tree tops it has been necessary to limit the family for the reason that no natural nursery is to hand, but it is the peculiarity of the tree top baby that it has a real infancy, and of the tree top mother that in her is developed to the full the whole sum of attributes comprised in the expression "maternal care"

Among large numbers of the Ungulates (for example, the Horse) the offspring knows no nursery and is usually solitary, but it is born very mature and has but little childhood, for it must be prepared to flee at its mother's side upon the approach of danger The arboreal baby, on the other hand, is born immature—its period of infancy is prolonged, and throughout its long stage of helplessness it must be carried and cared for by its mother A very exact parallel is seen among birds, for the ground nesting species (such as *Rallus Philippensis*, of which the young is running for its life in the undergrowth less than an hour after it has chipped its shell) contrast sharply with the helpless young hatched in the tree tops

This paper is an anatomical one, and it is not intended to trespass into the psychical advances initiated by these changes, and it is unnecessary to point out the influences in psychical evolution exerted by such factors as maternal care, infantile dependence, and the formation of the family In brief it may be said, from the eugenic point of view, that arboreal babies tend to be few but well looked after, and, from the psychical point of view, that the prolongation of infancy paves the way for social life and all the mental advances consequent upon it

MAMMARY GLANDS

With the anatomical changes, however, it is necessary to deal more fully It has already been pointed out that the non arboreal Insectivora have a large number of mammary glands and nipples, indeed, it is among these animals that perhaps the most complete mammary series is seen *Centetes* possesses as many as 11 pairs of functional mammary glands and teats, and *Solenodon* has the distinction of retaining the most caudal glands seen in any animal, for the posterior nipples are carried on the root of the tail behind the buttocks

Now, as a general rule, there is a very natural agreement between the number of pairs of functional mammary glands and the number of offspring produced at a birth With the reduction of the family the reduction of the mammary series goes hand in hand

In *Tupaia* with its many offspring reared in the nest the mammary series is still large, and pectoral, abdominal, and inguinal nipples are all present In all other members of the Primate stock, however, the reduction of the family has led to reduction of the nipples and mammary glands This reduction takes place in no haphazard way, only so many pairs are retained as are required for the nursing of a normal litter, and the pair or pairs in the series which are ultimately selected for persistence are those which are most convenient in the nursing habit of the mother

It is the fashion of suckling—a fashion ruled by convenience—that determines which members of the whole linear sequence are retained as functional sources of nourishment for the young All other throughout the literature Here we have a possible human tendency in mammary development, and again this tendency is the outcome of pure convenience in nursing

Man has distinguished himself from all the other Primates in the almost universal preference for the specialised use of his right hand The Primates lower than Man know no distinction in the use of right or left, Man alone shows a preference to perform specialised movements with one hand rather than the other It is a matter of indifference to a monkey if the infant be carried on the left arm or on the right, and it is accordingly suckled indifferently at either breast The majority of women, however, prefer to nurse the baby upon the left arm with its head towards the left breast, the right arm being free to perform other duties This preference for suckling the infant at the left breast is manifested in women apart from any question of race or racial habit, and must be regarded as an outcome of the human tendency to asymmetrical specialisation in the use of the fore limbs

One other factor has come into operation here, and this is the increasing separation of the mammary glands in the human as contrasted with the monkey type. This separation is brought about mainly by the widening of the chest, which is itself doubtless an outcome of the more upright posture of Man In some Monkeys the breasts are so near together that the young of *Cercopithecus lalandii* has been seen to suckle from both nipples at once This is, of course, impossible with the human type of chest and mammary gland, it must be one breast or the other, and selection is favouring the left breast

THE INTERNAL GENITALIA.

As for the internal genitalia there can be no doubt that the arboreal habit has brought about the greatest changes We have already seen that with regard to the lower segment of the female genital tract it is possible that the tree climbing habit has left its mark very clearly indeed We have noted that the length of this portion of the tract varies with the extent of the ventral pelvic symphysis, and that with the splaying out of the symphysis the tract becomes reduced in length In this way the urogenital sinus has become progressively shortened until in the human female it is altogether absent, the long common chamber which exists with an ischio pubic symphysis being opened out, as it were, by the splaying aside of the ischiatic rami Hand in hand with this we have noted a progressive reduction of the male copulatory organ, and the development of this organ according to a very special type

With regard to the upper portion of the internal genital tract of the female I am convinced that the reduction of the family consequent upon the arboreal habit has produced the very greatest changes These changes are worthy of consideration, for to my mind we need some readjustment in our ideas concerning the progress of the evolution that has resulted in the production of the essentially human type of uterus

It is possible for the student of pure human embryology to press his views too far, and in the explanation of many human anomalies I think it is probable that too much weight has been attached to mere mechanical interpretations of phases described as occurring in such human embryos as have been recorded in a series of different stages To be properly interpreted ontogeny must be checked at every turn by phylogeny, and the mere structural study of sections and models should be controlled throughout by some appreciation of the physiological need of the developing animal for the special type of development of individual organs and systems

It is, to my mind, essential in the study of the development of the human internal genitalia to keep constantly in view the fact that the chief modification has been imposed by the arboreal habit, and is an adaptation for procuring a system which shall accommodate only a single offspring during its pre natal stages The evolution of the uterus from the so called "low mammalian" to the so called "high mammalian" stage is merely a process by which a system designed for the reception of a large number of embryos is given up and a system is evolved which is adapted solely for the needs of a single embryo The differences between the processes as I shall describe them and those usually described may not seem great in detail, but the difference in functional conception of the evolution is considerable

The Development of the Uterus

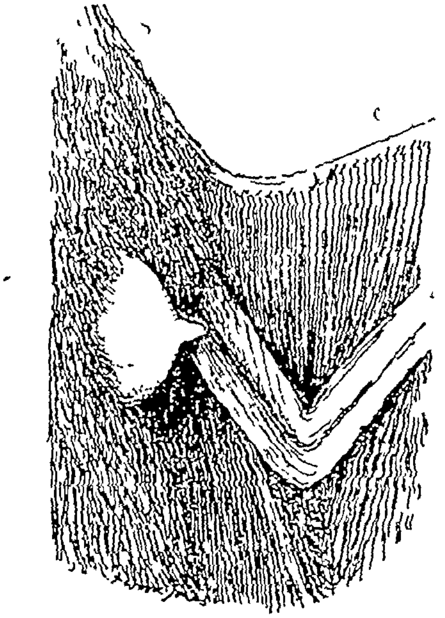
I need not remind you that we generally assume that, from a condition of completely separated Müllerian ducts, evolution proceeds by stages of a partial fusion over a greater part of their extent that whereas a lower Mammal has a large unfused portion—represented by the uterine cornua—these cornua have been fused and coalesced completely in the corpus uteri of Man. Such a theory is apparently supported by a whole series of anomalies which are well known to occur in the development of the human uterus This conception might be summed up by saying that in Man the whole of the Müllerian ducts are fused into a common chamber, with the exception of that portion which forms the Falloppian tubes and that the human uterus represents the coalesced uterine cornua of the lower animals Such a conception has an initial inherent improbability, since the aim of evolution in producing the human type of uterus has not been to make a large median chamber out of two previously large bilateral chambers, but rather has been to perfect a single small chamber destined to accommodate a single offspring The generally accepted explanation of the evolution of the Müllerian ducts is, to my mind, an example of embryology run riot for want of the proper controlling study of phylogeny

Far from the development having taken place by the retention and fusion of the largest segments of the Müllerian ducts, it has taken place by an absolute reduction of a portion of the duct, for that portion of them which forms the uterine cornua of lower animals has, I believe, disappeared in man The portion of the duct which forms the uterine cornua is destined to be the bilateral nidus of numerous offspring in the lower animals, this portion shrinks with the reduction of the family, it disappears when it is the established rule for the family to be reduced to a single offspring

Quite apart from any study of embryology its reduction is strikingly displayed in the mammalian series It is only necessary to contrast the uterine cornua of the large littered pig with those of the mare to see that far from a median fusion of the cornua taking place to form a corpus uteri, it is the uterine cornua that are themselves dwindling in response to the diminished demands for the accommodation of multiple embryos

The position of the Cheiroptera with regard to the Primate stock, which we are now considering, will be noted later, but it is of interest to observe here the identity of mammary development in the Lemurs and in certain members of this Order It will be recalled that it was the *possession of a pair* of pectoral *mammary glands by the Bats that* decided Cuvier *in placing them among the members* of his Primate order (See Fig 4)

Fig 4



The remarkably human type of pectoral mammary gland of a Bat (*Brachyphyllum cavernosum*)

There is, however, at least one Lemur—the aberrant Chiromys—in which the inguinal nipples are apparently not reduced to the condition of anchoring nipples, but remain associated with the functioning mammary gland and are the source of infantile nourishment According to Owen Chiromys possesses "*but one pair of nipples* situated *about an inch and a half in advance of the vulva*" I should imagine that the retention of inguinal nipples and mammary glands in this animal was probably the result of its nursing its solitary offspring while lying on its arboreal platform The nest-building habits of this curious Lemur have been mentioned previously, and this habit, taken in conjunction with the fact that Chiromys produces but one offspring at a birth, possibly accounts for the retention of a pair of inguinal mammary glands as a matter of pure convenience in nursing the offspring *in a nest* Chiromys must, however, be considered as *an exception in this particular* to the general trend of evolution in the Primate stock, for the the tendency is for the inguinal anchoring nipples to wane while the pectoral mammary nipples increase in size and importance

Functional Explanation of Mammary Development

This process takes place step by step with the increasing ability of the mother to grasp the baby When the mother can hold and carry the baby the inguinal anchoring nipples are no longer of use and they undergo an atrophy, the infant being nursed in the arms and held to the more convenient pectoral nipples, the glands associated with these nipples become enlarged, and ultimately, *in the* higher members of the Primate stock become the sole representatives of the long linear series of the lower Mammals *It is*, however, worthy of note that even *in the human female* inguinal nipples may reappear Such a case is *that of a woman described* by Testut and quoted *by Blanchard* and Rogers Williams in which inguinal nipples associated with mammary glands existed

It may be urged that although such a functional explanation is a plausible one for accounting for the mammary development of the Primates, yet it might in reality be some more obscure but inherent peculiarity of this stock to develop mammæ in the pectoral region, that the *perfection of* the human breast was surely more than the *mere outcome* of *the convenience of some* lowly Primate compelled to suckle its offspring amidst the branches of a tree

Any doubts are, I think, dispelled by turning to other arboreal animals which are not usually admitted to be near relations of the Primate stock Assuming, as we are entitled to do by all classifications accepted by modern zoologists, that the Edentata have no very intimate affinities with the Primates, then it must be an *example* of the development of similar *anatomical adaptations* to meet similar functional necessities that results in the typical mammary condition of the Sloths and *their allies*

In these Edentates all the phases which we have followed in the Primate stock are displayed to perfection, the animals have become arboreal, the family has become reduced, and while some species possess both inguinal and pectoral mammæ, in others (the most purely arboreal forms) *the inguinal* nipples are lost and only a strikingly Primate pair of pectoral mammæ persists

Another animal whose mammary condition needs mention here, though its zoological position will need discussion in another *place*, is the anomalous creature (*Galeopithecus*) *sometimes* known as the "Flying Lemur" The solitary *offspring* of *Galeopithecus* clings to its mother as do the *young of* Lemurs and Bats, and in this type again a pair of large pendulous mammary glands is situated upon the sides of the chest

Possible Tendency to Unilateral Mammary Development

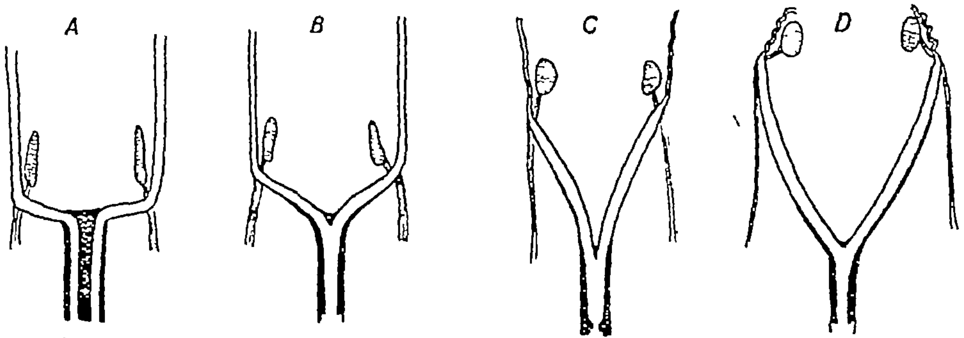
We have followed the steps *by* which a reduction of the family *leads to a reduction* of the mammary series, and we have noted the *process* by which *nursing* in the arms led to the selection of the *pectoral pair* as the permanent human *mammary* glands *It is easy* to understand *that since* the primitive mammary lines are bilaterally *symmetrical* structures, symmetrical *mammæ* will persist even when the production of only *one* offspring *at a birth* is the established rule But it is also *natural to* ask if long continuance of *this* state of things may not tend to a unilateral *mammary* development, if the *long established* habit of *suckling* only one offspring *may not tend* to the development of only one *functioning breast*

From what we know of the laws of symmetry in the animal body it does *not at* first sight *seem* likely that any such tendency should be manifested None of the Lemurs, Monkeys, *or* Anthropoid Apes show, so far as *I know, any tendency* to asymmetrical development of the *mammæ*, *but* the fact has been known to artists, physicians *and* anatomists from the very earliest times that in the *human* female the left breast tends to be *somewhat larger* than the right This fact is noticed time and again

Stages of Uterine Evolution

These stages of uterine development are all seen in members of the stock with which we are most concerned Among the Insectivora Cloacaperta the uterine cornua constitute two entirely distinct chambers, there being no fusion even in the genital cord portion, but in other members of the order the long cornua are united in the genital cord to form a small uterine body The condition seen in the Tupaiadae (*Tupaia ferruginea*) is of interest The Falloppian tube segment is short, and although not markedly tortuous is of very narrow bore, the uterine cornua are long and capacious, but the corpus uteri is well marked and is conspicuously delimited by a well marked os uteri leading into a vagina and urogenital sinus

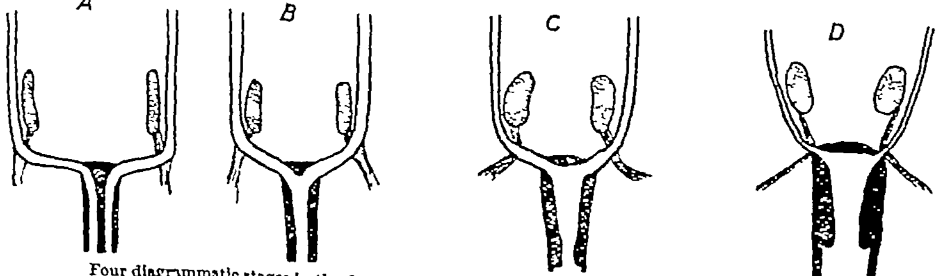
FIG 6



Four diagrammatic stages in the development of the "cornuate" or multiple pregnancy type of uterus

Among the lower Lemurs some extraordinary reversions to a low type of the Insectivora are displayed, but these reversions for the most part involve only the lower portion of the genital tract, and the uterus shows a steady advance (or rather adaptation to a single offspring) upon the stage seen in Tupaia. Indeed, no better summing up of the general characters of the lemurine uterus could be given than that furnished by John Hunter in his description of the Lemur, which he terms the "Mongoose or Mocock" "The uterus," he says, "is between that of a monkey and of a common quadruped, or is what may be called the first stage towards the quadruped's or double horned uterus" Such a condition may be illustrated by an examination of the internal genitalia of *Tarsius spectrum* In this animal the Falloppian tube segment is of narrow bore and slightly tortuous, the uterine cornua are comparatively short and thick, while the uterine body is well developed and is distinctly marked off from the vagina by an os uteri

FIG 7



Four diagrammatic stages in the development of the simple or single pregnancy type of uterus

The next stage of development of the lemurine uterus may again be recorded in the words of Hunter, for in speaking of a lemur's uterus in which reduction of the horns has gone still further, he likens its outline to that of "the heart as it is painted upon cards" In the monkeys the reduction is still more complete, and it is impossible to refrain from quoting again, this time from Owen, who, describing the uterus of Baboons and Macacques, says that the angles of the fundus are slightly produced "like a last indication of cornua" This is indeed the last indication of cornua in the Primate stock, for the anthropoid condition is similar to that of Man

Uterine Evolution in Bats and Edentata

In examining the mammary evolution, we saw that collateral evidence could be derived from a study of the Bats (which I am considering as an offshoot of this line) and certain of the Edentates The same interest is attached to the uterine conditions found within the limits of these two same orders

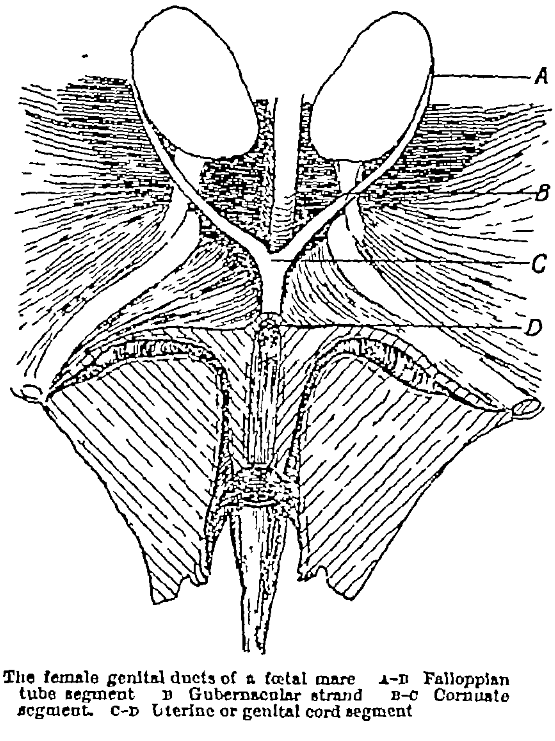
In the various families of Bats this uterine evolution is extremely well displayed Among the Megachiroptera (fruit eating bats) the uterine cornua may be entirely separate, no fusion having taken place in the genital cord segment, and separate "uteri" are present This condition is seen in *Cynonycteris* (*Xantharpyia*), *Hypsignathous*, and *Epomophorus*, but in some other genera there is a fusion in the genital cord segment and a small corpus uteri is present In the Microchiroptera (for the most part insect eating bats) the most primitive condition of the Megachiroptera is again found in *Taphozous melanopogon*, which has entirely separated cornua In *Rhynchonycteris*, *Saccopterix*, and *Enballonura* the cornua are still large, but the genital cord portion is represented by

Phases of Uterine Development in the Embryo.

Turning to the actual phases in the developing embryo, I think the process is made abundantly clear, and I imagine that the human uterus represents the caudal, median, fused portion of the Müllerian ducts such as is present in most lower Mammals, but that the uterine cornua are wanting in man. It is not that they are fused into the common chamber of the median uterus of man, but that they have disappeared in the process of development.

In the early stages of the Müllerian ducts all embryologists recognise three well-marked portions; the first, which lies in the long axis of the body and stretches from the cephalic end of the tube, at the ostium abdominale, to the gubernacular strand; the second, which is transverse to the long axis of the body and stretches medially from the gubernacular strand to the mid-line where it enters the genital cord; and the third, which is again in the long axis of the body and lies in the genital cord. (See Fig. 5.)

FIG. 5.



The female genital ducts of a fœtal mare. A–B, Falloppian tube segment. B, Gubernacular strand. B–C, Cornuate segment. C–D, Uterine or genital cord segment.

The fate of these three parts is easily followed. The first part forms the Falloppian tube; the second the uterine cornu; and the third (in which alone fusion ever takes place) the corpus uteri. The first two portions are suspended in their own bilateral mesenteries, and these portions do not fuse in any animal; the third portions are incorporated in a common mesentery, which is part of the genital cord, and these portions fuse in most (but not all) Mammals. The gubernaculum in the female persists as the round, or uterine, ligament of the ovary and as the round ligament of the uterus. The first portion is therefore all that part of the Müllerian duct which is cephalic to the crossing of this strand, the wide-bored and thick-walled Falloppian tube of Man, or the narrow, thin-walled, and tortuous Falloppian tube of the lower animals.

It is sometimes assumed, even to day, that the human Falloppian tubes are the representatives of the cornua of lower animals, and that the abnormal human tubal pregnancy is in some way a reversion to the condition of normal pregnancy in the uterine horns. Many of the older anatomists considered that the human Falloppian tubes were the homologues of the cornua of lower animals; Gerardus Blasius (d. 1684) makes use of this homology throughout his works on comparative anatomy. But it was recognised early that there were essential differences between the two structures, for Harvey says: "In a woman, as we have said, the two Trumpets near the process of the neck of the womb, which are perforated into the cavity thereof, are not commonly reputed proportionable to the Horns, but are conceited by some anatomists to be Vasa spermatica, by others Spiramenta uteri, by a third sort Vasa semen deferentia aut reservantia." But Harvey himself would have none of these ideas, and he lays it down as his opinion of the Falloppian tubes that "in truth they are answerable to the Horns of the womb of other animals."

The second portion stretches from the round ligament to the sides of the corpus uteri—this is the uterine cornua of the lower animals, but in man it is either altogether absent, or, if present at all, is represented by the so-called "interstitial portion" of the tubes. The third portion forms an inconspicuous median uterine chamber in most lower Mammals and constitutes the uterus of man.

The second, or intermediate, portion of the tubes—i.e., that part running primitively in the transverse axis of the body—is at first quite long in the human embryo. In the 19·4 mm. embryo the condition is similar to that seen in the lower animals which possess long uterine cornua; from the point of crossing of the gubernacular strand a considerable length of the human embryonic duct is taken up in the passage towards the middle line. In older embryos this portion appears relatively less and less developed. Its growth seems to cease altogether, while the portions upon either side of this stationary interval enlarge considerably. In this way that point on the tube to which the gubernacular strand adheres in its crossing alters its position relatively to the extremities of the tube; and we have only to look at the different courses taken by the gubernacular strand in the two main types of uterus, and in the intermediate forms which link them, to gain some idea of the relative degree to which the different portions of the tube develop in these types. With elongation of the second—or cornuate—portion of the Müllerian ducts the round ligament attachment becomes moved in an upward and outward direction as the tube between it and the genital cord increases in length. (See Fig. 6.) On the other hand, with shrinking of this cornuate portion the point of attachment becomes dragged nearer and nearer to the genital cord, so that a sharp angle is developed between the portion running from the ovary to the tube, and the portion running from the tube towards the inguinal region. (See Fig. 7.) With further shrinking of the cornuate portion this angle becomes more marked until, with the final atrophy of the cornua, the gubernacular attachment is dragged into the sides of the genital cord portion, and blends with the musculature of the wall of the median uterine chamber. Such a condition is seen in the human uterus.

PULSUS ALTERNANS IN SOME OF ITS CLINICAL ASPECTS[1]

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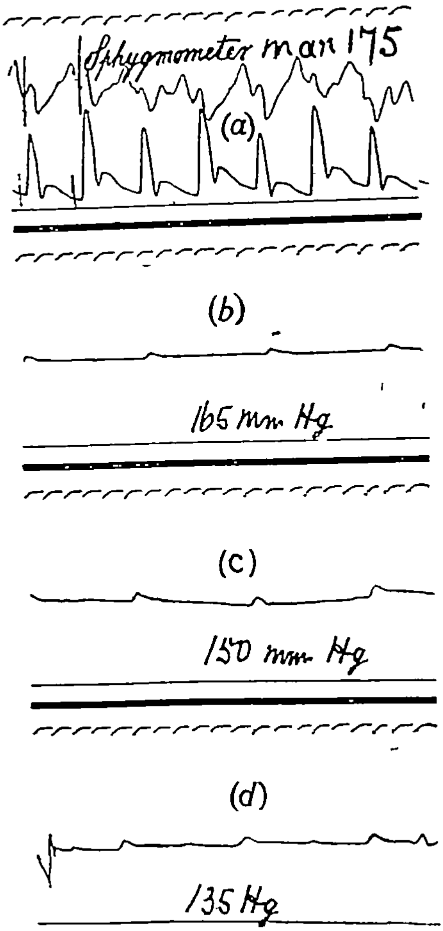
THIS communication deals with pulsus alternans in three different relations The first of these is the bearing of pulsus alternans upon so called blood pressure records, the second is concerned with the clinical detection of an alternating pulse, and the third has reference to the influence of this form of pulse on prognosis

Pulsus Alternans and the Sphygmometer

When the sphygmometer is applied to a person in whom the arterial pulse has a normal and regular rhythm it is assumed that all the pulse waves are of equal force, and that the sphygmometer pressure necessary to suppress a selected series of radial beats is the exact measure, neither more nor less, of each individual beat The measurement thus obtained is commonly quoted as the blood pressure or sometimes as the maximum blood pressure As this external or sphygmometer pressure neutralises all the pulse waves during the selected period of observation, and as all the waves are assumed to be of equal force, the sphygmometer figure is accepted as an index of the force of each or any individual wave Obviously this position must be modified in the case of pulsus alternans, for here the individual pulse waves are not of equal but of unequal force Therefore a sphygmometer pressure necessary to suppress completely a series of such waves, that is, a pressure sufficient to neutralise the more forcible, must be excessive in respect to the less forcible Hence if the sphygmometer measurement as ordinarily obtained is a record of the blood pressure, such a record in pulsus alternans must be incorrect in reference to 50 per cent of the pulse beats The figure which is true for the stronger waves is an exaggeration in relation to the weaker, just as the pressure needed to neutralise the less forcible waves would be deficient as a measure of the more forcible In other words, the blood pressure measurement as displayed by the sphygmometer must, in the case of pulsus alternans, be either a double one or an inaccurate one If there is presented one figure representing the pressure associated with the more energetic pulse beat, and another figure for the pressure of the less energetic, the position may be harmonised with the values which the sphygmometer professes, but short of this there is no safety—to suppress all the beats is to err in the direction of excess, to suppress only the weaker ones is to err in the direction of defect

The situation just defined is exactly illustrated in Fig 1 The first tracing (*a*) is the ordinary sphygmographic picture of pulsus alternans, and the sphygmometer pressure necessary to suppress all the radial beats is attained when the mercurial column reaches a height of 175 mm In the language of the hour, therefore, the patient has a blood pressure represented by the figure 175 If now the sphygmometer pressure is lowered to 165, some of the pulse waves come through (*b*), while others are suppressed, and it is obvious that the former are the alternate strong beats and that the missing waves are the alternate weaker ones This experience is repeated when the sphygmometer pressure is further reduced to 150 (*c*), and it is not until the pressure has fallen to 135 that the alternate weaker beats are seen in the sphygmogram (*d*) If then the usual sphygmometer method were applied to this case the blood pressure would be recorded as 175, a figure which is manifestly inaccurate, as judged by the sphygmometer's own showing, in relation to one-half of any period to which the record may be held to apply The only alternative would be to register the blood pressure as 175 at one moment and as, say, 140 at the next succeeding moment, and to intimate that this alternation is indefinitely repeated Now it can hardly be proposed that such alternation of blood pressure can be due to a rhythmical alternate contraction and dilation of the peripheral arterioles Hence the difference in sphygmometer measurement between the alternate strong and weak beats must be due solely to a difference in the degree of cardiac force But if this is true of differing pulse beats and differing sphygmometer measurements in one and the same individual, it must surely be true also of differing pulse beats and differing sphygmometer measurements in different individuals The measurements vary, or may vary, as expressing different degrees of cardiac force—a display which, however interesting, is certainly not a complete picture of the blood pressure In general terms, therefore, while the maximum sphygmometer reading as usually taken may afford an approximate intimation of the degree of force with which the

FIG 1



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[1] The substance of this paper was communicated to the Association of Physicians of Great Britain and Ireland at the Cambridge Meeting

a small corpus uteri In *Nyctinomus*, *Nycterides*, and *Vespertilio* the uterine cornua are diminishing and the corpus uteri is more conspicuous And the process culminates in *Phyllostomatidæ*, in which the uterus is of a simple human type possessing no uterine cornua.

Among the Edentata the uterine evolution is still more interesting, for associated with certain features in the internal genitalia which we must certainly consider as zoologically "low" are uterine features which are distinctly advanced, or, as we should say here, associated with the arboreal habit of producing a single offspring Undoubted reversions to a primitive Insectivorous type are seen in the lower portions of the genital tract, but associated with this "low" condition is a uterus that can only be described as human in type In certain Edentata the uterine cornua have disappeared, not by fusion in a high type of animal, but because the cornua are not needed to accommodate numerous offspring

Anomalous Development of the Uterus

It will possibly be objected that even if this picture of the development of the uterus be supported by phylogeny, and is an apparently justifiable interpretation of the stages recorded in ontogeny, nevertheless the well known human anomalies support the orthodox explanation so thoroughly that it is essential that any other attempted interpretation must explain them equally well To my mind the picture I have attempted to draw of the evolution of the Müllerian ducts furnishes a better explanation of the human anomalies than does the generally accepted theory

The human bicornuate uterus I regard, not as a malformation in which the Müllerian ducts have failed to fuse, but as an arrested stage—a reversion, if the term be preferred—by which the internal genitalia fail to achieve their full development in the atrophy of the normally temporary cornuate portion A rudimentary, or undeveloped, uterus will be arrested in some earlier phase, a stage represented, not necessarily by non fusion, but by ill development of the uterine body and persistence of the cornua That portion within the genital cord which undergoes a fusion phylogenetic and ontogenetic, may exhibit varying stages of incompleteness of fusion, and so varying types of septate uterus or double uterus may result Failures of fusion occur in the third, genital cord, or uterine segment, failures of retrogression occur in the second or cornuate portion, and both conditions are the outcome of arrests of normal development

CONSIDERATION OF OTHER POINTS

One or two points left unconcluded need some explanation I have alluded to the Marsupial genus Phascologale in connexion with nest building The Marsupial stock is so far removed from the animals with which I am especially dealing that any detailed discussion of them would be out of place here I need not point out, however, that I am putting forth no new or original thought in mentioning that the marsupial pouch itself is possibly an early and only partially successful solution of the problem of dealing with a family in a stock which is said to be primitively arboreal

Again I have made more than one reference to the Chiroptera and to Galeopithecus These forms I regard as offshoots from the stock which we have had under review Offshoots which in pre Eocene times had made a thorough conquest of the branches, but which had been over enterprising, and had in learning to glide and to fly, lost that very emancipation of the fore limb which had carried them so far and permitted them to make their fatal experiment

I am aware that this study does not warrant wide reaching conclusions, and yet it has its significance in the study of human origins Since in this system we see that arboreal life has brought about so much that we regard as "human" (and in other systems it is even more striking), should we find anything very incongruous in the blending of a very large number of typically "human" characters in a form which is still a very primitively arboreal "animal"?

THE ORIGIN OF HUMAN ATTRIBUTES

Leave for a moment the train of thought that we have been following Turn back in your minds to the works of the pre Darwinian period Bulky volumes will occur to you, volumes crammed with eulogistic descriptions of Man and all his attributes Whole shelves of our libraries are devoted to such works, and there is no end to the written plaudits of the perfection of human characteristics

The nobility of poise, the charm of proportion, and the general distinct, and unanimal, aloofness of the human body are described with unstinting appreciation The special attributes of the human mind are paraded, and the realities of family love, the social life, and the glorious culmination in unselfishness and lofty thought are emphasised to point the intellectual separation of Man from the rest of the animal world The whole sequence of this trend of thought and all that it implied will readily occur to you

Over a wide interval of upheaval, chaos, and extremeness we will pass to the period of a scientific yesterday The work of the morphologists is accomplished Man is a perfected, but in many ways a primitive, animal He has outclassed his Mammalian competitors, and become distinct from them in many bodily and mental changes The distinctive poise of Man remains in the newer conception of these changes, even if the praise of human bodily grace and proportions is left to a past generation, and the assumption of the upright posture is the key to the solution of the problem of the origin of human attributes Man the upright animal is the dominant note of modern human morphology

It is a step backward from Man the upright to Man the tree climbing, but it is a step which we must take in attempting to learn the origin of human specialisation It was among the branches that necessity determined and opportunity perfected the special adaptations of human bodily and mental characters

I have confined myself to a very limited study of a single system but every system and every part of man's body tell plainly the same story Even within the limits of the system whose evolution we have been following, I think it is possible to see that some of the peculiarly human psychology, which has been the subject of so much admiration from moralists and philosophers some of the perfections of the human female figure lauded by artists and poets, and some of the characters of internal structures exploited by the morphologist, were impressed upon the animal body by the schooling of arboreal life

[Towards the cost of some of the material used in this investigation assistance has been afforded by the Dixon grant of the University of London]

produce them are therefore not equal. In Fig 4 is seen a sphygmogram of which the constituent waves, all of them, have apparently an equal force and an equal duration. After the tracing had been taken the paper was removed and was again passed through the sphygmograph, while, at the same time, the sphygmometer armlet was tightened around the upper arm to a degree sufficient to suppress the radial pulse. In this way the upper line of the tracing was drawn, and it shows that, though most of the pulsations are suppressed, every now and then a wave effects its escape past the sphygmometer armlet and is registered as a radial movement. Similarly in Fig 5 the ordinary sphygmogram presents a series of waves of which every one appears to be identical with its fellows, yet when pressure is applied to the brachial artery the beats come through not in equal but in unequal excursion (*b*), and even when the pressure is urged to what appears to be the obliterating point there is still an occasional radial movement (*c*). In a word these observations appear to show that even when the pulse waves as exhibited in a sphygmogram may seem to be of equal force and value, some of them, when tested, may, at least in individual instances, overcome a pressure to which others are obliged to yield, that, in short, the appearance of sphygmographic wave equality is not a final and conclusive proof of essential wave equality.

FIG 3

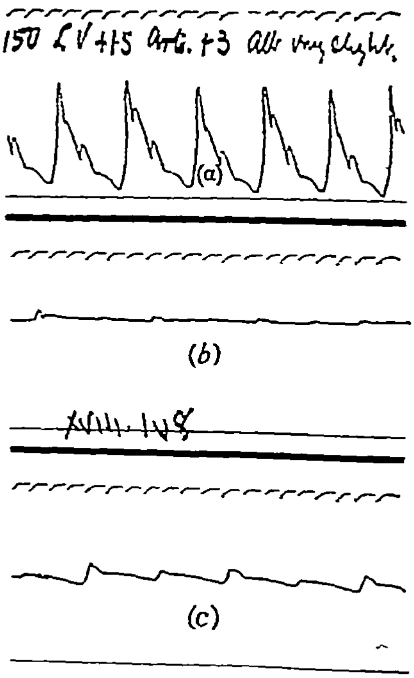
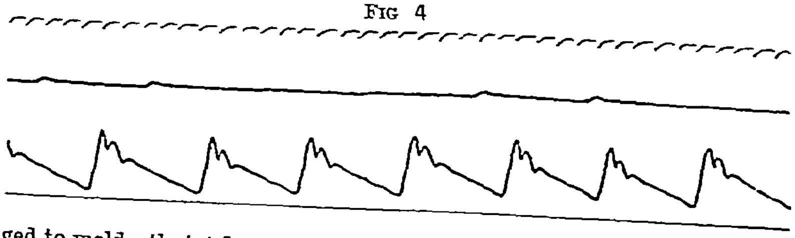


FIG 4



Is it, then, necessary to admit that pulse waves which appear to be equal may be the products not of equal but of unequal cardiac systoles? *A priori* this question would certainly be answered in the negative. Yet some explanation of the above facts must be found, and it is by no means certain that the *a priori* conclusion is the correct one. It is beyond question that the "escaping beats," as they may be called, of Figs 4 and 5 are not due to a gradual fall of pressure in the sphygmometer, for were this the case they would, when once established, continue to appear, and presumably in an increasing measure, whereas, as the tracings show, the arrival of one or more of the "beats" may be followed by a more or less prolonged period of complete suppression. Nor would the suggestion of a falling sphygmometer pressure explain the irregularly unequal waves of Fig 5 *b*.

Another explanation of the tracings (Figs 4 and 5) now under discussion might be that the radial pulse movement varies in consequence of varying degrees of pressure exerted on the brachial artery as a result of involuntary muscular contractions in the upper arm. To exclude this proposal with complete confidence is not easy, and it is perhaps equally difficult to affirm it. Were it true there ought to be with each "escaping" beat a fall in the sphygmometer index—assuming the instrument to be sufficiently delicate for such a record—and personally I have not been able to detect any such happening.

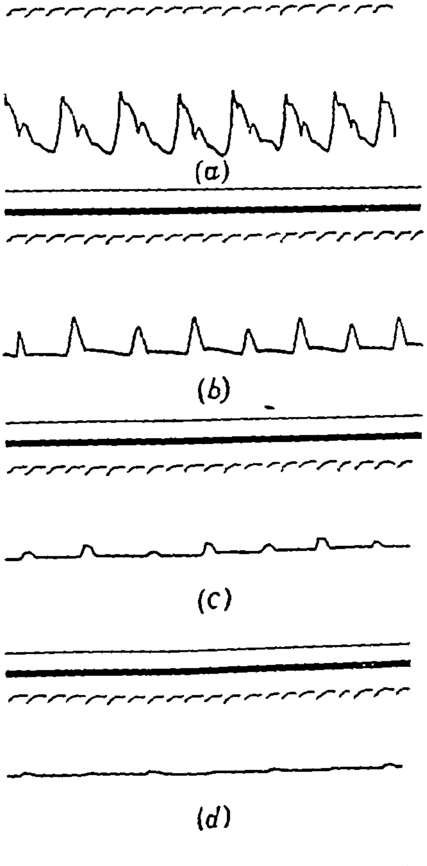
At first sight it seems an extravagant suggestion to say that the "escaping" beats in Fig 4, or the more marked waves of Fig 5 *b*, are due to exceptionally vigorous cardiac systoles, for such a suggestion, in view of the corresponding and apparently normal sphygmograms, would involve the proposition that cardiac systoles which, measured by all the usual clinical methods, appear to be of equal force and value are really of unequal force and value. Yet when we find that this conclusion is necessitated in certain cases of pulsus alternans (Fig 2), may it not be true also in instances in which the differences between cardiac systoles of apparently equal merit occur irregularly rather than in an alternating series? If inequality has to be admitted in the systoles responsible for the apparently equal waves of Fig 2 *a*, how can we deny the possibility of inequality in the systoles of which the apparently equal waves of Fig 4 are the product? All that is needed to bring the two tracings on to the same platform is to suggest that in one case (Fig 2) the variation in the force of the systoles occurs with alternate contractions, while in the other case (Fig 4) the variation is irregular and without apparent plan.

The conclusion just stated will appear less extravagant if it is recognised that the differences displayed in the apparently equal waves of certain sphygmograms when pressure is applied to the brachial artery may be differences which, in ordinary circumstances, are potential only, and that to expose them it is necessary to erect the special conditions which such brachial pressure implies. It is generally allowed that pulsus alternans, in the case of a heart predisposed to adopt this particular rhythm, may be excited or revealed by any circumstance which increases the degree of cardiac strain, and possibly obstruction of the brachial artery by the armlet of the sphygmometer may be such a circumstance. From this it systole of the left ventricle arrives at the brachial artery, it is far indeed from offering a comprehensive presentation of the state of the blood pressure This is not to challenge the clinical value of the sphygmometer, at least within certain limits, but it is to advance a basis for the claim that records obtained by this apparatus ought to be expressed, not in terms of blood pressure but rather in terms of sphygmometric measurement There are other considerations which support this claim Thus, while the sphygmometer reading is a fact, its interpretation as blood pressure is an inference, and descriptive scientific terms ought to announce facts and ought not to enclose speculations or opinions, again, whatever contribution may be made to the sphygmometer record by the pressure of the blood, something—admittedly a very uncertain something—is contributed by the resistance of the arterial wall and perhaps also by the resistance of other tissues, so that, as a matter of fact, the reading is not purely a record of blood pressure, and further, stated at its highest, the claim of the sphygmometer, at least in its maximum record, is limited to the ability to present a single aspect of blood pressure—namely, the height to which such pressure rises during a period of time of uncertain, undefined, and therefore of possibly varying duration These considerations certainly suggest the need for some care in the phrasing of sphygmometer records, and the argument now advanced is that a study of pulsus alternans in relation to such records adds strength to the suggestion that they should be recited in terms of sphygmometric measurement and not in terms of blood pressure

The Detection of Pulsus Alternans

The second proposition which I wish to advance is a more practical one It is that a pulsus alternans which may escape the finger, and the stethoscope, and perhaps also the pulse tracing may be rendered evident and even conspicuous by the combined use of the sphygmometer and the sphygmograph This is illustrated in Fig 2 The radial pulse of the patient from whom these tracings were taken was certainly not suspected by the finger to have the characters of pulsus alternans, and, as seen in the first of the tracings (*a*), no such suspicion is justified by the sphygmogram Yet if, while a radial tracing is being taken, more or less pressure is exercised on the brachial artery, the distinctive features of pulsus alternans come out very conspicuously The difference between the height of the alternate waves is most decided when the sphygmometer pressure is at a moderate level (*b*), it is somewhat less decided as the pressure is increased (*c*), but it can still be appreciated even when the pressure is carried near to the obliterating point (*d*) The same truth is illustrated in Fig 3, where the upper tracing was taken under ordinary conditions and each of the two lower ones while the brachial artery was subjected to a greater or less degree of pressure by means of the sphygmometer armlet In this instance, however, it must be admitted that the original sphygmogram does offer to careful examination some hints of the presence of pulsus alternans First, there will be noticed a slight difference in the height of the alternate waves, and, secondly, each of the less prominent waves is also less sustained, as is shown by the relatively less conspicuous ' shoulder or tidal wave To judge from this tracing, therefore, the existence of pulsus alternans means an alternation not only in the force but also in the duration of the alternate cardiac systoles, and such an observation is the more interesting in view of the statement that no such variation can be discovered by the electrocardiograph.[4] The point here of importance, however, is that a condition of pulsus alternans which might well have escaped detection by the ordinary methods was readily made evident when a radial tracing was taken under the influence of pressure applied to the brachial artery through the armlet of the sphygmometer[5]

FIG 2



When the observations just described had once attracted attention it seemed necessary to test, almost as a matter of routine, the effect produced on the radial pulse tracing by pressure applied to the brachial artery Without such test it appears impossible to be sure that any pulse, however regular and normal to the ordinary methods, may not perchance be, and as it were in a concealed fashion, an example of pulsus alternans When this is done it is surprising to find how frequently a pulse which seems to be composed of equal waves, the products presumably of equally forcible cardiac systoles, offers suggestions that the waves are not really equal, and that the cardiac systoles which

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[4] Diseases of the Heart Dr James Mackenzie third edition p 252

[5] Since writing this paper I have learned that an observation similar to that recorded above has been made by Dr Louis Gallavardin of Lyons who in an article entitled Pouls Alternant et Cœur Alternant," published in *Le Journal Médical Français* Feb 15th 1913 writes La seconde conclusion est que l on aura intérêt à *aider le doigt explorant la radiale de la compression de l'humérale* au moyen d une manchette brachiale pneumatique ou plus simplement d un des doigts de l autre main On arrivera ainsi à mettre en évidence des alternances que la palpation radiale simple aurait sûrement laissé échapper Il y a une alternance *latente* insensible au doigt, invisible même sur les traces sphygmographiques et que la manchette sphygmomanométrique et l exploration bidigitale parviennent seules à mettre en lumière "

SOME ASPECTS OF THE CILIARY BODY IN HEALTH AND DISEASE

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OF the structures composing the uveal tract the most important is the ciliary body Herein it may be said that the soul of the eye resides The ciliary body may be compared to the escapement mechanism of a watch Just as the performance of a watch depends upon the protection of the delicate mechanism of its escapement, so does the nutrition of the eye depend upon the integrity of the ciliary body In a watch the escapement forms the most delicate part of the movement The pivots, for example, work in jewelled holes to lessen friction and diminish wear, and any disturbance of the accurate adjustment causes the watch to go irregularly or cease to go at all Almost the same is the case with the ciliary body Disturbance of its nutrition generally means impairment or arrest of the nutrition of the eye While inflammatory conditions of other structures of the eye do not directly imperil the existence of the organ, inflammation of the ciliary body in more or less degree always does so And the reason is not far to seek The explanation lies in the special structure of the ciliary body and in the function it discharges Anatomically, the outstanding features of its structure are its vascularity and sensory nerve supply As the blood organ of the eye it consists of a dense plexus of blood vessels supported by connective tissue and arranged in the form of processes constituted from the inward folding of the various layers of the choroid So, also, in similar density, is the distribution to the ciliary body of the sensory nerve supply derived from the long and short ciliary nerves The extreme sensory endowment thus provided is probably a special feature which Nature has been careful to arrange, in order that early warning may be given of the pathological dangers to which the ciliary body is exposed By this means, in the case of an inflammatory attack the ciliary body is at once enabled to transmit a " S O S " call for therapeutic assistance Useful in this regard as a symptom is the intense agony associated with an acute attack of primary glaucoma, indicating, as it does, the urgency of immediate relief. The pain in these cases is due to the vascular engorgement of the ciliary body, and to its compression against the unyielding sclera. For the same reason a primary iritis only becomes painful when the ciliary body is involved in the inflammation, an iritis, *per se*, is not painful, but when the attack is accompanied by pain, the eyeball is then found to be tender to palpation, showing the presence of cyclitis and the severity of the inflammation

The next point which bears upon our theme is the function discharged by the ciliary body It has already been observed that this function is mostly concerned in maintaining the nutrition of the eye This is accomplished by ensuring a normal intra ocular tension The contour of the globe depends upon the two transparent media the aqueous and the vitreous, and the ciliary body, by providing the fluid supply, enables these media, under normal conditions, to preserve the tension required

Incidentally, it may be noted that an interesting controversy has arisen in respect of the special means by which the intra ocular fluid, represented by the aqueous, is derived from the ciliary body In the first place, there are those who hold that the fluid is formed by filtration, and, secondly those who maintain that the fluid is manifestly a secretion This diversity of view mainly prevails among the physiologists Then the ophthalmic surgeons appear on the scene They have a difference of opinion with the physiologists who favour the secretion theory Since Collins, by an ingenious inquiry with bleached sections, demonstrated what he believed to be glandular bodies in the ciliary processes, attributing to them the secretory source of the aqueous, ophthalmic surgeons have generally accepted the revelation, but the physiologists, on the other hand, have shown no sympathy with this discovery Their accepted view is that the aqueous is secreted entirely by the uveal epithelium covering the ciliary processes—curiously enough, this was practically the view propounded by Méry, so long ago as 1707 Moreover, it has been pointed out by Leber that the tubular invaginations of Collins have not the anatomical character of glands, having no secretory duct, no proper lumen, and no glandular epithelium[1] In some recent correspondence which I have had with Professor Bainbridge upon this subject, he writes "The view most commonly held, and which I share, is that the aqueous is formed by filtration through the ciliary processes" And so the matter, as indicated above, stands in the present day The advocates of each view maintain their position Possibly the controversy in the main may be reduced to an axiomatic statement—namely, that lymph is not a secretion, and the aqueous is not lymph If lymph only were necessary for the supply of intra ocular fluid, how is it that the protein content of the aqueous is negligible in comparison with that of lymph ?

But the question of greater importance in this connexion is not whether the aqueous is a filtration or a secretion, but that its character varies, as the blood varies from which it is derived Owing to its extreme vascularity the ciliary body is very responsive to blood changes We see this in the irido cyclitis of syphilis, of tubercle, of gonorrhœal rheumatism, of alveolar pyorrhœa, to mention some instances In all these the aqueous undergoes a marked change in character, physically shown by a varying degree of turbidity Turbidity of the aqueous means also a corresponding turbidity of the vitreous Normal aqueous has been shown to be sterile Again, aqueous is claimed to become toxic in cases of septic ulceration of the cornea, the toxin from the septic focus passing through the layers of the cornea, through Descemet's membrane, and so entering the anterior chamber The effect of the toxin is to cause the aqueous to act as an irritant upon the tissues of the uveal tract, leading to the exudation of polymorphonuclear cells, which fall to the bottom of the anterior chamber, forming hypopyon. The aqueous is also toxic in irido cyclitis of endogenous origin, and this explains the occasional presence of hypopyon associated with these inflammatory attacks

The toxic condition of the blood, due to perverted metabolism, affects in varying degree the nutrition of the eye Metabolic processes as a whole depend upon the controlling influence of the thyroid gland. In this regard two morbid entities represent the extremes of thyroid disturbance—hyper and hypo thyroidism respectively On the one hand, "systemic goitre," as an American writer prefers is no great advance to the suggestion that the same condition may perchance be sufficient to evoke a display of non alternating variation in the force of the cardiac systoles when a tendency to such variation exists In this way the two orders of events exhibited in the tracings which accompany this paper would be harmonised in principle, the only difference being that in the one group (Figs 2 and 3) the armlet pressure reveals a tendency to an alternating variation in the force of the ventricular systoles, and in the other (Figs 4 and 5) a tendency to an irregular (non alternating) variation Yet in each instance it remains true that these tendencies to an abnormal rhythm would not have been discovered unless, in addition to the usual methods of examination, the pulse had been tested while pressure was applied to the brachial artery And this involves the admission that the apparently equal waves of a sphygmogram may arise from cardiac systoles which, if not unequal in the existing conditions, may at least be unequal in their capacity to deal with the circulatory position created by obstruction, partial or complete, of a medium sized peripheral artery Though the sphygmographic waves appear to be the products of ventricular systoles of identical value, a pulse tracing taken while the brachial artery is subjected to pressure may show that such systoles are essentially unequal, at least in the sense that they vary *in their ability to meet a new situation* with one and the same measure of success

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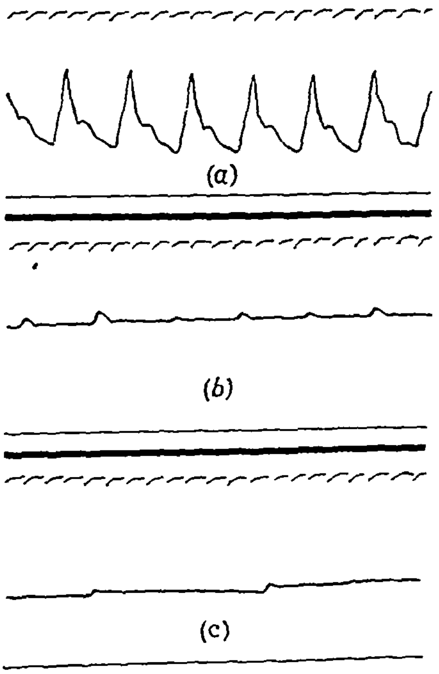
[1] Norris and Oliver System of Diseases of the Eye vol i., p. 193.

FIG. 5



(a)

(b)

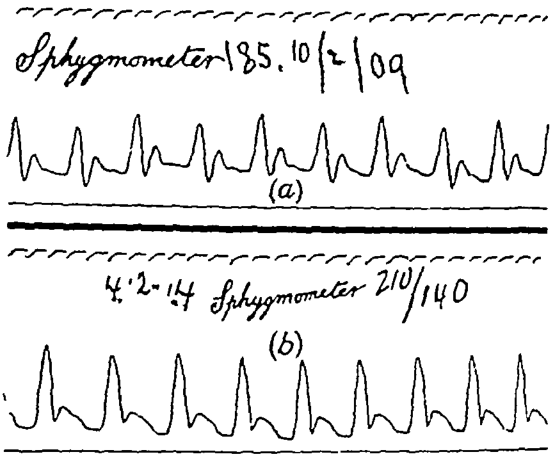
(c)

Apart from the discussion, doubtless somewhat speculative, of the significance of such tracings as Figs 4 and 5, the tracings have this practical interest, that they show how easy it may be for different observers in one and the same case to record different levels of sphygmometer measurement according as the observation is made at a point where one or more "escaping beats" pass the sphygmometer armlet, or, on the other hand, during a period when all the waves seem to be suppressed Whether the tactile or the auditory method of estimate be employed, the presence of these "escaping" beats is certainly not very uncommon, judging at least from observations made on patients of whom probably the majority were the victims of cardio vascular degeneration In cases of this order such tracings as Figs 4 and 5 may be noted at least every now and again.

Pulsus Alternans and Prognosis

There is a general agreement among writers on the subject that pulsus alternans almost invariably carries a very alarming prognosis When exceptions to so serious a rule occur it is of some importance that they be recorded As it happens, I am able to quote a case in which the patient is still alive, and believes herself to be quite well, although so long as five years ago (Fig 6 *a*), and on many occasions in the interval, her pulse has shown characteristic alternation At the date of the first observation (1909) she was 22 years of age, and was found to present distinctive clinical evidences of chronic *interstitial nephritis*, including albuminuria, cardiac hypertrophy, a high sphygmometer reading, and extensive retinal changes Yet she has continued to discharge her household duties as the wife of a poor man and the mother of three children, and she professes to day to be quite well and free from all complaints other than occasional head aches No doubt this sense of well being is in some measure misleading, as the physical changes above described (other than the retinitis) still persist, on some occasions, too, the pulse tracing shows the features of pulsus alternans, whilst on others the tracing has the characters exhibited in Fig 6 *b* Allowing freely that the woman is not "cured" as she believes herself to be, there remains the fact that she is alive and active even though *six* years ago pulsus alternans in a quite decided form was part and parcel of her clinical state, and that it existed in association with the cardio vascular changes which mark the progress of chronic interstitial nephritis In view of the terms in which the prognostic significance of pulsus alternans is usually phrased such an experience is certainly noteworthy The more serious the general rule the more welcome is it to find the possibility of exceptions.

FIG 6



(a)

(b)

Harley street W

HOME OFFICE ORDER AND DEATHS IN BATHS.—The Home Office has issued an order that in the case of all deaths occurring in baths an expert pathologist shall be called in to make a thorough investigation of the circumstances and to give evidence at any subsequent inquest was overlooked They were classed under the generic name of "rheumatic," and rebellious to treatment they proved upon the basis of their rheumatic origin The perversion of metabolism, however, which establishes an irido cyclitis in alveolar pyorrhœa, is also responsible for the disease in other forms of auto intoxication Hence the term "rheumatic" now conveys no etiological significance beyond implying that the attack of irido cyclitis is of toxæmic origin There is held to be some association between these attacks and so called gonorrhœal rheumatism, inasmuch as in such cases a common history is that of a previous gonorrhœal infection. But the term rheumatism suffixed to gonorrhœa is merely a term, and in these days might with advantage be improved upon The signs of so called gonorrhœal rheumatism may be symptomatic of rheumatism. But, on the other hand, these signs are probably due to a para-gonorrhœal toxin, as distinct from that present in a pure rheumatic attack, as is the toxin of tetanus from that of any other pathogenic organism.

The fact of the toxæmic origin of these cases being admitted, the assumption follows that a more or less degree of hypothyroidism is present which requires as the first line of systemic treatment the administration of thyroid extract A striking instance of the efficacy of this method was in that of a man suffering from a third attack of so called rheumatic irido cyclitis The signs were acute, the eye was intensely painful. Three grains of the extract were ordered twice daily After taking the third tabloid all the pain ceased, and yet the severity of the pain was such as to indicate relief by leeching

Metabolic toxæmia, I believe, bears closely upon another form of irido cyclitis—namely, that associated with the acute parenchymatous keratitis of inherited syphilis Congenital syphilis is a disease of very varying virulence The many eccentricities which distinguish its mode of transmission find their counterpart in the varying intensity of its incidence An infant may be grossly syphilitic at birth, then it commonly fails to survive But while this represents the extreme effect of the hereditary transmission, on the other hand the stigmata of congenital syphilis may be so nebulously manifested as to escape notice In these cases nothing may happen until later childhood. Then may come an attack of interstitial keratitis, which reveals the certainty of the taint Moreover, this interstitial attack may be the only manifestation, an isolated symptom at the time, unaccompanied by any additional evidence of systemic infection Of such cases I can recall instances which have come under my observation where deafness, disseminated choroiditis, gummata, and nodes, the common signs associated with an interstitial attack have each been absent

The logical inference to be derived from these cases is that congenital syphilis can be at times a very benign disease, the presence of which is displayed only when some adventitious tissue environment renders its manifestations possible The evidence of that environment is commonly shown in the children in whom acute parenchymatous keratitis develops. Frequently the general condition of the patients is more noticeable than the ocular signs of which they complain. These children are mostly wasted, pallid, feeble with malnutrition actively marked—objects of physical misery from every point of view The stigmata of syphilis in active virulence are not here exhibited in the general condition of the patient On the contrary, the general signs are those of metabolic toxæmia, of depressed vitality arising from hypothyroidism As such they correspond to those to which attention has already been drawn in connexion with keratitis punctata The view that the spirochæte becomes attenuated in virulence in the process of transmission is supported by the fact of its failure to impress upon its host the facial and other features which form the peculiar appanage of syphilitic inheritance Whenever, therefore, these conditions prevail it may be concluded that except for the adventitious tissue environment represented by hypothyroidism, the spirochæte would be unable to exhibit the pathogenic influence which still remains to it This assumption is borne out by clinical experience The worst cases met with of interstitial keratitis are always those in which the signs of hypothyroidism are most pronounced. At this point some reference may be made to the widely divergent views which prevail of the nature of interstitial keratitis By some authorities it is held that the disease is directly due to the action of the spirochæta pallida, by others that it is only, indirectly, a manifestation of syphilitic infection, and that it should be included among those of the para-syphilitic type Elschnig believes that the disease is a degenerative one, due to disturbance of nutrition, arising from toxins circulating in the blood stream. My view, as will have been gathered from the reasons already expressed, closely accords with the latter, and it is in consequence of that view that for some years I have regarded cases of interstitial keratitis as not among those to be treated by antisyphilitic remedies Upon this subject I may now add a few further remarks Believing, as I do, that the pronounced objective signs of malnutrition indicate that the syphilitic manifestation is secondary to, and has only been rendered possible by, the metabolic toxæmia present, it seems entirely unscientific to treat these cases heroically by "606," and by leeching to relieve the photophobia. It may or may not be admitted that there is but little syphilis in these cases, but the fact nevertheless must be conceded that the disease is overshadowed by the evident malnutrition Amid, therefore, the pervading diminished resistance of the tissues, the spirochæte is able to assert its presence, but in consequence of the depressed vitality the tissues are unable to respond, save feebly, to the therapeutic influence of antisyphilitic treatment The persistent method of treating these cases, as if they were purely syphilitic, by heroic measures, has probably been accountable for the notorious repute they possess of requiring a prolonged period of treatment before convalescence is established Thirty years ago it was commonly held that 18 months' treatment at least was requisite before cases of interstitial keratitis could be regarded as cured This cheering information used to be imparted to the parent attending with her child for treatment But it is true that the severity of the inflammation was much greater then than is now customary to be seen The cornea was not infrequently wholly vascular, "salmon" colour in appearance.

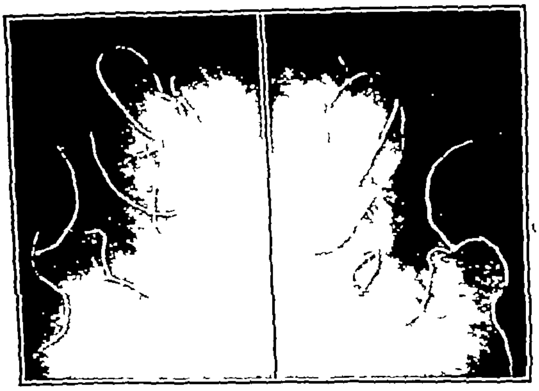
The lines of treatment which I have followed for some years include beginning with 3 grain doses twice daily of thyroid extract, and locally fomentations and atropine As the nutrition proceeds in improvement so the ocular signs diminish in severity In a deplorably bad case of malnutrition, to call exophthalmic goitre, and on the other myxœdema, in which atrophy of the gland is present Between these two extremes lie diseases of metabolic origin of lesser magnitude, the signs of which are those of hypothyroidism. The simplest form, I believe, of this toxæmic influence of metabolic perversion is met with as an ocular manifestation. It has been customary to ascribe so called "muscæ volitantes" to a physiological source The physiological basis of their presence is attributed "to the persistence of portions of the framework of the fœtal vitreous" (Collins) The fact, notwithstanding, remains that this entoptical disturbance of the vision only becomes troublesome to those who for some reason at the time believe themselves to be suffering in health, for only on these occasions is it that complaint of "black specks" is made At other times there is freedom from the trouble Hepatic disturbance is the popular conception of the cause The history of these cases suggests that "muscæ volitantes" is a pathological, rather than a physiological, sign They indicate that some metabolic disturbance has ensued by which the aqueous has become defective in transparency or in some degree changed from its normal character In one case a patient alleged to me that he was always troubled with muscæ volitantes at business on the day after attending a public dinner He attributed the sign, which ceased to be noticeable after some hours, to the food taken being imperfectly digested In the cases where muscæ volitantes remain persistent hypothyroidism in some degree may be inferred, for which thyroid treatment is indicated So far as the eye is concerned the sign is of no import, but regarded as a systemic manifestation its recognition may prove of value to the patient

When we come to consider inflammatory states of the ciliary body there is in certain cases clear evidence of the evil influence of metabolic disturbance In so called serous irido cyclitis, or more commonly, keratitis punctata, or, shortly, "K.P," the signs of hypothyroidism are distinctly manifest in the patient The etiology, nevertheless, of this disease has never been definitely determined The disease is distinguished by a chronic passive inflammation of the uveal tract, accompanied by the deposition of "dotted opacities" upon Descemet's membrane, which assume a triangular outline, with the base downwards These "dotted opacities" consist of "lymphocytes and plasma cells" derived from the uveal tract, exuded as the result of the toxæmic irritation of the tissues The history in such cases is always typical Apart from the ocular signs the patients complain of loss of appetite and flesh, of physical and mental depression, of coldness of the hands and feet, and of overwork, to the effect of which the signs are attributed Thus these cases are met with mostly among women whose ordinary strength is unequal to the demands of their occupations The metabolic origin of these signs, due to hypothyroidism, is proved by the rapid improvement which follows thyroid treatment With 3 grains, twice daily, of thyroid extract even in the course of a week a noticeable change ensues A marked feature is the early return of the appetite, and partly, no doubt, from this patients soon begin to increase in weight In the course of a few weeks the irido cyclitis has cleared up, the appetite has become vigorous, physical and mental alertness have become visible in movement and facial expression, and convalescence is practically established One among many typical instances of the kind was in the case of a former West London Hospital nurse, who, while private nursing, fell under the ban of these symptoms through an excess of night duty The value to her of thyroid treatment met with a response of appreciation which left no uncertainty in respect to the accuracy of her condition. A measure, it must be confessed, of fascination belongs to the therapeutic value of thyroid treatment. There is the rapidity of action which follows its use, there are its far reaching effects, accomplished by means so apparently simple, as would probably have astounded the multi drug prescribing physicians of old In the case of many a poor overworn patient, depressed and ailing, unfitted for work, from whom the joy of life has temporarily passed, the extract of thyroid proves a veritable elixir of life But while reaping the gratification which springs from the benefits it confers no doubt the patient wonders, with full reason, how so trivial a thing as a small tablet, neither drug nor chemical, should possess the power for good it displays And so of the many great advances of modern medicine I believe the evolution of our knowledge of the protean effects of hypothyroidism and of its treatment by thyroid extract to be one, at least, of the greatest What is true of the therapeutic value of thyroid extract in the treatment of keratitis punctata is equally true of that large class of cases of ulceration of the cornea among the poor, the cause of which is generally attributed to "debility" Among these are included the cases which in olden days would have been described as "strumous ophthalmia." Nowadays the term "strumous" has ceased to be officially recognised, persons, the victims of active tubercle, are now not strumous but tuberculous, persons who look "strumous" now emphasise the general signs of hypothyroidism, in more or less degree, and these signs vanish under thyroid treatment

Attention may now be drawn to a further aspect from which metabolic toxæmia affecting the ciliary body may be considered. First, it may be said that the term "vicious circle" is applicable to cases of metabolic toxæmia. There is the primary stage, represented by auto intoxication, arising as we may assume, in the intestines To combat the toxæmia so called, the thyroid gland, through its secretion, is called upon to make strenuous efforts under the influence of excessive stimulation. For a time these efforts are successful. Later on, however, the thyroid fails in its mission Then follows the second stage—namely, hypothyroidism With this begins a pervading uncontrolled toxæmia Accompanying this, and dependent upon it, is the last stage—that of diminished resistance of the tissues, thus rendering them a prey to bacillary infection The difficulty, however, of these cases lies in the absence, oftentimes, of any cause of the toxæmia and of the hypothyroidism which is present In the case of "K P the signs of hypothyroidism are so well marked that the existence of some source of toxæmia is at once suspected But while it is impossible to believe that any toxæmic condition could fail to depress the action of the thyroid, the fact remains that the hypothyroid effect is not always actively marked—for example, a case comes under observation of irido cyclitis, the cause of which is due to alveolar pyorrhœa. Here the source of the toxæmia is evident On the other hand, the hypothyroid effects are commonly but little noticeable, or even, it may be, are absent In former days the toxæmic source of these cases

On cystoscopic examination of the bladder in December, it was found to be perfectly healed, and no scarring was found An X ray examination disclosed the fact that the bones were still about 1½ inches apart, and that the sacro iliac joint has suffered partial dislocation but in spite of this fact the patient is able to walk The skiagram (Fig 2) shows the present condition

FIG 2



Skiagram of pelvis looking from behind Left side x shows partial dislocation of the left sacro-iliac articulation The ilium is displaced upwards. Right side x shows the normal position of the right sacro-iliac joint. The left os pubis is seen separated from the right; the fracture going through the symphysis above which the coccyx appears The bone is displaced upwards The straight line shows the width of the separation of the pubic bones

The case is interesting in the extensive injury produced by merely jumping on a horse, and the suggestion of congenital weakness of the pubic symphysis does not explain it The use of the Trendelenburg splint for drawing the bones together we have not been able to find in any text book, and are indebted to Mr Thomson Walker for pointing it out in a French genito urinary paper In spite of the fact that no sutures were inserted into the bladder, it healed up perfectly, and the capacity does not appear materially altered The patient is now pursuing his ordinary work as a farmer, walking easily for three miles at a stretch

HYPERTRICHOSIS IN THE INSANE

BY C T EWART, M D ABERD,
SENIOR ASSISTANT MEDICAL OFFICER LONDON COUNTY ASYLUM, CLAYBURY

ANYONE with an observant eye who happens to pass through the wards of an asylum cannot help but being struck with the number of female patients showing an excessive overgrowth of hair on the face—a number much larger than can be seen in any haphazard collection of women selected from the everyday world The overgrowth is not a mere pencilling of down on the upper lip and chin, but hirsute appendages capable of arousing in some men a feeling of envy It would also be observed that these cases are represented by a lusty and strong type of physique thus conveying the impression that the overgrowth is correlated with animal vigour

At the present time there are resident at Claybury Asylum ten cases of hypertrichosis Two of these are married—one with two children and the other childless, the remainder are single and have no offspring Two of the single women have an abundance of hair on their lower extremities, but in the remainder the distribution of hair is normal All have menstruated regularly, height and weight are above the average, and the type of insanity in each is that of depression The excessive amount of hair on the face has been developed in adolescent life and not after the climacteric All being sensitive on the subject, to please them a razor has frequently to be used. Some even endeavour to get rid of the disfigurement by rubbing with pumice stone No history as to hereditary transmission can be elicited

The question as to what are the causes leading to this form of hirsutism is shrouded in mystery, but I would venture to suggest that there is evidence which goes to show that the secretions of the suprarenal glands may be important factors Before touching on this point it would be as well to remember the advice of Dr T B Hyslop "That not only may there exist a functional increase or a diminution of one type, but also a relative or compensatory increase or diminution of the secretion of one or several of the undamaged remainder It is warrantable to assume that a lesion of any important gland makes itself felt throughout the whole of the chemical interchanges of the body" I pass on to touch briefly on some of the secretions

Ovaries and testicles —With the development of the sexual organs there is marked growth of hair In women the cessation of the sexual functions at the climacteric does in some cases correspond to the excessive growth of hair on the face, but, considering that all women pass through this change and so few who suffer from hypertrichosis, the cause of the overgrowth cannot altogether depend on the secretions or lack of secretions of these glands

Thymus gland —This gland apparently becomes functionless about puberty, and there is at this time an increase in growth of hair It has been suggested that it is the thymic secretion which inhibits the sexual development with its associated hair growth Removal strikingly impairs the development of the osseous system and the genitalia

Thyroid gland —When there is a diminution of secretion the hair of the scalp becomes scanty and prematurely grey, with a falling off from the eyebrows eyelashes, axillæ, and pubis With thyroid medication the hair again grows

Pituitary gland —This does not appear to have any influence on the growth of hair

Suprarenal glands —The cortex forms, in man, at least 90 per cent. of the entire bulk of the gland, and it is the enlargement of the cortex which characterises the adrenal glands of the higher animals They exert a powerful influence on the growth of the hair for in a few instances hypertrophy has been associated with early sexual development of hair On the other hand, disappearance of the pubic hair and non development of the genital organs have occurred in connexion with defective suprarenals Dr T R Elliott, of University College Hospital, states "The cells of the cortex are derived from a mass of tissue close to the kidneys in the neighbourhood where the sex gland arises As the latter, testis or ovary descends to the pelvis it carries with it buds from this mass which may be scattered along the line of descent and form accessory cortical adrenals along the spermatic veins There is reason to believe that other buds are embedded in the sex gland itself giving rise to the lutein cells of the ovary or the interstitial cells of the testis By these cells are determined the sexual characteristics of the individual."

Some forms of cortical overgrowth cause an early adolescence and sexual precocity The young male acquires hair on the face and pubes years before the proper time, and his body at nine years becomes that of a diminutive but strongly built man. The female, curiously enough, under like conditions, loses the characteristics of her sex, hair growing on the face and her body assuming a masculine contour Dr Gordon Holmes describes a case in which a perfectly normal young woman had at the age of 20 ceased to menstruate, and this she attributed to fright A beard commenced to grow a case typical of the worst form of double interstitial keratitis, a child under this treatment was fat, strong, and well at the end of three months And there the problem remains, if interstitial keratitis be purely and wholly a syphilitic lesion, how is it curable without antisyphilitic treatment? Impartial reasoning suggests that except for the tissue environment of pronounced diminished resistance the attenuated spirochæta pallida of a benign congenital transmission would fail to exert its pathogenic influence The possibility of this view being correct throws emphasis again upon the value of recognising the vulnerability of the ciliary body—practically the blood organ of the eye—to metabolic disturbance It emphasises, too, the therapeutic advantages to be gained by combating such toxæmic manifestations by thyroid treatment Moreover, in this connexion the reflection inculcated in the following quotation from a paper by Hertoghe, of Antwerp, applies with force to ophthalmic surgeons—namely, "The day is coming when we will interrogate the thyroid equation (hypo or hyper) in all our patients with the same fidelity that we inquire to day into their previous history as regards tuberculosis, syphilis, and alcoholism "[2]

In conclusion, the main purport of this paper is to lay stress upon hypothyroidism as a causative factor in cases of irido cyclitis and upon the usefulness, clinically, of its recognition That the ciliary body, so sensitive to toxæmic influence, should readily respond to thyroid treatment is a natural sequence to the vascularity of its structure Thus is placed in the hands of the ophthalmic surgeon a means of relief, yielding results which can be obtained in no other way The dose of the extract employed by me for children beyond 5 years of age and for adults is 3 grains twice daily, and from this dosage I have never seen any ill effects

Wimpole street, W

FRACTURE OF THE PELVIS, WITH EXTRA-PERITONEAL RUPTURE OF THE BLADDER

BY A E BLACKBURN, M.D BRUX, M R C S, &c

AND

W WARNER COOK, M R C S, L R C.P LOND,

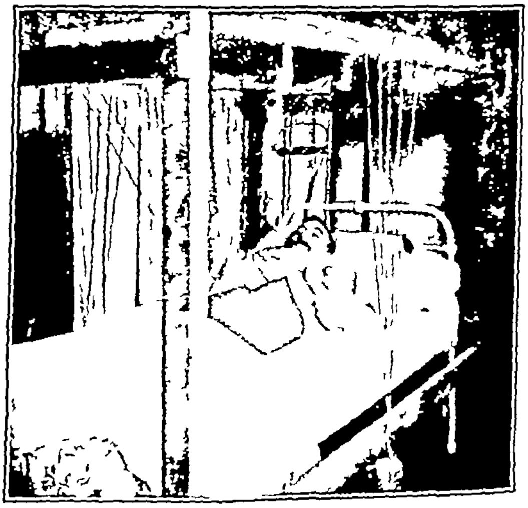
FRACTURE of the pelvis and rupture of the bladder are fairly common accidents, but the enormous separation of the pubes and the extensive damage to the bladder and prostate from such a simple cause seem to make this case unique

The patient was a healthy farmer aged 45 years The accident occurred on August 5th, 1914, whilst he was engaged in showing a horse for military purposes He jumped on to the horse bareback At the time he felt no pain, but after riding a few yards he felt a griping sensation "inside" This became so bad that he rolled off the horse, he was found in this condition and taken home He was quite certain that he did not jump heavily on the horse, and he was equally certain that the horse did not buck, nor crush him in any way He was not under the influence of alcohol He had ridden horses for years, and times out of number he had mounted horses in a similar way The accident occurred at 6 P M, he was seen by us at 7 P M He was in great pain and his scrotum and perineum were very swollen and discoloured, and his left leg was rotated outwards

On first sight it appeared that the case might be a simple hæmatoma of the testis, considering the history of the accident, but as he had not passed urine for some time, and there was no bladder dulness, it was decided to pass a catheter On passing a catheter a little bloody urine was withdrawn It was considered advisable to remove the patient to a nursing home for operation, as his house was 10 miles from the town He was operated upon at 1 A M

On making a suprapubic opening hæmorrhage was very free, and this was found to be coming from the region of the prostate, which was ripped up, along with the bladder The rent in the bladder was so extensive that the hand could readily be passed into its cavity The ramus of the left pubic bone was fractured near the symphysis, and the separation was over 6 inches in extent As the hæmorrhage was so free and the patient was in such a critical condition any attempt at suture of the bladder was considered unadvisable, and he was merely packed with gauze and drainage tubes inserted. His legs were tied together and the usual treatment for shock was carried out He was not expected to recover Hæmorrhage continued to be profuse for the next 24 hours, but the patient rallied and his condition next day was satisfactory

FIG 1.



The patient lying in the leather splint. The bed is surrounded by a wooden frame cords are fastened to the leather and passed over the top rail of the frame at the ends of the cord on either side is a tin containing shot. The tin on the left side contains 6 lb the right 12 lb The patient is slung in the same way as one slings a horse

On August 9th the plugs were removed, and on the 11th, under an anæsthetic, a metal catheter was passed and tied in, the bladder washed out, and Irving's apparatus applied The bladder was washed out twice daily, and urotropin and brandy were given regularly About this time he appeared to be developing pneumonia. The temperature went up and nasal breathing was marked, but it subsided after more frequent bladder washings On Sept 3rd an attempt was made to draw the pubic bones close together and a leather splint was applied with counter extension and weights (Trendelenburg) (See Fig 1) The patient had complained of great pain and could not sleep, but from the day on which this splint was used he became more comfortable On Oct 14th he passed urine naturally and the suprapubic opening closed about the end of November, and he was able to stand, but this gave him pain, and he was glad to return to his splint interest these clots are of clinical importance, because they may become detached and thus cause fatal embolism. This cause of pulmonary embolism should be borne in mind when no source for the clot can be discovered in the veins

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[2] American Medicine April 1914 p 1[illegible]

Embolism of the aorta might similarly occur, and a case of this kind I recorded some years ago The patient died suddenly The main trunk of the aorta was found plugged with a mass of tough decolorised clot of considerable size On unravelling this in water it opened out into a thin flat clot such as I have described, which could be readily placed *in situ*, and corresponded exactly with the cavities of the left ventricle and auricle

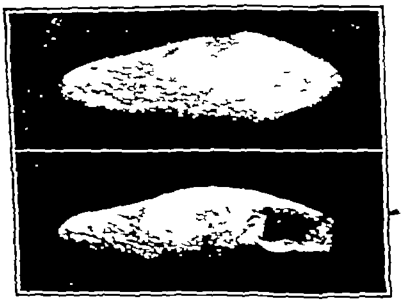
It is strange that this form of cardiac thrombosis has not received more attention, as it is by no means rare

Wimpole-street, W

URETHRAL CALCULUS IMPACTED FOR 15 YEARS

By T Bates, Jun, M.B, B S Lond, F.R C S Eng

The patient was a male, aged 39 years, unmarried. The following history was given. The patient was circumcised in 1899 at the Middlesex Hospital. In 1900 he was seized with acute pain in the penis A small calculus became lodged in the fossa navicularis He consulted a medical man, who prescribed some medicine for him, and shortly afterwards he left London, since which date he had consulted no medical man, although the calculus remained *in situ* I saw him on account of severe pain and swelling in the penis I then found the distal half of the penis much swollen. Thin watery pus was discharging from the urethra. There was a muco cutaneous fistula opening behind the glans penis



The calculus exact size. The upper view shows the dorsal aspect and the lower view shows the right lateral aspect of the calculus.

Operation—An incision was made from the meatus urinarius to the muco cutaneous fistula, the stone removed, and hæmorrhage controlled by cat gut suture of the wound. A No 12 bougie was passed once a week for four months as a precaution against stricture

The stone weighs 58 grains, size 1⅜ × ½ in. The anterior third is smooth and blunt, the posterior two thirds are rough and pointed. The anterior half is hollow, the walls being laminated, the inner laminæ being dark in colour and the outer ones pale

Worcester

The Royal Dental Hospital, Leicester-square, has received a donation of £500 from the trustees of Smith's (Kensington Estate) Charity

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Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND

Section of Medicine.

Dermatitis Herpetiformis—Urinary Concretions—Cases of Landry's Paralysis Myasthenia Gravis, and Epileptic Automatism

A meeting of this section was held on April 23rd, Professor J A. Lindsay, the President, being in the chair

Dr C M. O Brien showed a boy, aged 14, who had been suffering from Dermatitis Herpetiformis since he was 3 months old. He was one of a family of nine healthy children, and up to the time of vaccination was in good health. He then developed a rash, which in its early stages caused much itching, was multiform, and well marked on the arms and legs A peculiarity was its persistence and recurrence It never totally disappeared—Dr Walter G Smith said the disease was rare, he suggested "dermatitis multiformis" as a better name He considered the persistence and recurrence its distinguishing marks He looked upon treatment as of no avail.

Dr Walter Smith read a paper on Urinary Concretions, their Origin and Modes of Formation, in which the following questions were brought forward 1. Is there any essential difference between gravel (sand) and calculus? 2. Is there any general theory of calculus formation? 3. Is there a scale of relative frequency of the different species of calculi? 4 What do we know as to the determining factors leading towards or producing calculi? 5 How far can we trace the coöperation or interaction of colloids and crystalloids in their production? 6 Has the frequency of calculi sensibly decreased within recent times. Stress was laid upon conditions of altered or perverted metabolism in the etiology of calculus, and attention was called to our ignorance of the pathology of gout and to the exaggerated statements as to the alleged pernicious effects of uric acid in the blood. The conditions relating to relative solubility were discussed in some detail, and it was insisted that the relations between colloids and crystalloids are of prime importance in the etiology of urinary concretions.—Sir John Moore recalled his experience of 40 years ago at the Meath Hospital, when the surgeons were almost constantly operating for stone. He thought the prevalence of stone had decreased in recent years. He had always connected the subsidence of ordinary calculus with the introduction of Vartry water—Professor H. Mettam said that urinary calculi, chiefly oxalate, carbonate, or mixtures, were met with in the domesticated animals In a specimen shown at the Section of Pathology renal calculi were found in the lymphatic spaces outside the tubules. In the lower animals calculi of enormous size were met with. It had been observed that rams fed on mangolds, which are very rich in sugar, frequently developed calculi—Dr A. R. Parsons asked for an explanation of the frequent occurrence of calcium oxalate crystals in the urine of diabetics—Professor E. J McWeeney said that during the past 20 years he had examined from 50 to 60 ordinary calculi and was strongly struck by the extremely dark colour of these oxalate of lime calculi, an oxalate of lime calculus found in the pelvis of the kidney was absolutely jet black with a very polished surface. This dark pigmentation of calcium oxalate calculi might be correlated with the fact that their surfaces are so rough that they produce small hæmorrhages—The President said that in his experience in the North of Ireland calculus was rare, and he thought that a decrease had come about in recent times The decrease might be accounted for by the extreme rarity of gout which was much more common some years ago—Dr Smith replied.

The President read the notes of the following three cases. 1. A case of Landry's Disease. He discussed the possibility of the case being one of acute ascending myelitis, acute poliomyelitis or acute toxic polyneuritis, but was of opinion that these conditions could be excluded, and that the case was a genuine example of Landry's syndrome. 2. A case of Myasthenia Gravis. The points of distinction between myasthenia gravis and

and the body assumed a masculine appearance Four years later a tumour of the right adrenal was removed, but time has not yet permitted of the hoped for result—the return to femaleness

The medullary portion of the suprarenals has, apparently, only a very close connexion with the nerves of the sympathetic system

From the presence of the lanugo, or down, on the human fœtus we may infer that man is descended from some animal which was born hairy and remained so during life In the infancy of the race, and before man started to conquer the earth from the Equator to the Arctic regions, a complete covering of hair may have been a useful protection, not only from wet weather but from sudden chills Gradually, as his brain developed and his intelligence evolved, by natural and sexual selection he cast off his hairy clothing and supplied himself with substitutes derived from the animal and vegetable worlds Other animals find a niche in the world into which they fit themselves, rest, and are thankful, but insurgent man travels along the open road and no niche is good enough for him This being so, he has to be capable of adapting himself to all conditions of existence, as otherwise he would have found himself in a cul de sac The power ever thrusting him forward is the function we term mind, which precedes and creates for itself the structure we call body and is itself an evolutionary product The loss of hair is thus correlated with the growth of intellect, and this may to some extent explain the baldness which is always conspicuous by its presence at the meetings of learned societies The superman will most likely be a completely hairless creature Darwin holds that, as the body in woman is less hairy than in man and as this character is common to all races, it is right to conclude that it was our female semi human ancestors who were first divested of hair for some natural advantage, and that this partial loss, because it exposed the beauty of the skin, became highly esteemed as an ornament by our male progenitors, and so gradually by sexual selection the denudation proceeded With civilised man the sense of beauty may be intimately associated with complex ideas and trains of thought, but in the great majority of animals the taste for the beautiful is confined, so far as we can judge, to the mere attraction of the opposite sex Where females have been the selectors the males are more highly ornamental, where males exercise the right of choice the opposite occurs In the case of woman man has decided that smooth cheeks are ornamental, and this becomes transmitted exclusively to the female offspring, and those with an overgrowth are not sought for as mates and therefore die out Anyone who has seen pictures of the Siamese hairy family must admit that they create feelings of repulsion The beard is peculiar to man, and because it gives an aspect of virility to the face it acts as an attraction to the woman, thus becoming a secondary sexual character, and I have yet to hear of a civilised nation which looks upon a beard in a woman as anything else but a monstrosity It revives the old prejudice that anyone with this stigma represented a person on whom Nature had branded a mark of mental and moral degeneracy

> But thou art neither like thy sire or dam,
> But like a foul unshapen stigmatic—
> Marked by the Destinies to be avoided
> As venom toads or lizard's dreadful stings
> —*Henry VI*

The evolution and maintenance of sex is definitely for the purpose of reproduction, and is ordained for the sake of the race and the future It is an instrument of progress becoming more powerful, more delicate, and more subtle in its work as the ages roll by This is the evidence afforded by a survey of living forms in general, and emphasises the arguments of those who say that the trend of evolution is towards an increase of sex differences, and that, if history is to be trusted, there would appear to be a natural and indispensable decree for an increase of feminism in woman and masculinity in man But if so, what is the inner meaning of the modern mode of clean shaven faces? Is a moustache to be doomed because it is not only a constant emblem to a woman that a man is a man, but also reminds her of the unkind fate which condemns her to be born a female? Has facial hair lost its sexual significance because of the creation by the pampered luxury of peace of a feeling in woman that she no longer needs a protector, and will the war restore a beard to its original importance?

Claybury

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

NOTE ON A LITTLE RECOGNISED FORM OF CARDIAC THROMBOSIS

By SAMUEL WEST, M D OXON, F R C P LOND,

CONSULTING PHYSICIAN TO ST BARTHOLOMEW'S HOSPITAL.

THE common forms of cardiac thrombosis are (1) the soft bulky gelatinous clots, described as *post mortem clots,* and (2) the tough, more or less, decolorised clots which form the chief part of the *vegetations* on diseased portions of the endocardium, especially in connexion with the valves As rarer forms are (3) larger and more or less *rounded masses* found in dilated cavities, they are usually attached to the cardiac walls, but may be free, when they have been called (4) *ball thrombi* It is the pathological rarity of these two last forms that gives them their chief interest

The form of cardiac thrombosis with which I wish to deal is of an entirely different character, it occurs in patients who have been long a dying, as in phthisis or malignant disease The clots present the usual characters of ante mortem clots, being firm and tough, pale, and fibrinous They are thin and flat and moulded to the shape of the ventricles and auricles, and represent these cavities in the stage of extreme contraction The thickness varies in different parts, but averages one eighth to one quarter of an inch The clot starts in the ventricles, behind the trabeculæ carneæ, and in the auricles among the rugosities of the appendix, and this connexion keeps them fixed In the ventricle the clots form a thin, flat, triangular, pancake like mass, 3 inches, it may be, in length and 1 to 2 inches in greatest breadth A thin band may pass through the auriculo ventricular orifice, to be continuous with a similar flat clot on the auricle, from which string like processes may extend for some distance into the branches of the pulmonary artery and veins Clots of this kind are, as would be expected, commonest on the right side of the heart, but they may occur on the left or on both sides together Apart from their pathological

Reviews and Notices of Books.

Abdominal Operations

By Sir BERKELEY MOYNIHAN, M S Lond , F R C S Eng Third edition, revised In two volumes, fully illustrated Pp 488 and 492 London and Philadelphia W B Saunders Company 1914 Price 42s net

THE field of surgery is so vast that it is now, more than at any previous time, necessary to limit the purview of any work on surgery if the study of it is to be at all thorough , and at the present time, when specialism for good or evil has assumed such an important place in modern medicine, it is more than ever essential to confine the subject within reasonable boundaries

When the first edition of Sir Berkeley Moynihan's work on the surgery of the abdomen appeared it was generally recognised that an extremely valuable treatise had been presented to the English speaking peoples, and one which from the originality and experience of the author should prove of the greatest value to surgeons This, the third, edition has grown to two volumes, and when we consider the importance of the subject and the advances which are being made almost daily in this branch of surgery, we must acknowledge that there is ample reason for the enlargement of the work Although the book is entitled "Abdominal Surgery" there are certain intentional omissions, only those abdominal operations are included which are common to the two sexes, for no gynæcological operations have been introduced Moreover, the surgery of organs like the kidney and the bladder, which are partly intra and partly extra peritoneal, is omitted, and the various operations for hernia are not included In a work such as this the author was naturally sometimes in doubt as to whether he should include a certain operation or not, and we think that Sir Berkeley Moynihan has acted wisely in including in the work only those operations which he practises himself, and a few others which are generally recognised as worthy of recognition One remarkable fact deserves mention, and that is that no allusion is made to mechanical aids for the union of bowel or stomach, the author holds that the purpose of these aids has been served and that their interest is now only historical, as good or even better results can be obtained without them

It is needless to discuss the whole work in detail, but we may say that in this, as in the other writings of the author, the facts are given in simple language, and he speaks with the assurance of one who knows his subject The illustrations are numerous and clear, and the printing is all that can be desired

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The Infant Nutrition and Management

By ERIC PRITCHARD M A , M D Oxon M R C P Lond , Physician to Queen's Hospital for Children , Physician to Out patients, City of London Hospital for Diseases of the Chest Victoria Park, &c London Edward Arnold 1914 Pp 265 Price 3s 6d net

THE subject of the nutrition and management of the infant is one which, in view of its great national importance, has within recent years received very marked attention, and large numbers of text books and popular manuals have appeared The vexed question of infant mortality and the methods of reducing it cannot receive too much attention more especially from those who, like Dr Pritchard, have devoted special practical attention to the subject We therefore welcome the little book before us as a thoughtful, suggestive, and stimulating contribution to this matter Although many of the views expressed in it are new and some of them heterodox, they are obviously the result of careful thought, wide experience, and a practical examination of the problems involved

The subject of breast feeding is first dealt with, and great stress is laid upon the importance of perseverance in the attempts to secure breast feeding in spite of difficulties Numerous practical hints are given of measures to promote a regular and satisfactory flow of milk Some interesting observations are next given on the nutrition of the infant and on the determination of the quantitative food requirements By means of the "test feed" in breast fed cases Dr Pritchard has accumulated some striking data. He rightly points out that it is unscientific to prepare hard and fast tables for general application. Each case must be considered individually, since its needs depend upon the rate of growth, the work done in bodily movements, and the rate of heat loss of the particular infant He arrives at the conclusion that the demand for food in an infant can be increased by less clothing, more air, and more exercise The motor functions of the digestive tract and the training of nerve centres next receive attention, and some valuable suggestions are made as to the proper education of these functions and the avoidance of disturbing factors The subject of constipation is examined in some detail, and here the importance of quantitative and qualitative defects in diet is emphasised, as well as the value of endeavours to induce regularity of habit Dr Pritchard inveighs strongly against the administration of purgatives and enemata, especially against the dose of castor oil so frequently given to infants in the first few hours of life, which he regards as often provocative of subsequent constipation. Some common symptoms in infancy, such as marasmus, vomiting, crying, coughs, diarrhœa, thrush, and sore buttocks, are next examined, and the rational treatment of each is considered. A chapter is devoted to a consideration of the uses of dried milk in infant feeding, of which Dr Pritchard apparently has a high opinion The uses of petroleum are next dealt with in detail, and some useful directions are given in regard to preparation and dosage Other subjects considered are the causation of convulsions in infancy and the causation and treatment of rickets The concluding chapter is devoted to a matter to which Dr Pritchard has devoted special attention—viz , the instruction of mothers in mother craft

We can strongly recommend this book to the general practitioner, and especially to those concerned in the management of infant consultations or of mother craft centres

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Text book of Public Health

By E W HOPE, M D Edin , D Sc , *Professor of Public Health University of Liverpool Eighth edition, revised* and enlarged Edinburgh E and *S Livingstone Pp 267* Price 5s net

PUBLIC health and forensic medicine used frequently to be taught at the medical schools by the same lecturer and in the *same* course, and a standard text book in both branches, which served for generations of students, was the volume known as "Husband" *The two* subjects are now seldom thus combined in *teaching*, and Dr Hope has been well advised to issue separately the portion of cases of aggravated neurasthenia were discussed, and stress was laid upon the predominance of muscle fatigue, the myasthenic reaction, the condition of the reflexes, the absence of pain, the absence of morbid introspection, and the alternating character of the symptoms as characteristic of the former disease 3 A case of Automatism The patient was a man, aged 60, of temperate habits and a history of good health There was no history of hereditary nervous disease, alcoholism, or syphilis His general health was excellent, and his weight was 14 st. 7 lb There was no evidence of organic disease in any of the viscera His story was that on several occasions he had found himself at considerable distances from his office without any recollection of what had happened in the interval He had never had a convulsion, had never fallen or hurt himself, had never passed urine during an attack, and his condition had never excited the notice of any of those persons with whom he was associated On recovering from a seizure he felt perfectly well, and there were no after phenomena. Physical examination was entirely negative The patient was put upon a course of bromide and belladonna, and in a short time the attacks ceased. When last seen he had been free from attacks for a period of nearly five years —Dr H O DRURY considered that the first two cases were without question, but the third reminded him of a case of his own which he looked upon as of the nature of *petit mal* —Dr PARSONS agreed that the third case was one of *petit mal* He recalled the case of a patient of his which ended fatally At the necropsy nothing could be discovered wrong with the brain.—Dr W R DAWSON agreed that the second case was not neurasthenia In the third case, while listening to Professor Lindsay's account, he had made a diagnosis of *petit mal* He considered the fact that the fits had ceased was an example of the good results produced by the combination of belladonna and bromide —Dr H T BEWLEY also discussed the first case

The PRESIDENT, replying, agreed with the name of *petit mal* as better fitting the third case

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MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND

"*Anger*"—*Research in Connexion with Causation of Insanity*

THE quarterly meeting of this association was held in the rooms of the Medical Society of London on May 18th, Dr DAVID G THOMSON, the President, being in the chair Dr Thomson having referred to the services to psychological medicine of the late Sir Thomas Clouston, the meeting passed a resolution of sympathy with Sir Thomas Clouston's relatives, the members rising in their places

The PRESIDENT also said that Dr J Beveridge Spence and Dr T Seymour Tuke had recently lost their sons in battle, and the meeting expressed its sympathy with the bereaved parents

About 100 books were presented to the library by Dr T B Hyslop, who was cordially thanked for his generous gift

Dr HYSLOP then read a paper on "Anger," and said that many authorities considered that Germany was now running amok in an epidemic of maniacal fury He regarded this as an instance of epidemic psychopathy, a repetition of which humanity was not likely to permit —The subject was discussed by Sir GEORGE SAVAGE Mr H F HAYES NEWINGTON, Dr J N SERGEANT, and Mr W F SAMUELS

Dr DAVID ORR read a paper on Research in Connexion with the Causation of Insanity Such research in this country, he said, up to the present time had been either isolated, neglected, or starved At one period of our knowledge isolated effort could make some headway, but now the problems were much more complex, rendering essential the coöperation of several species of workers Research had come to mean specialisation in a branch after a thoroughly broad preliminary training and this must be given in a properly equipped central laboratory Such laboratory must be prepared to give instruction in anatomy physiology, pathology, bacteriology, chemistry and serology as applied to the nervous system There were many examples in history of the futility of attacking problems from a narrow standpoint Dejerine had declared that in the study of the lesions in aphasia, macroscopic observation was not sufficient, there must be microscopical examination in serial stained sections of the affected hemisphere or even of both hemispheres Only by this means could the limits of the lesion be determined and the questions still under debate be solved This must apply even more truly to such conditions as various types of insanity, epilepsy agnosia, apraxia, &c And there must be complete reciprocity between the laboratory and the asylum Investigators in the domain of neuro pathology must no longer recognise any line of demarcation between the brain and the nervous system Clinical insanity, he considered, was best taught in a clinic where the cases were seen in the stage of early development, and the clinic should be in close touch with the laboratory Both should be conveniently near to a medical school whose teachers could give special lectures and expert advice No training could be complete without adequate clinical instruction Each asylum should have its own pathological department, in which those who had been trained in broad neurology could work out problems for themselves, when in difficulties the central institute could be drawn upon for expert advice The county asylum was not the best place in which to learn, because so seldom were cases seen there in the early stage —Mr HAYES NEWINGTON hoped that those who would find the money for research would be impressed by what Dr Orr had advanced, he had made out an excellent case for it —Dr HUBERT J NORMAN expressed the view of many in the asylum service as to the small opportunity they received for doing any research though they fully saw the necessity of it. To conduct this work men must have the enthusiasm for it which the author had shown —Dr HARVEY BAIRD spoke of the good work being done at Cardiff Mental Hospital due largely to the keenness of the superintendent, who succeeded in impressing the borough authorities as to the need for supporting the work

Dr ORR replied, expressing the view that the necessary money would be forthcoming

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ROENTGEN SOCIETY —The annual general meeting of this society will be held on Tuesday next, June 1st, at 8 15 P M, at the Cancer Hospital, Fulham road, S W The annual report and the honorary treasurer s report will be received, and a ballot will take place to chose the president, members of council, and officers for the ensuing session The electrical and radio therapeutic department of the hospital will be open for inspection and there will be a number of demonstrations given Members desirous of showing new apparatus, negatives or lantern slides are requested to communicate with the honorary secretary, Dr Robert Knox, 7, Harley street, London, W

THE HENRY SAXON SNELL PRIZE —This prize, which was founded to encourage improvements in the construction or adaptation of sanitary appliances, is awarded by the council of the Royal Sanitary Institute every third year The prize consists of 50 guineas and a silver medal and it will be awarded this year for an essay on Suggestions for Improvements in the Sanitary Arrangements and Appliances on Board Ship for Passengers and for Cattle Further particulars may be obtained from the secretary of the Royal Sanitary Institute, 90, Buckingham Palace road, London S W

KING'S COLLEGE UNIVERSITY OF LONDON —We are informed that the course of lectures by Professor Brodie on the Gases of the Blood, announced last week will not be delivered owing to Professor Brodie s services being required for military purposes

ASYLUM WORKERS' ASSOCIATION —The annual meeting of this association was held on May 19th when Sir John Jardine K.C I E, M P, presided It was stated in the report that although the value of the association had never been more apparent, the membership had shown a decline for the year 1914

PLAGUE IN HONG-KONG —The Colonial Office reports 13 cases of plague, with 12 deaths, at Hong Kong in the week ending May 22nd

Wundt and Bergson The former professes to find the determining factors of the present war in a "low desire for gain" and in the "diplomatic intrigues" of those who direct the conflict against his compatriots, but above all he believes that the origin of the war must be ascribed to the will of a king (now deceased) and an ambitious group of political adventurers A strange èrror, comments Dr Mackenzie, and full of suggestion is that of this learned man who during his long scientific career has been occupied with the study of psychology, and especially the psychology of peoples How clearly the hidden will of the nation speaks through his mouth, which befogs his thought, otherwise so clear, and makes it a blind instrument of war !

But little better is the conclusion arrived at by Bergson in his well known academical and bellicose treatise, which is justly celebrated for its elevated style This treatise contains in substance the startling and more or less explicit assertion that the present war is above all a struggle of the material against the spiritual, and, as is natural, the illustrious philosopher finds all the spiritual on his own side and all the material on that of the enemy With regard to this attitude Dr Mackenzie says with truth that science and philosophy will gain more by the silence than by the publications and speeches of those scientists and philosophers who in times of difficulty for their own country, and for the whole world, make a profession of political faith, thinking to further it by biological arguments which do not fit in with any faith. Such lucubrations conduce to a single and most deplorable result—that of causing and fostering that ignorant hate among men which is the main "enemy" to be fought against

Radiography, X Ray Therapeutics, and Radium Therapy

By ROBERT KNOX, M D Edin., M R C S, L R C P Lond, Honorary Radiographer, King's College Hospital, Director Electrical and Radiotherapeutic Department, Cancer Hospital, London, &c. With 64 full page plates and 245 illustrations in the text London A and C Black, Limited. 1915 Pp 406 Price 25s net

THIS is the first really comprehensive volume on the whole subject of the X rays and radium that has been brought out by a British author While we have had many similar volumes in the past they have emanated for the most part from the continent and America. This is not because British radiologists have been behind in their researches, but rather because as a class they are more content to wait until they are sure of their ground before stating their views in permanent form As a matter of fact, a very large proportion of the writings of foreign radiologists have added little to our permanent knowledge of radiology

In the present volume we have a very complete treatise on the present state of our knowledge, so complete and comprehensive is it that in our opinion it goes rather beyond the author's aim, "to present to the student and practitioner in as concise and as practical a form as possible the essential points in radiography and radium therapy" The beginner who attempts to get his knowledge of a subject so highly technical from this volume will find himself rather bewildered with the task before him The book appeals more to those who have acquired their first principles and desire to increase their knowledge extensively This applies particularly to the first chapters dealing with apparatus A perusal of this part would leave the beginner with a sense of incompleteness, however ample it may be for those whose technical knowledge is fairly extensive, we do not think it meets the requirements of that greater number of aspiring radiologists whose attainments in this direction are of a very sketchy character As regards the illustrations in this section, it is perhaps unfortunate at the present time that so many of them are from the catalogues of Teutonic manufacturers Diagrams are more valuable to the student than illustrations of the finished article of one or other maker, but they require to be carefully prepared and selected In this connexion we may instance the diagram of a centrifugal mercury interrupter on p 17 We think the average beginner will find no little difficulty, with only this diagram before him, in understanding how this apparatus works The same criticism applies to the section on X ray tubes and the various accessory appliances used in radiology Fundamental principles are passed over too briefly, there are too many catalogue illustrations, and too few explanatory diagrams for a work that sets out to teach the beginner

When we come to the practical application of the X rays in the diagnosis and treatment of injuries and diseases, we have nothing but praise for the scope of the work Methods are clearly described and the resulting plates are illustrated profusely and well A valuable feature of the illustrations is that all are shown in duplicate, one as a negative and the other as a positive As a radiologist almost invariably bases his opinions on the negative plates their reproduction in this form is a very decided help to the student in familiarising himself with the immediate results of his work A very useful chapter is that on the development of the bones, showing the appearances of the epiphyses at various ages This will be of great help in the interpretation of plates made from young subjects—a most difficult matter at times The chapters on the examination of the thoracic, abdominal, and pelvic organs are complete and instructive There are few who will not find here many valuable suggestions, and as this is a branch of radio diagnosis that is bound to be increasingly important as time goes on, a study of the whole section of the work is recommended

In the section on X ray therapeutics we find the same thoroughness displayed as in the previous part The various forms of technique, methods of dosage, and other necessary details are supplied in a clear and concise manner Suitable modifications are given for the treatment of different diseases, and numerous illustrations show the effects produced after treatment by the X rays, some of the cases of inoperable malignant disease being improved in a remarkable manner

The last part of the book deals with the physics and application of the rays from radium in the treatment of disease, the section on physics having been contributed by Mr C E S Phillips This part of the work will be found a valuable guide

The book, which has been printed and published in an excellent manner, is bound to achieve success

A System of Veterinary Medicine

By Various Writers Edited by E WALLIS HOARE, F R C V S Vol II General Diseases, Parasites London Baillière, Tindall, and Cox. 1915 Pp xx. + 1600 Price of the two volumes 50s complete

IT is many years since an authoritative work on veterinary medicine was produced in the British Isles, and since that time great advance has been made in the science Many a practitioner in

"Husband's Forensic Medicine" for which he was responsible This little volume should go a long way to meet the requirements of the medical student or the practitioner reading for the Diploma in Public Health, for whom it is intended It is full of well-arranged information, given with the lucidity which characterises Dr Hope's writings, and is well illustrated The main object of the book has been kept in view throughout, and care has been taken to quote sound authorities and to draw upon the official documents and reports which govern the every day practice of medical officers of health and school medical officers Some of the most useful information in the volume is derived from Dr Hope's special experience in Liverpool, and as a whole the work deals essentially with the practice of public health in large urban communities

The new edition is well up to date in such matters as the methods for dealing with tuberculosis which have followed the National Insurance Acts, and other recent legislation and changes of administration which bear on the curriculum of instruction in public hygiene at the present day

Zoology An Elementary Text book

By A E SHIPLEY, D Sc , F R S , Master of Christ's College, Cambridge, and E W MACBRIDE, D Sc , F R S , Professor of Zoology at the Imperial College Cambridge University Press Third edition. Pp 752 Price 12*s* 6*d* net

IN view of the authoritative names of the two authors and of the fact that the present is the third edition of their useful text book, it will hardly be expected that much criticism can be applied to this manual of zoology—that is, in the way of detection of error—though, as they tell us in the preface, the third edition is in some parts substantially altered There are, however, a few points to which we should like to direct their attention, where some little improvement can be introduced in a succeeding edition.

For instance, in dealing with the structure of birds (p 629) the authors write that "according to one of the best bird specialists the external characters furnish just as reliable data as the ill known internal organs" for the classification of this group It is not clear whether this is in effect a quotation or a mere verbal *ipse dixit* of the eminent one In any case it is singularly at variance with fact, for it would be hard, if not impossible, to find any group of animals whose internal anatomy has been studied in greater detail or more comprehensively than has been the case with birds There is not a bone, not a muscle, not a viscus that has not been treated of by one or more of the seven or eight zoologists who have specially dealt with these vertebrates

In describing the skull of Chimæra the authors naturally use the term "autostylic," introduced by Professor Huxley in his well known memoir upon the skull of Ceratodus, for the suspensory condition of the jaws Having decided to adopt this widely used word it was unnecessary, as we think, to replace it on p 473 by "holostylic" The disadvantage of the "type system" in treatises on zoology (which, however, it must be confessed, can hardly be avoided) is, to our mind, that it is apt to give wrong impressions while correctly stating absolute fact Thus, the authors of the present treatise, in distinguishing between the earthworm and the leech, remark that "in leeches, unlike the condition in the earthworm, the genital pores are single and median The student might go away with the fixed idea that this statement covers all leeches and all earthworms, which would, of course, be incorrect As a matter of fact this danger could be easily avoided by adding after the word "earthworm" some such phrase as "*but not in all genera*" A slight blemish seems to us to be shown in the definition (p 166) of the Hirudinea, where the dogmatic statement of characters is immediately followed by a definition of the suborder Acanthobdellidæ in which several of these characters are shown not to apply This could have been avoided by the use of such a word as "generally," interspersed with the requisite liberality

It must not be assumed from these few observations that we are not impressed by the general and dependable accuracy, and thus usefulness, of this very handy volume We merely proffer some suggestions for the future

Significato Bio filosofico della Guerra

By Dr WILLIAM MACKENZIE. Genoa 1915 Pp 101. Price 2 lire.

THIS little brochure is a praiseworthy but somewhat hopeless attempt to solve by means of biological and metaphysical methods the question, "Why do the heathen rage so furiously?" The author starts with the premise that every cell has two apparent tendencies—to become more complex and more specialised—hence grades and types become evolved The same process applies to groups, the final evolution of which is seen in national states Further, as every organism must fight in order to exist, this applies also to states, but the author points out that the "struggle for life" does not constitute the exclusive protection of the biological edifice, it is only a mode, a partial aspect of development, the other aspect being strictly complementary and found in "collaboration," which may attain to complete denial of self for the reciprocal advantage of the organic constituents

Nations and states, says Dr Mackenzie, live as if they wished to become more and more "national" and at the same time more and more "dominant" The entire drama of history according to his theory consists in the undoings of one or the other tendency and in the temporary over ridings of one over the other, the drama—that is to say, of oppressed nations, as also of crumbling empires, from whose ashes there arise again and for ever other nations and empires The populace, or those who think they govern them, very often maintain, and in good faith, that the object of a given war resides in the affirmation or in the defence of a given right, interest, or principle, nevertheless, whatever their apparent interests or principles may be, the ultimate scope of every war, whether confessed by those responsible for it or not, must ever be the aggrandisement of the nation or state, either directly by some positive addition or indirectly by liberation from some burden or menace The same duplex necessity of sustenance and increase which is incumbent on the smallest protozoon in its drop of water weighs equally on nations and states, peoples with their own struggles, gigantic in comparison with those of the protozoon, have no other object than to increase in space and time, although they themselves know nothing of it

Whether Dr Mackenzie has satisfactorily and convincingly proved his thesis must be left for the reader to judge for himself, but to help his decision we may summarise two judgments passed by the author on two contemporary students of war—

THE LANCET.

LONDON SATURDAY, MAY 29, 1915

The Question of Conscription

THE date of the statutory or religious holidays is very usually one against which we set in order our private affairs, and, whether we wish it or not, it is a date by which our attitude towards public matters is regularised Instinctively we propose that one thing shall be done before the holidays, or that another thing shall be put off until after the holidays, and thus a great arrangement of business in an undefined and informal way goes on throughout the country round about these days of festival The result is to find many people entering upon their work with renewed ardour after the holidays, not so much because they are physically refreshed, but because, in common phrase, they know "where they are" Whitsuntide found not only this country but the whole civilised world engaged in a contest of a sort that did not allow of this or that being put through hurriedly in order to get rid of the trouble by a certain date, still less do the conditions of war permit of any proceeding which is recognised as necessary being relegated to the future, however near, therefore it is in the nature of a coincidence that during the Whitsuntide holidays there should have occurred in the conduct of the war much the same kind of altered demeanour that characterises careful tradesmen who have estimated their commercial position upon the information gathered from a holiday stocktaking And the coincidence has its value it is a fact that the mind of the people has been prepared by the holidays for great alterations Undoubtedly the nation is realising far better than hitherto "where we are" There has been of necessity a reviewing of the immense and terrible situation, and it is quite certain that the temper with which the war is to be carried on will now change in this country in a way that may surprise us all There will be with us a more coherent idea as to the task that is before us and a more distinct apprehension of how the various calls on the national spirit and resources should be met And the outcome of this change may be conscription, a measure of great medical significance in the circumstances

Until quite recently there prevailed in this country a general and vague optimism We remained under the influence of financial quidnuncs who said that the war could not last longer than the summer of 1915 because credits would be exhausted and supplies would not be forthcoming Fortunately for the Allies no particular heed was paid to these prognostications, and preparations for a prolonged struggle were put in hand, though it is open to question whether they were undertaken with quite the necessary vigour—for which falling away from a strenuous ideal the said quidnuncs have to bear at least part of the blame We were told, moreover, that the central European empires, cut off by our fleet from intercourse with the world, and suffering notably in East Prussia from interference with agricultural activities, would cease to produce the food stuffs necessary for the support of the population, especially in view of the large waste which always occurs in time of war No one who read the article published in THE LANCET upon the German reserves of food and their maintenance,[1] could have failed to gather that to speak of grave shortage of food stuffs in Germany was quite premature The possible position in Germany, in the case of British interference in the war, had been envisaged long ago by our enemy, precautions had been taken with the vigour and particularity that characterises all the German public actions, and we now know that the people who expected to find Germany hungry by the summer of 1915 were as wrong as those who expected to find her bankrupt at the same date Gradually these things have been dawning upon the public, and it is very interesting to see how infectious the process of thought is Within a very short space of time the public, which had so relied upon the optimistic prophecies of experts, passed into an unnecessary phase of gloom in which the resources of the Germans and Austrians appeared to be illimitable Many of the journals of the country then began to represent this change of temper, and a deeper feeling of apprehension was produced which in some measure was as illogical as the previous attitude, based although that may have been upon ignorance For while it is clear that the aggressive tactics which have marked our conduct of the recent stages of the war have not produced results commensurate with expectation, it is equally certain that the enemy must be far more disappointed with the position And in one area the tide ran definitely against our cause, a great feeling of nervousness was produced, and the Government took stock of the situation. The result has been, we think, the production of the salutary impression that we must not deceive ourselves and the formation of a new administration representing the united will of a resolute people Where we have been right we shall continue, and where we have been wrong we shall revise Exactly at this moment, a moment which had been closely forecast by many, Italy enters the arena, marking a definite step in the progress of the war at the moment when our national temper required stiffening It has compelled that rearrangement of ideas which is so particularly fitting to the holiday season We see that attempts to make scapegoats for past blunders are not only ill judged, but tragically wasteful of time, we fix our gaze on the future

Medical men are perpetually engaged in clinical struggles where victory goes in the end to the therapeutists who, following now one indication and veterinary medicine has felt for some time that his own knowledge, limited as it necessarily must be by his opportunities, was still ahead of that supplied by the text-books, and that he could gain little progressive information from a perusal of their pages. It was somewhat of a reproach that no really good and recent standard British work of reference existed to guide, influence, and advance the knowledge of the veterinary surgeon. The reproach began to disappear when Mr. Hoare's System was issued. The information thus supplied to the veterinary profession has been derived from numerous sources, is presented in plain language, has been furnished by many of the best minds in the veterinary profession, and supervised by an editor who stands high as a clinician and scientific observer.

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[1] THE LANCET Feb. 20th (p 389) 1915.

The first volume of the "System of Veterinary Medicine," it may be remembered, dealt with the "Microbial Diseases" of the various animals. The second deals with "General Diseases." Here the diseases described are, with few exceptions, those frequently found in this country—those, indeed, occurring almost daily among animal patients. All the contributors, 15 in number, are specialists in their several domains and have had extensive experience in treating the diseases of the horse, cow, sheep, pig, dog, cat, bird, and goat, upon which they write.

The editor writes on the diseases of the digestive system in the horse. His communications to the veterinary periodicals are evidence that he has spent years of study and research in trying to simplify some of the difficulties of diagnosis which here present themselves, and to suggest lines of rational treatment. He has, we think, succeeded in producing an admirable exposition of the subject. The ailments of the alimentary system in the other animals are also comprehensively and adequately dealt with, a special word of praise being due to the authors of the articles in this section on the ox (Mr. H. Begg, F.R.C.V.S.), the dog (Mr. E. Wallis Hoare, F.R.C.V.S.), and the pig (Mr. G. Mayall, M.R.C.V.S.). The division of the digestive ailments in the ox is good, and the treatments advised are uncomplicated and likely to be profitable and effective. The consideration of diseases of the digestive system in the pig fill a gap too frequently noticeable in books on this animal. A good knowledge of feeding, hygiene, and the physiology of digestion in porcines will be profitable alike to the professional adviser, the breeder, and the owner. The various forms of respiratory, urinary, circulatory, nervous, and parasitic disease receive full notice, and the work concludes with a section on poisons, and an appendix on the disease of sheep called "scrapie."

We have here a store of information, indispensable alike to veterinarians and students of comparative pathology. The contributions are from trustworthy sources and the book is well arranged. The publishers also have done their work well.

JOURNALS AND MAGAZINES

The Journal of Comparative Pathology and Therapeutics. Vol. XXVIII. Part I. March, 1915.—In the March number, which is the last number of this valuable journal to reach our hands, there is abundant evidence that good work is being done by the veterinary profession. Captain E. Clive Webb, A.V.C., F.R.C.V.S., gives some results of Transmission Experiments and Arsenical Treatment of Trypanosomiasis of Donkeys and Mules in the Anglo-Egyptian Sudan, from which he concludes that arsenic appears to have a specific trypanocidal action in a large percentage of cases and clears the blood of trypanosomes. He believes that he may claim about 45 per cent. of cures, but justly observes that this claim cannot be made good until the cases have been under observation for a longer period. He maintains that to obtain successful results one must be prepared for casualties due to susceptibility and overdosage.—H. R. Seddon, B.V.Sc., of the Veterinary Research Institute, University of Melbourne, describes some observations on the methods of using the agglutination test in the diagnosis of the disease in bovines caused by the bacillus of contagious abortion. He uses vaginal or uterine exudates or the fluids from the fœtus or fœtal membranes, blood serum, or milk. He gives an account of the technique employed, describes the quantitative factors in the agglutination reaction, and comes to the conclusion that the method is of distinct value in making a diagnosis.—Principal Mettam, M.R.C.V.S., B.Sc., Royal Veterinary College of Ireland, Dublin, describes a case of lympho-sarcoma in the horse with arterio-sclerotic changes in the heart and lungs, a case of arterial sclerosis in a dog, two different malignant growths in the same dog, and an embryoma of the brain of the horse.—H. L. Watson-Wemyss, F.R.C.P. Edin., gives a sound summary of recent work on vitamines, especially in relation to beri-beri, the scurvy groups of diseases, pellagra, rickets, and tetany, and also on vitamines in their relation to growth, and calls special attention to von Noorden's oatmeal treatment of diabetes.—C. M. Wenyon, M.B., B.S., B.Sc. Lond., Director of Research in the Tropics to the Wellcome Bureau of Scientific Research, writes on the organisms found in piroplasmosis of Rhodesian sheep as observed by Bevan.—J. A. Griffiths, M.R.C.V.S., Department of Agriculture, Veterinary Division, Zomba, Nyasaland Protectorate, gives an account of Demodectic Mange of domestic animals in Nyasaland, and maintains that it is not economical to endanger the animals of the community by prolonging the life of infecting subjects, but that where treatment is considered desirable every possible precaution should be taken to prevent the disease spreading either by direct contact or through the medium of contaminated articles likely to come in contact with healthy animals.—A. Leslie Sheather, B.Sc., M.R.C.V.S., Research Laboratory, Royal Veterinary College, London, describes an improved method for the detection of mange acari dependent on the fact that these acari can be subjected to boiling caustic liquids without undergoing any outward alteration.—The general articles conclude with a revised check list of the animal parasites of domesticated animals in India by S. H. Gaiger, M.R.C.V.S., Indian Civil Veterinary Department, a list that from its size should be fairly complete. Several useful abstracts complete a most interesting number.

Dental Record.—The April and May issues of this journal contain a paper by Mr. J. F. Colyer on Dento-Alveolar Abscess and Dental Cyst. The paper is founded on a museum demonstration given at the Royal College of Surgeons last October, and forms an illustrated account of many of the specimens in the Odontological Section of the museum. The author shows that sepsis around the roots of the deciduous molars frequently involves the developing premolars and in some cases leads to necrosis of those teeth. Some instructive specimens of palatal abscess are described, and attention is drawn to the large destruction of bone caused by these abscesses. The morbid anatomy of dental cysts is fully described and illustrations are given of cases in which these swellings have encroached upon the antral cavity. There are over 50 illustrations.—In the May issue Mr. J. H. Mummery gives an account of his recent researches on tubular enamel and comes to the conclusion that calcification commences in the prisms and then proceeds in the interprismatic material and that the tubes run between the prisms and not in the centre of the prisms.—In both issues there are papers by R. Eckermann, of Malmö, on the etiology of caries.

MEASLES AT ST. AUSTELL.—At a recent meeting of the St. Austell rural district council it was decided to put into force the order of the Local Government Board for the notification of the first case of measles in every house. The medical officer of health has reported the continued prevalence of measles in the district.

The valuable reports issued by the medical officer to the Local Government Board during recent years should be in every hand, for all are interested in the matter of disease propagation by flies Special reference may be made to Mr J P JEPSON's report on the breeding of the house fly during the winter (New Series, No 5, also Nos 85 and 102 by Dr S M. COPEMAN), reports by several observers on the distribution of bacteria by artificially infected flies (Nos 40, 53, and 66), and the reports on the range of flight of flies (Nos 53 and 85) Professor A E SHIPLEY states that house flies usually begin to breed in June and July, and continue until October, being most active in August and September, but in warm stables or kitchens they may breed all the year round The whole development of the fly, from egg to imago, may take place in nine or ten days, the second generation may lay eggs ten days later We hope that the interesting Anti fly Exhibition now being held at the Zoological Gardens, Regent's Park, London, a brief account of which appears elsewhere, will be visited by many responsible members of the public, who will thus be able to appreciate the measure of risk which a community runs through the evil doing of flies, and will be prepared to second the efforts of our sanitarians to fight a very numerous and determined foe

Annotations.

"Ne quid nimis

THE IMMATURE SPIRITS (RESTRICTION) BILL AND MEDICINES

As reported in our Parliamentary columns last week, the Chancellor of the Exchequer (Mr Lloyd George) agreed to exempt rectified spirits used for the compounding of medicines from the provisions of this Bill Representations on the subject were made by Mr Glyn Jones M.P, Parliamentary Secretary of the Pharmaceutical Society of Great Britain, Mr W J Uglow Woolcock, Secretary and Registrar of that Society, and Dr Alfred Cox, Medical Secretary of the British Medical Association As Mr Glyn-Jones pointed out in *Parliament*, if medical men, pharmacists, and hospitals were not to be allowed to obtain rectified spirit by a prohibition clause in *the* Bill the position would become serious The Pharmaceutical Society at once realised the situation and urged that it is vital to the preparation of medicines that rectified spirits of wine should be available for use by registered medical men, hospitals, and pharmacists for the making of preparations of the British Pharmacopœia. In the recently published (1914) edition of the Pharmacopœia there are 427 preparations, and of these rectified spirit is a necessary ingredient in 263 Further, as the law stands it is absolutely illegal for anybody to make these preparations with anything but rectified spirits of wine. Subsequently general resolutions were passed but the remissions did not appear because, as Mr Lloyd George explained, it was not necessary to have a resolution for that purpose, all these matters he added, being dealt with after the ' charging resolution had been adopted. Mr Glyn Jones was anxious that this matter should be made quite clear when the general provisions of the Bill were discussed, for as the resolutions stood they included all spirits Mr Lloyd George stated that it was the intention of the Government to exempt from these particular taxes the spirits used in medicine The medical and pharmaceutical authorities, who strongly appealed for the exemption of spirit employed for medicinal purposes from the provisions of the Bill, have done excellent service to medicine by preserving the efficiency of dispensing practice in the directions indicated

EGYPTIAN OBSTETRICS AS ILLUSTRATED BY A GREEK INSCRIPTION

IT is popularly believed that the process of child birth among primitive peoples is a simple and comparatively painless one There are signs that this is so, for some of the West African women at the present time make no ado whatever during parturition, all the circumstances being normal But a difficult labour is a different matter, and if the assistance of a native doctor is called in the fate of the mother may be a terrible one Where the knowledge of anatomy and medicine is very small the sufferings at complicated childbirth have always been terrible, and for many centuries they were just as great in Egypt and Greece, the most civilised countries of their day, as in the backward parts of Asia and Africa at the present time A Greek inscription recently found in Egypt clearly illustrates this sad fact in the history of civilisation. It has been published by Professor G Arvanitakis in the *Bulletin* of the Archæological Society of Alexandria, whose edition of the text may be thus rendered into English. "Who is the dead one? Herois How and where? Having a tumour (ὄγκος) in the stomach And, notwithstanding that we placed a weight (in the form) of Isis, the mother was lost very quickly, and then the child also What was her age? Eighteen So Herois was in the flower of her age Oh, the unfortunate one. May Osiris render her ashes light and grant her sweet water" The story told in this record is one which, it is to be feared, was of frequent occurrence about the commencement of our era. Herois's first accouchement had arrived, and the doctor, or midwife, acting as attendant, finding the delivery delayed, proceeded by mechanical means to accelerate matters He took a weight made in the form of a figure of Isis, a presiding deity on such occasions, and either placed it upon the mother's abdomen or, as is more probable, attached it by a cord to the already projecting part of the infant In this case the mother would have been placed in a sitting posture, resting upon two stools, or standing erect The erroneous practice in the case referred to produced the delivery of the child, doubtless injured, for it died shortly after the mother The word translated tumour is ὄγκος, which Galen uses solely with that meaning

PANCREATIC INFANTILISM

"THE characters of pancreatic infantilism are arrested bodily and arrested sexual development, intelligence good, no mental defect, no deformity or structural defects *of* the bones, no visceral disease or derangement except chronic diarrhœa, flatulent distension of the abdomen, and defective or arrested pancreatic secretion. The defective or arrested pancreatic secretion is probably due to chronic pancreatitis In some cases the condition (chronic diarrhœa and infantilism) is completely now another, may commit faults in technique. What, then, are most to be dreaded are futile recriminations; what, then, are most to be desired are a calm review of the position and reinforcement from expert advice. A section of the public are apparently willing to abuse those who have the charge of the conduct of the war on evidence of whose value they can know but little. We hope and believe that this unworthy tendency will die down, and that the example of Italy, which has thrown in its lot with the Allies in perfect knowledge that failure connotes national ruin, will strengthen, if this be needed, our determination to do all to bring this war to a speedy conclusion. How can we best show our Allies, who are aware at what cost and with what devotion we have already supported the common cause, that our future undertakings will be still larger, and will reflect more surely our dour decision to win? We have a new spirit upon us, and while on the one hand it should lead to an increased production of munitions, it is not so certain that it will increase our voluntary levies of men. The populace is waiting, we believe, to be released from the responsibility of initiative. Our military authorities think that it is absolutely necessary that we should have in training further large numbers of men to take the place of the heavy depletions which we cannot but expect. The remedy is surely some form of conscription, and with this procedure a medical journal would have no difficulty in finding itself in accord. We believe that some form of conscription would be for the good of this country at the present moment, and would serve both its mental and its physical health. No one knows better than the general practitioner how unequally the call for men to the colours has been responded to in different localities and among different classes. His peculiar knowledge of the population enables him to say for certain of any locality that some in it have gone to the war, quite enthusiastically, who should have formed the material for later drafts; and that others are still outside the army, when the army needs them, when they would make good stuff within its organisation, and when all that is required to secure their adhesion is to provide the method of making up their minds for them. Conscription would find strong support in the medical profession if it is advanced as a desirable measure in the existing circumstances.

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Flies and the Spread of Disease.

THE subject of spread of disease through the agency of flies has of late years met with a good deal of attention, and at the present time deserves careful consideration on account of the existence of a very large number of encampments in all parts of the country. Under the conditions of camp life in hot weather the influence of fly prevalence on the health of the occupants may be most important. If it is particularly with regard to the spread of typhus fever, enteric fever, and cholera that flies have been found to play an important part, it must not be forgotten that many other infections are disseminated by them, and that we do not really know the scope of their influence for ill. To the inhabitants not only of our own country but of the greater part of Europe the conveyance of disease by flies is for this coming summer a matter of very great moment. Every large European nation is more or less under arms, and the aggregation of huge bodies of troops in more or less temporary quarters inevitably brings about a state of things which encourages an increase of flies. The medical authorities in charge of encampments are well aware of the danger, and are not likely, in this country, to be careless in their measures against fly multiplication.

So far good. But for the ordinary town dweller special supervision and instruction as to his duty to his neighbour, as well as to his own household, may probably be advisable. The medical officer of health of Bermondsey carried on a systematic campaign against flies last year. A register was kept of all places where manure heaps or rubbish accumulations existed; about 20,000 handbills were distributed to householders, and posters were exhibited throughout the borough, explaining to the public what the danger was and what should be done to prevent it. Such a campaign might, we think, be instituted with advantage throughout the kingdom; in every camp where men are aggregated together in large numbers, with sanitary arrangements more or less temporary in character, steps should be taken to obviate the danger. The two main points to be kept in view are (1) the removal of all rubbish, decomposing organic matter of any kind, and especially of excreta, from the immediate neighbourhood of the house or camp; and (2) the extermination, as far as may be possible, of flies of all kinds. With regard to the first consideration, in towns and places having a sewerage system there is no difficulty as regards immediate and complete removal of excreta and liquid refuse. Solid organic house refuse, which cannot be thrown into the drain, must be kept in covered receptacles and removed at frequent intervals. This is done by the local authority. Nevertheless, accumulations of manure and refuse heaps do exist, often uncovered, and are allowed to lie for days, forming breeding grounds for flies. Flies will not be attracted to a place, either indoors or out of doors, unless they find something to feed on. Of course, all articles of food likely to attract flies should be kept covered up, or within a properly protected and ventilated safe. The second point, the extermination of flies, presents several difficulties; but the principle to go upon is that of *obsta principiis*. The killing of adult flies, even in thousands, will not be sufficient; one must search for and destroy the eggs. If the campaign is taken in hand early enough in the season, flies that have survived from last year will also be dealt with.

with carbohydrates is to be deprecated because it makes a slimy film over the teeth, preventing efficient chewing. These are only some of the suggestions which a study of the mechanical value of certain foodstuffs offers. It would be of interest to follow up the possibilities of the effect of diet upon the gums. It is possible that a reversion to simpler fare or simpler cooking in certain directions may be found to result in general improvement in health, due not only to its effect upon the lower alimentary tract, but also to its improvement of the condition of the gums.

THE SPECIFIC GRAVITY OF THE HUMAN BODY

THE specific gravity of the fluids and tissues of the body is one of the commonplaces of physiological data. The specific gravity of the body as a whole, important though it is in connexion with the power of the human body to float in water, is one which has received less attention, at any rate, in recent years. An interesting paper by Dr. C. D. Spivak, of Denver, dealing with this subject was published in a recent issue of the *Archives of Internal Medicine*. The earliest record of observations on the specific gravity of the human body which Dr. Spivak has been able to discover is that by John Robertson, librarian of the Royal Society, published in the Philosophical Transactions of 1814. Mr. Robertson undertook his experiments from the desire to know what quantity of timber would suffice to keep a man afloat in water, on the supposition that most men were heavier than river water. But his experiments showed that all the men he examined, except the first one, were lighter than an equal bulk of fresh water. Dr. Spivak has employed an ingeniously constructed tank with a gauge graduated in centimetres and millimetres to read off the level of the water within it. The individual to be examined enters the tank, and the level of the water is read before and after the immersion. The gauge was carefully calibrated in regard to the level of the water within it; the weight of water displaced by the individual could thus be determined easily. Dr. Spivak has also employed his method to determine the weight of the different parts of the body, reading off the level when the individual is immersed to the knees, to the arch of the pubic bone, and so on. In the case of a gain in weight he is therefore able to determine to what part of the body the gain has accrued. Dr. Spivak has taken the volumetric measurements of 14 individuals—namely, 4 adults, 3 males and 1 female, and 10 boys. The ages ranged from 53 years to 8 years, the weights from 79 to 26 kilogrammes, and the heights from 1·71 to 1·35 metres. All the measurements were taken at 7 P.M. before the evening meal. The specific gravity of the entire body varied between 0·976 and 1·049. The average specific gravity of the adults was 1·003 and of the boys 1·006, the average of all the individuals examined being 1·005. The other observations on record are according to Dr. Spivak either too low, such as those of Robertson, 0·8706; Suelzer, 0·970; Herman, 0·920; or too high, such as those of Krause, 1·055; Ziegelroth, 1·055; Miess, 1·012; Meeh, 1·012. Dr. Spivak maintains that his tank being of smaller diameter than any of the vessels hitherto used, is designed to get more accurate results than those of his predecessors. The difficulty introduced by the amount of air in the lungs is discussed by Dr. Spivak, together with the means of overcoming it.

THE NATIONAL INSURANCE ACT: THE REDUCTION OF CAPITATION FEES.

THE proposed reduction of quarterly advanced payments to practitioners on the panel formed a prominent subject of discussion at a conference at Chesterfield recently, a strong point being made as to the lack of evidence to justify the scale of reduction proposed. It was urged that this amounted to over 40 per cent., whereas the estimates of the Approved Societies with regard to enlistment pointed to an average of 12 per cent. withdrawn from insurance through military service. A resolution was moved and carried, "That this meeting of the Medical Alliance is of opinion that any deduction from the current accounts of doctors, chemists, or institutions exceeding 15 per cent. is more than is warranted by the circumstances, and trusts that where it may be necessary the Commissioners will give instructions for deductions not to exceed 15 per cent." At a meeting of panel practitioners convened by the Brighton members of the Panel Medico-Political Union the same subject was discussed, special stress being laid upon the responsibility of insurance committees for the present position of doubt and difficulty owing to their failure to institute and maintain correct lists. This is the point raised by Mr. C. W. Hogarth at the meeting of the London Panel Committee and commented upon in THE LANCET of May 8th, p. 982. Speaking at Brighton Dr. H. J. Cardale said it was impossible that the whole of the proposed reduction could be due to men joining the army, adding that the registers kept at the Insurance Committees' offices were probably to blame. In comment we would suggest that the framers of the Insurance Acts failed in their estimate of the enormous amount of clerical work and official verification which would be necessary if accurate working of the panel system was to be obtained. Hence the present unsatisfactory situation arising out of the same cause which brought into existence "unallotted funds."

THE EFFECTS OF ANTIMONY.

ANTIMONY is used as an alloy in a large number of articles, such as type, axles for machines, and cases of projectiles, and forms a constituent of certain glazes. From time to time an outcry makes itself heard as to the perils run by the workers in such trades on a par with that against lead poisoning. Professor E. Bertarelli, of Parma University, has lately investigated the hygienic conditions of workers in antimony in the Italian mines (*Il Morgagni*, March 22nd) and was unable to trace any special morbid condition, nor any particular or general form of poisoning amongst them. Although the suspicion might arise that workers in the antimony mines would be specially subject to anæmia, yet investigation showed that it was impossible to assert that the metal had acted in producing it. Neither among the workers in the sulphide were any cases of anæmia found which would suggest that antimony had any specific action in this respect. The trade which *a priori* would be considered most fraught with danger is the manufacture of antimonial glazes, which involves fine pulverisation of the metal or of its oxide or sulphide, as there is great probability of absorption by the skin or buccal mucous membrane. The author, however, found nothing among the workers in such a factory at Leghorn which would lead him cured by the administration of pancreatic extract and by that treatment alone" In these words Dr Byrom Bramwell defines the condition to which he draws attention in the *Edinburgh Medical Journal* for May It appears to be extremely rare, although cases of arrested development associated with, and apparently due to, chronic diarrhœa are not so uncommon, but in these cases there is usually no evidence of defective pancreatic secretion. Dr Bramwell records details of his case, which has been under observation off and on for 14 years, and has done excellently on pancreatic extract He notes from the literature also four other cases, in all of which pancreatic extract gave most satisfactory results It appears that there is also a type of disease, termed intestinal infantilism (Herter), which may simulate this pancreatic type, but in these cases there may be associated conditions such as anæmia and splenic enlargement, whilst in one case referred to there were gastric dilatation and severe gastric tetany The indication of the true pancreatic infantilism appears to be found not only from careful tests, of which Sahli's appears to be particularly favoured by Dr Bramwell, but apparently also by observing the effect of pancreatic treatment

ATMOSPHERIC POLLUTION INVESTIGATIONS IN MANCHESTER

WE have received a copy of the first annual report of the Air Pollution Advisory Board of the Manchester City Council, from which it appears that the question is going to receive promptly a very thoroughgoing investigation in that city In fact, the work of this board represents a very spirited attempt to deal with the problems of smoke abatement on new lines In the monthly reports published in THE LANCET of investigations on the nature and amount of soot fall those made by the authorities at Manchester have already been recorded, but their inquiries are about to be extended Thus, in addition to soot-fall observations, actinometric and photometric methods have been tried, and also an air filter Systematic observations have been made by the use of (1) an iodine actinometer, (2) a photographic recording actinometer, and (3) a photometer for measuring daylight Reference is made in the report to the soot gauge returns published in THE LANCET "They prove," the report states, "that for the month of October the total air pollution is less at Manchester than at Oldham, Birmingham, London, Sheffield, and Bolton, Oldham being much the dirtiest place All of them contrast most unfavourably with Malvern, Oldham having about 28 times as much soot and tar as Malvern." The comparison in regard to Manchester and London is based on the results obtained at the Embankment station of the latter city, which has nearly always shown a much worse state of affairs than the other seven London stations This evil condition is probably due to smoke from the river and railways The comparison is hardly a fair one to use, therefore, in a broad generalisation We are glad to see the progress that is being made towards carrying out systematic and scientific investigation of the atmospheric pollution created by smoke, and it is to be hoped that Manchester's fine example will be followed by other cities and towns We are particularly gratified at the success of the movement since we took a large and active share in initiating it, and have from the beginning published the returns made in the monthly records

THE CAUSATION OF GINGIVITIS

GINGIVITIS, or inflammation of the gums, is most familiar in its chronic form, pyorrhœa alveolaris Since attention was first directed to it the number of general medical and even surgical conditions which are held to claim oral sepsis as a leading etiological factor is very large, it appears to share with the large intestine the unenviable reputation of being a sort of slow poisoner through the machinations of the organisms it harbours But whilst conditions in the colon can with difficulty be accurately investigated, the mouth affords readier access for this purpose, and sufficient facts have been adduced, we think, to make the physician very willing to seek the aid of the odontologist when faced with certain chronic conditions of probable infective origin We know that the orthopædic surgeon has already appreciated the significance of oral sepsis in its relation to some arthritic states It is probable, however, that, in turn, the physician may help the dentist, and this more especially in coming to a decision as to what is, after all, the essential problem—namely, the cause of the pyorrhœa He may do so in two ways First, gingivitis is a recognised sequela or symptom in certain general diseases Some cases of secondary anæmia, for instance, lead to pyorrhœa by inducing an anæmic and flabby condition of the gums, and predisposing in this way to the entrance of organisms In many cases of leukæmia gingivitis occurs, in measles similarly Lead poisoning in its less marked forms may give a key to the true cause of an inflammatory or unhealthy condition of the gums, even in absence of the characteristic blue line Scurvy, too, a primary blood condition, leads to changes in the gums Secondly, it seems possible that gingivitis may follow dietetic errors A recognition of such possible causes of lowered vitality, either general or local, is of much value Generalised periodontal disease begins in a marginal gingivitis, and many dental pathologists consider that the latter condition is due to the formation of stagnant areas around the teeth Dr R Ackerley, in an interesting communication,[1] considers that the main factors in producing the gingivitis are (1) a chronic hyperæmia due to the habit of taking food and drink hotter than the body, (2) a chronic congestion of the mouth, throat, and nose due to hyperæmia of the stomach from overfeeding and too frequent feeding, and (3) the effect on the mucous membrane of the oro pharynx of moist, warm, unwholesome, microbe laden air He states that he has seen several patients with considerable chronic gingivitis who were not mouth breathers and who kept their teeth scrupulously clean, but who, on the other hand, were addicted to taking hot drinks With the abandonment of the hot drinks he has found a marked improvement in the condition of the mouth These observations emphasise the importance of the influences which certain foods, and the manner of eating them, exert upon the gums Dryness of the mouth, induced by mouth breathing, leads to lowered vitality, as does also the sustained, chronic congestion of the gums caused by frequent drinking of too hot fluids, either in infancy or even in adults In the former, such congestion may itself lead to mouth breathing Of benefit are foods which demand considerable "gum exercise" or the act of sucking Fat mixed

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[1] Proceedings of the Royal Society of Medicine Odontological Section vol. viii No 2.

THE USE OF ATROPINE IN THE TREATMENT OF THOSE SUFFERING FROM THE EFFECTS OF IRRITANT AND OTHER GASES

By Douglas V. Cow, M.D. Cantab.,
BEIT MEMORIAL RESEARCH FELLOW

(*From the Pharmacological Laboratory, Cambridge.*)

My object in carrying out the series of experiments which form the basis of this communication is not so much to bring to light any new fact (the action of atropine on the bronchioles has been made clear by the experiments of Dixon and Ransom[1]), as to demonstrate in a clear manner the ways in which this drug may relieve the sufferings of those who have been exposed to the action of German gases.

From such information as I have been able to obtain it does not appear that atropine is being used to any extent in the treatment of these cases. I have therefore performed these experiments as rapidly as possible, and whilst taking account of the more obvious and gross changes produced, I have paid no attention to secondary conditions, such as the tension of various gases in the blood, the estimation of which would have taken more time.

From the symptoms produced by these gases it appears that some at any rate are irritant, the result being a condition in which the sufferer has a great difficulty in breathing and in efficiently oxygenating his blood.

Twelve rabbits were arranged in pairs according to their body weight, and were exposed to either chlorine or bromine vapour for periods of 15 minutes. Each pair was exposed to the vapour by enclosing the two rabbits together in a box (20 in. by 15 in. by 15 in.) with a zinc lining and a glass lid. The amount of chlorine given was that produced by adding 20 drops of hydrochloric acid to an excess of bleaching powder; the amount of bromine was such that the lower three inches of the box showed a thick yellow layer, whilst the rest of the space in the box appeared fairly clear.

As soon as the 15 minutes' exposure to the gas was complete the animals were removed to the laboratory (the box in which the gas was given was placed in the open air) and kept in boxes at laboratory temperature throughout the remainder of the experiments.

One animal of each pair was treated with atropine, the other being kept as a control. The dose of atropine given varied between 2.5 and 4 milligrammes, given in three, four, or five separate injections (the first injection in each case was intravenous, the others subcutaneous). In some cases the atropine treatment was started directly the animals were removed from the gas, in other cases the treatment was not commenced until 30, 60, or 120 minutes after removal from the gas.

Two pairs of the animals were also placed in a box through which a stream of oxygen was passed.

The results of the atropine treatment were very marked and agreed qualitatively throughout the series, though the effects were, of course, more obvious in some animals than in others. When removed from the gas the animals were in every case breathing with difficulty—head thrown back, nostrils working convulsively, and nose and mouth wet with inflammatory fluid. The rate of respiration at this stage varied between 92 in the worst case (chlorine) and 20 in the least urgent case (bromine), though in all cases respiration was laboured. The bromine animals were also very drowsy.

The condition became progressively worse; in about 30 minutes after removal from the gas stridor, crepitations, and rhonchi were evident; diminished resonance over the lungs was noted in one pair only (chlorine).

Atropine treatment affected the animals in the following ways:—the animals became more alert, respiration became much easier, less laboured, and more effective, the chest obviously filling and emptying more completely with each respiration than in the controls; the physical signs in the chest disappeared in every case except two, and in these two animals stridor and crepitations disappeared, a few rhonchi only remaining.

A particularly noticeable feature was the fact that of the two pairs which had oxygen treatment the two controls (which received no atropine) did not appear to be in any better case than other controls which received no extra oxygen; indeed, as it happened they were about the worst cases of the whole series.

The improvement in the animals which received oxygen as well as atropine was particularly obvious. After about an hour from the commencement of the treatment they appeared to be practically normal, though in most cases atropine alone seemed quite sufficient to relieve the acute symptoms.

The rate of respiration was not very greatly affected except in one case in which it was very much accelerated (92) before treatment commenced. This animal's breathing gradually came down to 60 half an hour after the first dose of atropine, and thereafter to 54, 52, and 50. The control animal of this pair, whose respiration was 66 on removal from the gas, continued to breathe at an average rate of 55 throughout. The only other case in which the rate of respiration was greatly changed was that of the other atropine and oxygen animal, in which the respiration came down from 22 to 14 per minute, the control in this case (oxygen only) falling only from 26 to 24.

All these animals were killed about five hours after the commencement of the treatment; the post-mortem condition of the lungs of the atropine animals as compared with the controls was most instructive. All the lungs from the atropine animals were normally collapsed (partially collapsed in the worst case), whilst in the case of the controls the lungs remained distended and retained the shape of the thorax like plaster casts after the chest was opened. A certain amount of frothy fluid exuded from the cut bronchi, the amount varying considerably, but always more in the controls than in the atropine animals.

Again the weight of the lungs showed marked differences as between the atropine animals and the controls; the average weight of the lungs from the atropine animals was 6.7 grammes, as against 7.9 grammes in the case of the controls, though the average body weights of the two classes were 1048 and 1036 respectively.

All the lungs floated in water; in three cases they were practically submerged; all these three were from animals which had received no atropine.

It is known from the work of Dixon and Ransom (*supra*) that so long as an animal is under the influence of atropine the bronchioles remain in a to suppose that any poisoning took place Nor were those forms of anæmia which certain observers have affirmed to be a common result of the absorption of antimony in industrial preparations met with in these workers, even though the most elementary precautions were neglected and the ingestion of small particles of antimonial substances must have been frequent The conclusion seems to be that if antimony has any effect in causing anæmia or other morbid phenomena among workers it must be extremely slight

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[1] Dixon and Ransom: Journal of Physiology, 1912, xlv, 5 413.

INCOME-TAX RATES FOR THE YEAR 1915-16

FOLLOWING on the articles in THE LANCET of April 24th and May 1st on "The Medical Man's Income tax," and of May 15th on "Service Medical Officers and Income tax," it may be useful to have the several rates of tax in concise form, which we extract from an explanatory article in the *Daily Telegraph* of May 25th —

	In the £
Normal Rate	2*s* 6*d*
Modified Rates	
(*a*) Reduced Rates on Small Incomes	
Incomes exceeding £300 but not exceeding £500	2*s* 4*d*
Incomes not exceeding £300	2*s* 0*d*
(*b*) Relief for Earned Income	
Any individual who claims and proves that his total income from all sources does not exceed £2500, and that any part of that income is Earned income, to be entitled to be charged on his Earned income at the following rates, viz	
Total income not exceeding £1000	1*s* 6*d*
Total income exceeding £1000, but not exceeding £1500	1*s* 9*d*
Total income exceeding £1500, but not exceeding £2000	2*s* 0*d*
Total income exceeding £2000, but not exceeding £2500	2*s* 4*d*

It should be noted that the relief in respect of earned income is required to be claimed at the time a return is made, and in any case before Sept 30th, 1915 It is supplemental to any relief under paragraph (*a*) above

PULMONARY TUBERCULOSIS IN THE TROPICS

IN the tropics it is the infectious disorders that cause the high death rate among human beings, coloured or white Van Loghem[1] draws attention to the increasing importance of pulmonary tuberculosis as a cause of death in tropical countries, and particularly in the Dutch Indies The annual death rate from phthisis in Amsterdam for the years 1900 to 1904 was 152 per 100,000 living, in London 163 The figures in subtropical and tropical towns are often much larger, as, indeed, is the general death rate, and Van Loghem quotes the following figures Havana, 348, Batavia, 409, Rio de Janeiro, 463, Manila, 486, Santiago, 492, Bombay, 635, Tunis, 691, and Singapore, 692, adding that they probably err by being too low rather than too high The death rate from phthisis among the whites alone is higher in the Dutch Indies than in Holland, for the years 1908 to 1911 it stood at about 125 per 100,000 living in Holland, whereas in Batavia it was 177, at Semarang 200, and at Surabaya 232 The cattle here are free from bovine tuberculosis, so that there can be no question of the infection of human beings with tubercle bacilli of the bovine variety Stress is laid upon the fact that these figures only apply to the large centres of population, the coast towns, where the admixture of natives with civilised and tuberculous whites is most thorough Inland the mortality due to phthisis, and indeed the incidence of any form of tuberculous infection, fall away to almost nothing The cutaneous tuberculin reaction of von Pirquet, obtained in 92 per cent of the students at Leyden by Nolen (1911), was obtained in only 3½ per cent of the inland Javanese inhabitants of Sumatra (Heinemann, 1914) to quote a single instance Thus, tuberculous infection during childhood is a rarity among natives uncontaminated by contact with a higher civilisation The result, as Van Loghem points out, is that among such people tuberculosis is an acute infectious disorder very fatal to adults, for they have not been protected, as Europeans have, by a mild attack of tuberculosis during their youth Heinemann describes tuberculosis as an acute or subacute disease, rarely chronic, among the uncontaminated Javanese, with a great tendency to the production of generalised tuberculosis such as it seen mainly in infants and young children in Europe So Van Loghem calls out for some method of vaccinating natives against tuberculosis, and for the enforcing of all sanitary and hygienic regulations that tend to prevent the dissemination of tubercle bacilli, as two urgent needs in tropical countries where the native inhabitants are naturally free from tuberculosis

EMETINE IN THE TREATMENT OF CHOLERA

SIR Leonard Rogers reports the results of treatment of cholera by this drug in the *Indian Medical Gazette* (1915, vol 1, p 4) No benefit can be derived from its use, he concludes It was thought from the good results which follow its administration in amœbic dysentery, occasionally in sprue like diarrhœa, and also in hæmoptysis and hæmorrhage from the gastro intestinal tract, that it might be beneficial when there is, as in cholera, extensive loss of fluid through the mucous membrane of the small intestine During an epidemic of cholera a series of 32 cases was treated with half a grain of emetine night and morning, in addition to intravenous injections of hypertonic solution of saline and potassium permanganate by the mouth. These cases were not selected, they were also compared with 32 similar cases which were taken alternately with the test cases but not treated with the emetine. The observations extended over two months No benefit could be recorded The whole mortality of the 64 cases was 12 5 per cent A comparison of the two groups of cases showed the following features —

	Emetine	No emetine
No pulse on admission	10	15
Blood specific gravity above 1065	8	3
Two or more intravenous salines	10	10
Age over 50	1	1
Deaths	4	4

THE Cavendish lecture of the West London Medico Chirurgical Society will be delivered on Friday, June 25th, by Professor Arthur Keith, F R S, at the West London Hospital

A SESSIONAL meeting of the Royal Sanitary Institute will be held in the Guildhall, Bristol, on Friday, June 11th, when a discussion will take place at 11 A M on "The Coördination of Military and Civil Sanitary Services in War Time," opened by Lieutenant Colonel D S Davies R A M C (T), medical officer of health of the city, and Mr L S McKenzie A M I C E, the city engineer of Bristol districts and least so in the metropolis They were also most numerous in Wales and least numerous in the south of England This is true of each of the three years 1911-13

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[1] Nederlandsch Tijdschrift voor Geneeskunde Amsterdam 1915 i 1300

Mortality in Relation to Sex, Age, and Locality

The deaths registered in 1913 were in the proportion of 13 7 per 1000 living at all ages and of both sexes, a rate which is 1 2 per 1000 below the average for the preceding decennium With the exception of that of the two previous years, the mortality in 1913 was the lowest on record. The standardised mortality of males exceeded that of females by 23 per cent. Since 1841-5 the mortality of females has fallen by 39 4 per cent., while that of males has fallen by only 31 5 per cent The mortality of males is in excess at all ages except in the years of childhood, when mortality is at its minimum The excess is very unevenly distributed, being large in infancy negative in childhood, then gradually increasing to a maximum in later middle life, and subsequently declining again with advancing age Up to the age of 35 for males and of 45 for females the mortality of 1913 was at each period, only about half that recorded 50 years ago, but after these ages respectively the fall has been comparatively slight For each of the four geographical divisions the rates of mortality are given in an instructive table Presuming that the constitution of the population was less favourable to a low mortality in 1913 than in 1901, it is shown that although the effect of standardisation upon London and the smaller urban districts is only slight, the mortality of the county boroughs is increased by that process by 3 per cent, whilst that of the rural districts is diminished by 14 per cent, the contrast between them being thus greatly increased As in the two preceding years the relative as well as the actual excess of mortality was least in the rural districts, whilst it increased with urbanisation to a maximum in London Recent evidence therefore confirms the general impression that urban conditions tell more heavily on males than on females The standardised death-rate of the north exceeds that of other parts of England. That of the principality is intermediate between the north and south, but in early adult life the customary tendency to excess of Welsh mortality over even that of the north of England still asserts itself This tendency is more marked amongst females in the rural areas The lowest mortality mostly prevails in the midlands and in the south.

Mortality of Infancy and Early Childhood

Of the total deaths in 1913 those occurring in the first year of life amounted to 18 9 per cent., and were equal to 108 per 1000 births a rate below the decennial average by 11 per cent In different localities the rates varied from 131 in the northern county boroughs to 69 in the southern rural districts The evil effects of residence in town as compared with the country are shown by the fact that the rate for the rural districts is exceeded by 41 per cent. by that of the county boroughs but only by 20 per cent in the case of London The comparatively small excess in the metropolis indicates how largely the adverse influences of urban surroundings may be avoided. It is a noteworthy fact that the mortality of the County of London—the centre of the largest urban community known—was lower than that of England and Wales in the aggregate. Very remarkable is the geographical distribution of infant mortality, it was highest in the north of England and lowest in the south Even the rural districts of the north are more destructive to infant life than is London the excess being much greater in the male sex. It is interesting to extend comparison of infant mortality up to school age—i.e to the end of the period of exclusively home influence. The range in the second year of life is greater than in the first It varies from 14 5 in the southern rural districts to 50 8 in the northern county boroughs The chances of survival in the second year of life in the latter are only slightly greater than those of the first year in the former The causes of mortality in early life will be referred to later in dealing with the total loss of life from particular diseases The mortality of illegitimate infants is about double that of the legitimate the excess being greater among females The mortality of illegitimate exceeds that of legitimate infants especially in the case of fatal syphilis, the loss of life from which infection is eight times as great among these unfortunates as it is among legitimate infants

(*To be concluded.*)

THE ANTI-FLY EXHIBITION

A VERY useful and practical exhibition, the Anti-fly Exhibition, was opened on May 13th at the Gardens of the Zoological Society in Regent's Park. This title is pregnant with the meaning of the exhibition by which it is intended to indicate that flies—the common house-fly among them—are not a mere nuisance but dangerous enemies to the race. Musca domestica, in the cause of ideal hygiene, must be fought with the same implacable determination employed in dealing with the malaria spreading mosquito

The Transmission of Infection by Flies

The danger with which the public is not yet sufficiently familiar is rendered manifest immediately on entering the exhibition A drawing of the common house-fly is suspended to the wall, well in view, which is so large in scale that the hairy covering of the feet and legs is seen, so that it can be readily realised that moist filth from any dustbin, gully, or midden can be taken up by a moving insect. Later when partially dried, this filth may drop off perhaps on any foodstuff over which the fly walks, and the insect may have come in contact with the dejecta of a typhoid patient The fly, moreover, is a very greedy beast, and will vomit undigested food so as to replenish its stomach with other food it prefers The picture shows how by regurgitation specific germs previously consumed are brought up and ejected on the supplies in unprotected larders, while the insect, emulating the noble Romans of the days of Petronius, quietly proceeds to consume the better fare it has discovered. In this process a large bubble is formed outside the fly's mouth which we see in the drawing Beneath the revolting and engrossing picture of the fly there is a series of beautiful models of the germs found by Dr Birmingham in these bubbles coming from flies These models, magnified to 1500 diameters, show that flies carry the germs of typhoid fever, tuberculosis, cholera, anthrax, and plague Flies are also believed on good grounds, to spread ophthalmia, dysentery, and infantile diarrhœa. After feeding on liquid or moist matter contained in excrement, wounds, sputum, decaying meat, fish, or other organic substances, they penetrate our larders and alight on our food. The extent to which disease is spread in this way cannot as yet be estimated, but we need not wait for blood-curdling statistics before deciding that the fly is a dangerous enemy to society

Preventive and Other Anti-fly Measures

Both the germs and the processes by which they are spread, so magnified that we can easily see and understand, are now exhibited. No one can plead ignorance after this object-lesson, and we are immediately led to inquire how so evident a danger is to be avoided. Naturally, the first step is to prevent flies from coming into existence Where this can be done we have the most certain remedy Therefore we are shown at the exhibition what are the favourite breeding-places for flies They breed freely in every form of offal. Preserved in spirits, there are shown at the exhibition all sorts of offal and refuse—fishes' heads putrid shell fish, and kitchen débris—in which flies have laid their eggs The first lesson therefore, is that no moist offal should be allowed to remain near human settlements, it should be burnt, or buried, or transported where it can do less harm if more radical methods fail

At the Zoological Gardens there are devices for dealing with stable and farmyard manure which provide the most extensive breeding-ground for flies This has been demonstrated by a simple experiment After flies have laid their eggs on a small heap of stable manure if it is boxed over with wire gauze so that none of the flies can escape but must remain to multiply at their birthplace, the rapidity of their increase is demonstrated. And when we realise how quickly a plague of flies can be brought about, we only want to learn the methods of remedy to apply them with a will. A manure heap can be converted into a fly trap with very little trouble By placing round it at a distance of 12 inches a ring of dry straw the straw will quickly contain the maggots as they wish to pupate, and the straw is burnt every four days so as not to give the chrysalides time to transform themselves into flies It is not always feasible to dig manure into the ground, it should always be kept dry, or be treated with an insecticide which may be superficially applied, and which will keep flies away, condition of maximal dilatation The means whereby this drug relieves the symptoms, as described above, are sufficiently obvious to need no discussion It remains, therefore, only to point out that without atropine oxygen inhalation produces little or no amelioration of the symptoms, that atropine treatment should be commenced as soon as possible, and that atropine in such doses as I have used should not be given to men, bearing in mind the fact that herbivorous animals have a peculiar tolerance to atropine

Atropine has the advantage over hyoscine and hyoscyamine in that the stimulant action on the central nervous system is more pronounced and the subsequent depressant action less in evidence than in the case of these other drugs

ANNUAL REPORT FOR 1913 OF THE REGISTRAR-GENERAL

IN a leading article in THE LANCET of May 8th we commented generally on the appearance of this report, which is the third of a new series inaugurated in the year of the recent Census A change of form and of detail in these reports was required in order to give effect to the previously determined substitution of administrative for registration districts throughout England and Wales, the object being to coördinate conflicting areas for statistical as well as for sanitary purposes The reasons assigned in favour of these and other subsidiary changes are set forth in the official reports for 1909 and 1910 Careful reading of the first volume of this series, which related to 1911, indicated the sufficiency of the precautions adopted for the preservation of continuity with the records of the past Similar precautions have evidently been observed in preparing the present report That the national records at Somerset House—essential as they are to due progress in public health—will in future be protected from ill advised curtailment may reasonably be inferred from the exemplary attitude of the central authority to which reference has already been made[1]

The present report, like its several predecessors, is the joint production of the Registrar General and his statistical superintendent The purely medical portion is contributed by Dr T H C Stevenson, who has again shown commendable care and skill in the conduct of the work

We proceed to notice briefly those portions of the report that appear specially important from the view point of preventive medicine

Estimates of Population

Inasmuch as the rate of natural increase of the English population has fallen since 1911, whilst there has been an increased loss of passenger movement, there is reason to believe that the rate of increase experienced in the last intercensal period has not been maintained subsequently In no year previous to 1911 had a rate of natural increase been recorded so low as that of the last three years The fall in the death rate, which for a number of years had sufficed to compensate for the defect in the birth rate, has now ceased to do so, and it seems likely that a period of definitely lower natural increase than in the recent past has now set in To some extent this is due to the age constitution of the population Since 1901 however, owing mainly to increased proportion of old persons among the living, resulting from fall in the birth rate the age constitution has become less favourable, and as this change progresses it will increasingly tend to raise the death rate, and thus to diminish the natural increase. In view of the foregoing considerations it has been decided to frame the population estimates for future years on the natural increase of the living and the net effect of migration—the assumption upon which previous estimates were based having proved faulty On the assumption of a continued increase, by geometrical progression, at the rate experienced in 1901–10 the population at the middle of 1913 is estimated at 36,919,339, but this number would have been reduced by 310,000 had the estimate been based on the natural increase and the migration returns

Changes in Natality and Fertility

Stated in terms of estimated population at all ages and of both sexes, the births registered in 1913 were equal to a rate of 23 9 per 1000, which is in defect of the average rate for the previous decennium by not less than 2 4 With the exception of the rate for the immediately preceding year it was the lowest on record Moreover, the provisional figures for 1914 indicate a still further fall of 0 3 per 1000 The birth rate necessarily varies with the proportion of females living at conceptive ages, and with the proportion of these who are married The changes in these proportions at the several censuses since 1871 are discussed in the text, and certain of these are specified as influencing the birth rate, either by increase or by decrease Among these changes may be noticed (*a*) the increased proportion of women of conceptive ages in the total population, which is a direct consequence of the fall in the birth rate already recorded, (*b*) the varying proportion of women of fertile ages who are married, and (*c*) the increasing average age of married women under 45 years old. This appears to have been continuous during recent year, and must have contributed to the fall in the birth rate, inasmuch as fertility is known to decrease with advancing age. As, however, our registers contain no particulars of the age of parents, nothing is known of the fertility of English women at the several ages It is therefore at present impossible to determine the effect upon the birth rate of increase in the age of potential mothers The effect of decreases in the fertility of married women, due in some measure to their greater average age, but largely no doubt to deliberate restriction of child bearing, is masked to some extent by the net result of other changes in the constitution of the population, so that the fall in the birth rate cannot be fully accounted for

Birth-rates in Different Localities

In view of the impracticability of dealing separately with the statistics of the numerous administrative districts in the country, the Registrar General in his recent reports has grouped the facts of birth (as well as of mortality) in "four geographical divisions," corresponding respectively to the north, the south, and the midland areas of England and the principality of Wales. The contents and limits of these areas cannot here be given, but they appear in the official reports of the last three years. In the summary tables of each division, the data for urban are distinguished from those of rural districts Stated in terms of total population the highest birth rate in 1913 was that of Wales, 26 9 per 1000, whilst the rate in the south of England was only 21 8 Moreover, if London were not included in the south the rate for that division would be lower still. The rate in the midlands was 23 6 and in the north 25 2 When different parts of the country are compared, Wales comes first, followed in order by the north the midlands, and the south, whatever measure of fertility be employed

Illegitimacy

It has long been customary to measure illegitimate fertility by the proportion of illegitimate to total births, but by this method no satisfactory index is afforded of the fertility of unmarried women, which can only be correctly ascertained by comparing the illegitimate births with the number of possible unmarried mothers The decline of illegitimacy appears to be considerably greater when measured by the latter method than by the former In 1913 the illegitimate rate was equal to 7 9 per 1000 unmarried and widowed women, aged 15–45 years Comparing the proportion of illegitimacy in that year with the proportion prevailing in the quinquennium 1876–80, it appears that, if based on the standard of total births the rate of illegitimacy would seem to have decreased by less than 10 per cent., whereas the reduction will be found to equal 45 per cent if calculated on the number of single and widowed women in the population Relatively to unmarried women of these ages, illegitimate births were most numerous in the rural

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[1] THE LANCET May 8th, 1915, p 974

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING APRIL, 1915

(Specially compiled for THE LANCET*)*

CITIES AND BOROUGHS	Estimated population in the middle of 1914	Notified Cases of Infectious Disease												Deaths from Principal Infectious Diseases									Deaths from all causes.	Death rate per 1000 living.†
		Small pox.	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever.	Other continued fevers.	Puerperal fever	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living	Small pox.	Measles.	Scarlet fever	Diphtheria.*	Whooping-cough.	Enteric fever	Diarrhœa and enteritis (under 2 years)	Total.	Annual rate per 1000 persons living		
LONDON	4,516,612	—	1144	590	1	62	2	18	229	140	10	2106	6·3	—	503	36	50	182	5	66	841	2·4	6776	19·6
West Districts																								
Paddington	142,065	—	39	25	—	1	1	—	6	1	—	73	6·7	—	12	1	—	6	1	5	25	2·3	211	19·3
Kensington	170,817	—	42	10	—		—	—	3	12	—	68	5·2	—	28	1	1	3	—	2	35	2·7	270	20·5
Hammersmith	124,750	—	38	15	—	1	—	1	9	6	—	70	7·3	—	3	1	—	5	—	2	11	1·1	184	19·0
Fulham	158,840	—	38	21	—	—	—	—	5	2	—	66	5·4	—	37	2	2	6	—	1	48	3·9	231	19·6
Chelsea	63,701	—	11	8	—	4	—	—	—	4	—	27	5·5	—	14	—	—	—	—	1	15	3·1	90	18·6
City of Westminster	162,340	—	59	17	—	—	—	—	6	3	—	85	7·3	—	14	4	—	1	—	3	22	1·9	221	19·0
North Districts																								
St Marylebone	112,802	—	17	16	—	2	—	—	6	2	—	43	5·0	—	11	—	1	1	—	1	14	1·6	164	18·2
Hampstead	86,731	—	14	11	—	—	—	1	1	3	—	30	4·6	—	4	1	—	2	—	1	8	1·2	95	15·1
St Pancras	212,407	—	47	31	—	2	—	—	10	4	1	95	5·8	—	16	1	1	6	—	1	25	1·6	290	18·2
Islington	324,704	—	62	46	—	1	—	2	8	7	3	128	5·1	—	48	6	3	18	1	4	80	3·2	543	21·3
Stoke Newington	50,454	—	19	11	—	1	—	—	3	—	1	35	9·0	—	6	2	—	2	—	1	11	2·8	64	16·7
Hackney	223,724	—	34	20	—	10	—	—	15	11	—	90	5·2	—	16	1	1	4	—	2	24	1·4	288	16·9
Central Districts																								
Holborn	45,801	—	8	4	—	1	—	—	1	2	—	16	4·5	—	2	—	2	1	—	—	5	1·4	64	18·3
Finsbury	83,212	—	24	7	—	1	—	1	3	2	—	38	6·0	—	6	1	—	11	—	2	20	3·1	135	20·9
City of London	17,120	—	3	2	—	—	—	—	—	—	—	5	3·8	—	—	—	—	—	—	1	1	0·8	35	27·7
East Districts																								
Shoreditch	108,860	—	24	12	—	—	—	—	10	6	—	52	6·2	—	9	—	3	9	—	1	22	2·6	203	25·1
Bethnal Green	127,062	—	34	34	—	1	—	2	6	3	1	81	8·3	—	17	1	5	6	—	5	34	3·5	209	22·1
Stepney	273,265	—	81	68	1	4	—	1	21	2	1	170	8·5	—	20	1	5	2	—	6	34	1·6	386	19·2
Poplar	160,222	—	39	31	—	1	—	1	12	1	—	85	6·9	—	*25	2	5	5	—	7	44	3·6	265	21·4
South Districts																								
Southwark	186,041	—	40	16	—	9	—	2	17	10	—	94	6·6	—	14	2	6	5	—	1	28	2·0	315	22·1
Bermondsey	124,213	—	25	8	—	2	1	—	8	9	1	54	5·7	—	25	1	—	10	1	5	42	4·4	262	27·4
Lambeth	298,724	—	74	31	—	2	—	3	10	10	—	130	6·1	—	16	3	3	9	1	3	35	1·6	462	19·9
Battersea	167,338	—	52	18	—	3	—	—	4	4	—	81	6·3	—	54	—	1	18	—	4	77	6·0	286	22·5
Wandsworth	338,008	—	106	36	—	4	—	2	12	12	1	173	6·7	—	41	3	4	10	—	2	60	2·3	435	16·8
Camberwell	262,020	—	59	17	—	2	—	—	12	5	—	95	4·7	—	20	—	1	9	—	3	33	1·6	388	19·1
Deptford	109,162	—	27	10	—	3	—	—	10	4	1	55	6·6	—	10	2	2	15	1	1	31	3·7	160	18·9
Greenwich	99,037	—	40	13	—	1	—	1	4	7	—	66	9·0	—	7	—	—	8	—	—	15	2·0	161	21·6
Lewisham	172,433	—	35	25	—	2	—	1	7	2	—	72	5·4	—	15	—	1	5	—	1	22	1·7	172	12·8
Woolwich	122,836	—	56	28	—	3	—	—	8	6	—	101	10·7	—	14	—	3	3	—	—	20	2·1	182	19·8
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup

† The death rates are corrected for variations in sex and age constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard

All these measures mean care, watchfulness, and trouble The sprinkling of poisonous fluids, which can be used not only on manure heaps, but on walls, trees, and roofs, in the clearly indicated parts of premises, is a simple measure One of the oldest methods of making fly traps is also one of the best. It is to dip bunches of grass in a mixture of treacle or brown sugar impregnated with some arsenious salt, and hang them up in likely spots, taking care to place them beyond the reach of children The use of poison, however, always involves some risk, and many will prefer the traps that catch living flies instead of poisoning them From America we get an ingenious and very simple device called the Minnesota fly trap It is an oblong box of wire gauze One side is bent inwards to form an arch, and at the apex there are several holes big enough to push a pencil through The box is placed on the ground or on a shelf or table, the arch covering a bait such as a banana A little room is left so that the fly may pass under the sides of the box and reach the bait When satiated the fly goes upwards and finds its way through one of the holes into the portion of the box covering the arch Here it will struggle to get out, but always by flying upwards and sideways and towards the light It never thinks of going downwards to find the little hole by which it entered. Thus caught, the flies can be killed by dipping the trap into hot water or holding it over fumes of paraffin oil or benzine This trap is shown at the Anti fly Exhibition, together with other and more complicated traps The Minnesota trap is the easiest to carry about and to make

An Effective Insecticide

Though war against the common house-fly and blow-flies or bluebottles is the main purpose of this exhibition, the danger of disease spread by insects generally is considered The fact is illustrated that we have in crude mineral oil a cheap, easily obtainable, and applicable specific Not only is it used to prevent mosquitoes breeding in stagnant water, but it can be made into an emulsion which will rid us of such pests as fleas In war perhaps lice are the cause of our principal concern In Serbia and Montenegro, and we fear in some of the German prisons or internment camps, they are spreading typhus fever The work done in destroying flies by the English Commission has saved thousands of lives to our gallant allies Professor H. Maxwell Lefroy, with the assistance of Dr Harriette Chick, of the Lister Institute, has issued a small pamphlet of instructions dealing especially with the use of crude oil, and 4000 lb of crude oil emulsion have been sent to the soldiers at the front Anyone can make the emulsion Five and a half pints of crude mineral oil with three pounds of soft soap and about half a pint of water will form a jelly that will prove an efficient insecticide A more delicate preparation is exhibited at the exhibition made with "bottom" oil and Texas fuel oil, but the principle is the same. The vapour of the lighter oil kills insects, and the grease on the skin or in the clothes kills by contact The soap makes it feasible to mix the emulsion with water and use it for ordinary washing purposes If some of the emulsion is allowed to dry into the clothes vermin will not approach those who wear clothes thus treated The same protection is secured by rubbing a little of the emulsion over the skin During the war this is likely, one would think, to prove a most useful preparation A few tins holding a grease or jelly that looks like soft soap are not interesting to look at, but when we realise the results that can be obtained by distributing these tins they gather importance in our sight, and the desire to send any quantity of them to the typhus stricken towns and villages of Serbia and Montenegro, has been expressed by more than one visitor

Everyone who can spare the time should visit the Anti fly Exhibition

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LITERARY INTELLIGENCE —Under the title of "Sanitation in War,' the lectures by Major P S Lelean, assistant professor of hygiene at the Royal Army Medical College, with an introduction by Sir Alfred Keogh are announced for publication about June 1st by Messrs J and A Churchill The subjects dealt with are Physical Fitness for War Anti typhoid Inoculation, The March Sickness in the Army, The Rôle of Insects in War Field Conservancy, Medical Organisation and Administration in the Field, and Water and Water supplies

ASYLUM REPORTS

Royal Albert Institution for the Feeble minded of the Northern Counties (Annual Report for the Year ending June 30th, 1914) —At the time of its establishment, 50 years ago, the Royal Albert was the only institution of its kind in this part of the country, and since its opening it has dealt with no less a number than 3433 feeble-minded persons It is satisfactory to note that at no time since its foundation has its financial and general position been higher or its prestige greater Not only from its size and general equipment, but also from the results in educating and training the feeble minded, the institution is second to none of its kind in the world Mr Archibald R Douglas, the medical superintendent, comments on the passage of the Mental Deficiency Act of 1913, and says that about the future of the Royal Albert and the other kindred institutions there ought to be no doubt. From the fact of possessing a complete equipment of buildings and a full staff of teachers and manual trainers, these establishments are quite prepared and ready to act as training centres Now is the time for local authorities and boards of guardians who do not wish to provide for their own feeble minded to apply for accommodation to be reserved for their cases in these institutions Another very important question for the consideration of the central committee in the near future will be the reception of children above the age of seven years sent by the education authorities

The aggregate number of patients under treatment during the year was 807, with an average daily number resident of 696 An undesirable preponderance of those admitted have been low grade and feeble cases There were 65 discharges and 13 deaths, the death rate on the average number resident being only 1 87 per cent The farm colony has been in constant occupation since October last, and has proved itself to be a useful dependency of the institution For the past year the schools have been conducted on a novel plan, which provides for purely educational work during the first half of the day, the afternoons being devoted to the new industrial occupations which have been already introduced and which were mentioned in the last report This departure has succeeded beyond the most sanguine expectations and has infused fresh interest into the teaching staff and all concerned The most important factor in this rearrangement is that it provides employment for the greatest possible number of patients Already these new industrial occupations are almost self supporting, since for the most part the receipts from the articles made have defrayed the cost of the materials used Care has also been bestowed on the provision of simple kindergarten occupations for the large number who are incapable of learning anything more, and who would therefore be otherwise wholly unemployed The Herbert Storey Industrial Schools and Workshops have been maintained in a high state of efficiency The committee have added cloth weaving to the list of trades taught here, and have introduced one of Hall's hand power looms

VITAL STATISTICS

VITAL STATISTICS OF LONDON DURING APRIL 1915

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the 10 diseases specified in the table was equal to an annual rate of 6 3 per 1000 of the population, estimated at 4,516,612 persons, in the two preceding months the rates were 7 4 and 6 6 per 1000 respectively The lowest rates last month were recorded in St Marylebone Islington Holborn, the City of London, and Camberwell, and the highest rates in Stoke Newington, Bethnal Green, Stepney Greenwich and Woolwich The prevalence of scarlet fever showed a further slight decline last month, among the metropolitan boroughs this disease was proportionally most prevalent in Hammersmith the City of Westminster, Stoke Newington Stepney, Battersea Wandsworth Greenwich, and Woolwich The Metropolitan Asylums Hospitals contained 2339 scarlet fever patients at the end of last month, against 3609, 2939, and 2514 at the end

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

The undermentioned Lieutenants are confirmed in their rank —Arthur C Bateman, Edmond Robinson, and Charles A. Mason

TERRITORIAL FORCE

Royal Army Medical Corps

1st Northumbrian Brigade Surgeon-Captain Robert A Nesham to be Surgeon Major

1st Scottish General Hospital The undermentioned to be Lieutenants —Herbert John Adam Longmore, Douglas Wales Berry, and Cadet Cameron Macdonald Nicol from Aberdeen University Contingent, Senior Division, Officers Training Corps

2nd Southern General Hospital Captain William Cotton is seconded

1st Western General Hospital Captain Keith W Monsarrat is seconded.

South Midland Casualty Clearing Station Captain James L Joyce is seconded Walter Mundy-Cox to be Lieutenant

3rd London General Hospital William Francis Bensted Bensted Smith to be Lieutenant.

1st Southern General Hospital Captain Albert Lucas to be Major Major Otto J Kauffmann to be Lieutenant Colonel Christopher Martin to be Captain, whose services will be available on mobilisation Leonard Kirkby Thomas to be Captain whose services will be available on mobilisation

East Anglian Casualty Clearing Station Richard Vincent Slattery to be Lieutenant

1st East Anglian Field Ambulance Lieutenant Laurence Henry Hutchins from the 3rd East Anglian Field Ambulance, to be Lieutenant.

3rd East Lancashire Field Ambulance Lieutenant Frank G Prestwich, from Attached to Units other than Medical Units, to be Lieutenant

1st Welsh Field Ambulance Lieutenant John Clarke, from Attached to Units other than Medical Units, to be Lieutenant

3rd Welsh Field Ambulance Major John Livingstone, from Attached to Units other than Medical Units, to be Major

1st Northern General Hospital James Dunlop Lickley to be Lieutenant

4th Scottish General Hospital Willie Whitelaw to be Captain, whose services will be available on mobilisation

3rd Southern General Hospital Edward Walton Spencer Rowland to be Captain, whose services will be available on mobilisation

2nd London Sanitary Company To be Lieutenants Arthur Errington Rayner and Lieutenant Arthur H Savage, from 1st South Western Mounted Brigade Field Ambulance

1st London Casualty Clearing Station Captain William S Forbes from the Unattached List for the Territorial Force, to be Captain

Supernumerary for service with the Officers Training Corps Temporary Major Archibald M. H. Gray to be Major

Attached to Units other than Medical Units —Surgeon Major James P S Ward, from Devonshire Royal Garrison Artillery, to be Major Captain Norman Maclaren to be Major Surgeon-Captain Evan J T Cory from the 5th Battalion, The Welsh Regiment, to be Captain To be Lieutenants Richard Payne Pollard and Charles Beresford Alexander

VOLUNTEERS

1st Cadet Battalion The King's Royal Rifle Corps Surgeon Lieutenant William H. Davis resigns his commission (dated July 23rd, 1914)

DEATHS IN THE SERVICES

Surgeon-General Arthur James Payne I M S (retired), on May 21st at Onslow gardens London, in his 89th year He attained the rank of surgeon general in 1885

ROYAL HOSPITAL FOR INCURABLES, DUBLIN —Mr G Jameson Johnston F R C.S Irel., professor of surgery in the school of the Royal College of Surgeons, and senior surgeon to the Royal City of Dublin Hospital, has been elected consulting surgeon to the Royal Hospital for Incurables in room of the late Sir John Lentaigne.

CATS AS A CAUSE OF DIPHTHERIA INFECTION —An outbreak of diphtheria at the Stockwell Orphanage, in which out of 63 cases 1 proved fatal, has been traced to some infected cats in the Orphanage The number of cases was larger among the boys than among the girls which is accounted for by the fact that the boys, singularly enough took more interest in the cats

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Correspondence.

"Audi alteram partem."

"CHARCOAL" OR "BINDING" WIRE FOR DRAINAGE TUBES

To the Editor of THE LANCET

SIR,—The memorandum on the treatment of the bacterial infections of projectile wounds in THE LANCET of April 24th makes special point of drainage Rubber tubes which are in general use have been found efficient in civil surgery, whence the need for long continued drainage has almost vanished, but where free and constant drainage of infected wounds is necessary the rubber tube does not fully meet the need, its imperforate walls permit the exit of fluids through the lumen of the tube only Occlusion of this sole exit may arise, at the inner end of the tube, where it is liable to be blocked by the wall of the wound itself, by the flattening of the tube from natural pressure of the parts and from bandaging, or by angles which result from bending of the tube within the wound, or from fenestrating and so weakening the tube wall. Were infected wounds always hollow and cyst-like, a rubber tube might effectually drain them, but in the commoner case of irregular wounds whose inner walls fall together the drainage effected by a rubber tube may be but little more than would result from the use of a solid rubber cylinder

To permit of exit and lavage and no less of entrance for air and flushing, not only must the opening of the wound be free, but the walls within must be kept from falling together and so suffocating each other The largest rubber tube which may be introduced can but keep apart those particular portions of the wound walls on which it lies, whilst the more tubes introduced the greater the area of rubber to press upon the raw and so impede both the weeping from it as well as the air getting to it

Amongst the alternatives to rubber tubes for drainage wire has been suggested, though but little used in the last 20 years The use of wire in strands or hanks is effective by capillary action, but the use of wire in tubes of open coiled spirals has further advantages Suitable wire is of soft iron known as "charcoal" or "binding" wire, it is made in all gauges down to as fine as a hair, such gauges as 22–25–27 are suitable for coiling up into tubes, the higher the gauge number the thinner the wire, such wire costs, say, sixpence a pound or less by quantity Charcoal binding wire has practically no spring, it is very easily bent and retains immediately the given bend Nothing is used in the manufacture of binding wire which can harm an infected wound. A wire drainage tube can be made of suitable size, shape, and flexibility on the spot in a couple of minutes, with no more elaborate tool than a lead pencil or a walking stick, and a wise thumb The tube of spirally coiled wire can be bent to the shape of the wound, the gaps between the coils allow free entrance and exit of fluids and air to and from the wounded surfaces

The gauge of the wire selected, the circumference of the wire tube and the amount of extension given to the spirals regulate the strength and flexibility of the tube For example, coil two feet of gauge 27 wire round a lead pencil, press the coils up neatly together on the pencil, so forming of the three preceding months, the weekly admissions averaged 272, against 317, 324, and 278 in the three preceding months Diphtheria also was slightly less prevalent than in the preceding month, the greatest proportional prevalence of this disease was recorded in Paddington, Stoke Newington, Bethnal Green, Stepney, Poplar, and Woolwich The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals, which had been 1621, 1562, and 1362 at the end of the three preceding months, had further declined to 1223 at the end of last month, the weekly admissions averaged 136, against 160, 172, and 142 in the three preceding months Enteric fever was less prevalent than in other recent months, this disease was proportionally most prevalent last month in Chelsea, Hampstead, Southwark, Deptford, and Woolwich The Metropolitan Asylums Hospitals contained 60 enteric fever patients at the end of last month, against 50, 64, and 46 at the end of the three preceding months, the weekly admissions averaged 13, against 13 and 8 in the two preceding months Erysipelas was proportionally most prevalent in Paddington, Hammersmith, Hackney, Shoreditch, Stepney, Poplar, Southwark, and Deptford The 18 cases of puerperal fever notified during the month included 3 in Lambeth, and 2 each in Islington, Bethnal Green, Southwark, and Wandsworth The cases of cerebro-spinal meningitis numbered 140, this disease being proportionally most prevalent in Kensington, Chelsea, Shoreditch, Southwark, Bermondsey, and Greenwich The 10 cases of poliomyelitis included 3 in Islington

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided, the death rates from all causes are further corrected for variations in the sex and age constitution of the populations of the several boroughs During the five weeks ending May 1st the deaths of 6776 London residents were registered, equal to an annual rate of 19 6 per 1000, in the three preceding months the rates were 19 6, 20 7, and 21 2 per 1000 respectively The death rates last month ranged from 12 8 in Lewisham, 15 1 in Hampstead, 15 7 in Stoke Newington 16 8 in Wandsworth, and 16 9 in Hackney, to 22 1 in Bethnal Green and in Southwark, 22 5 in Battersea, 25 1 in Shoreditch, 27 4 in Bermondsey, and 27 7 in the City of London The 6776 deaths from all causes included 841 which were referred to the principal infectious diseases, of these, 503 resulted from measles, 35 from scarlet fever, 50 from diphtheria, 182 from whooping-cough, 5 from enteric fever, and 66 from diarrhœa and enteritis among children under 2 years of age The lowest death rates from these diseases in the aggregate were recorded in Hammersmith, Hampstead, St Pancras, Hackney, Holborn, and the City of London, and the highest rates in Fulham, Islington, Bethnal Green, Poplar, Bermondsey, Battersea, and Deptford The 503 deaths from measles were 317 in excess of the corrected average number in the corresponding period of the five preceding years, this disease was proportionally most fatal in Kensington, Fulham, Chelsea, Islington, Poplar, Bermondsey, and Battersea The 35 fatal cases of scarlet fever were 22 above the corrected average number, and included 5 in Islington, 4 in the City of Westminster, 3 in Lambeth, 3 in Wandsworth, and 2 each in Fulham, Stoke Newington, Poplar, Southwark, and Deptford The 50 deaths from diphtheria were 17 in excess of the corrected average, this disease was proportionally most fatal in Holborn, Shoreditch, Bethnal Green, Poplar, and Southwark The 182 deaths from whooping-cough were 53 above the corrected average, the highest death rates from this disease were recorded in Finsbury, Shoreditch, Bermondsey, Battersea, Deptford, and Greenwich The 5 deaths from enteric fever were 3 below the corrected average number and belonged respectively to Paddington, Islington, Bermondsey, Lambeth, and Deptford The mortality from diarrhœa and enteritis among children under 2 years of age was proportionally greatest in Paddington, Finsbury, Bethnal Green, Stepney, Poplar, Bermondsey, and Battersea In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases, excluding diarrhœa, was 110 per cent above the average

RATS AND THE PORT OF LONDON —The number of rats caught at the docks and on vessels arriving at the Port of London in 1914 was 42,916 Of these 2716 were subjected to bacteriological examination, but in no case was there any evidence of plague

THE SUCCESS OF THE PROBATION ACT —Mr R Wallace K.C, in binding over a prisoner at the London Sessions on May 20th, said that over 90 per cent of the prisoners bound over under the Probation Act never saw the inside of a police court again a satisfactory result on grounds both of morality and of finance

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE following appointments have been notified —Fleet Surgeon R T Gilmour to the *Vivid*, additional for disposal Staff Surgeons C R Rickard to the *Topaze* A. H S Richardson to the *Skirmisher* A La T Darley and J C Bringan to the *Victory* P L Crosbie and J J H Rooney to the *Pembroke* and A. C W Newport to the *Vivid* Surgeons J P Berry (Reserve) to the *Victory* H E Perkins to the *Pembroke*, and G B Cockrem to the *Vivid* Temporary Surgeons T M Wood Robinson to the *Black Prince* W Whitfield to the *Conqueror* W A. Bailey to the *Monarch* A. T R Wollaston to the *Agincourt* R H H Newton to the *King George V* E D Granger to the *Centurion* J G Nicholson to the *Albemarle* H Wilks to the *St George*, A. H Wear to the *Ajax*, G M Heiron to the *Africa*, and H B Padwick and J Paxton to Haslar Hospital

ROYAL ARMY MEDICAL CORPS

The undermentioned are granted temporary rank whilst serving at the Edmonton War Hospital —Dated April 20th Lieutenant-Colonel Spencer Mort Major William Benjamin Batchelor Taylor, Henry Martin Rashbrook, and David Morgan Hughes

George Arthur Wright (late Lieutenant-Colonel, Royal Army Medical Corps, Territorial Force) to be temporary Lieutenant-Colonel whilst serving at the Military Hospital, Whalley (dated May 5th)

The undermentioned temporary Lieutenants to be temporary Captains —Dated May 26th Norman Black late Captain, Singapore Volunteer Corps, and John Paton, late Captain, Royal Army Medical Corps, Territorial Force

Captain John A. Hayward, having ceased duty with the British Red Cross Hospital, Netley, relinquishes his temporary commission (dated May 12th)

Edgar William Willett late Surgeon Captain, Volunteer Medical Staff Corps, to be temporary Captain (dated April 27th)

Lieutenant Ian Macdonald relinquishes his temporary commission on account of ill health (dated April 29th)

Lieutenant Frank H Rae relinquishes his temporary commission (dated April 28th)

To be temporary Lieutenant Daniel McKinlay Reid (dated April 10th) Temporary Lieutenant Owen Richards to be temporary Captain (dated May 21st)

The undermentioned to be temporary Lieutenants Dated April 24th Joseph Henri Napoleon Felix Savy, Henry Adams, Colin George Shearer, James David Mackinnon Alfred George Brown Duncan, Herbert Hampden Taylor, George Fleming, John Ross, William Fleming Stevenson, Thomas Holmes Scott, George Francis Clegg Walker, William Magner, Joseph Edward Judson, Thomas Battersby Jobson, Joseph Humphrey Jones, Godfrey Douglas Hindley, James Henry Edwin Davis, Thomas Clifford, Valentine Henry Blake, Alfred Reginald Roche Maurice Gerald McElligott, Denis Victor O'Connor Robert Bern Tydd Stephenson, John Rhodes Dickson Sidney James Wareham, and James Johnston Abraham Dated April 25th Daniel Owen Twining, Arthur Lawrence Jackson, Everard Cecil Abraham, Wilfred Raffle, and Cedric Roland Denny Dated April 26th Edgar Taunton, Richard Harrison George Todd MacLean, Geoffrey Andrew Bird David Fleck Caleb Thomas Hilton, Stanley Elder Humphreys, Williamson Rust Reith, John Sneed Bookless, Charles Forbes Harford Stephen Veitch Telfer, James Smith, Alexander Cameron Renwick, George London Neil, Gerard Edward Lockyer, John Kean, Robert Thomas Herron Ernest Edward Frazer Andrew Crawford, William Reginald Ward Asplen and Richard Henry George Weston from 15th (Service) Battalion The King's (Liverpool Regiment) Dated April 27th Charles Gordon MacKay Cecil Claude Cragg, John Newbury Fraser Ferguson John Menlove Bennion, Arthur Richmond George McMullan, Alfred MacKenzie Clark, Reginald Frederick Yencken, Aubrey John Colby Tingey John Roberts Pate Charles Edwin Price William Samuel Nason, and George Sefton Miller Dated May 8th John Jones Dated May 21st Francis Mark Farmer to be temporary honorary Lieutenant

INDIAN MEDICAL SERVICE

The services of the undermentioned officers are replaced temporarily at the disposal of His Excellency the Commander in Chief in India —Major F R Rost and Major R D Saigol Lieutenant-Colonel Selby Herriot Henderson has been nominated a member of the United Provinces Legislative Council vice Colonel C C Manifold C [illegible] resigned Lieutenant Colonel J Lloyd Jones, Assay Master, Bombay has been granted two months' leave

Anyone who is really concerned for the liberty of the subject, and does not merely cherish it as an obstructive fad, should work heart and soul for the passage of this Bill, and for the excision of the absurd clause which limits its operation to the period of six months after the conclusion of the war

I am, Sir, yours faithfully,

Parkstone, Dorset May 17th 1915 CHAS A MERCIER

THE MEDICAL DEFENCE UNION AND THE NATIONAL INSURANCE COMMISSIONERS

To the Editor of THE LANCET

SIR,—I see a letter in your last issue from Dr A G Bateman, of the Medical Defence Union, stating that this body intends to challenge the right in the High Courts to surcharge practitioners who, in the opinion of their colleagues, represented by the panel committees, have prescribed extravagantly and improperly As a member of the Medical Defence Union I shall strongly oppose any of the funds of that body being used for such a purpose If Dr Bateman had had the opportunity, as I have had, of seeing the extraordinary concoctions ordered by certain panel practitioners, the total disregard as to the cost, even when a drug with a similar therapeutic action is much cheaper, and the preference shown by some to drugs that are unknown to the general run of practitioner, and particulars of which are only to be found in advertisements, he would realise that it is absolutely necessary to have a check of some kind In the insurance area of Bucks three quarters of the doctors who prescribe are able to keep to the level of sevenpence per prescription, the other quarter are mostly at the eightpenny level and seldom above 1s

Yet we know that in the London area the cost is much higher, and there is no doubt whatever in my mind that there are many men who are prescribing expensive medicines solely with a view of making the Act unworkable If they succeed in doing so and have a State Medical Service they will only have themselves to thank for it

It is sincerely to be hoped that an important body like the Medical Defence Union is not going to be captured by enemies of the Act

I am, Sir, yours faithfully,

Buckingham May 24th 1915. ARTHUR E LARKING

DIFFICULT LABOUR AND DENTAL DEFORMITIES

To the Editor of THE LANCET

SIR,—I have no wish to enter into a discussion in your columns with Mr F Lonnon, but I should like to correct a false impression he conveys in his letter in THE LANCET of May 22nd that subsequent to his interviewing the mother of the patient my attention was attracted to the relationship of difficult labour to dental deformities My interest in the question was long antecedent to the International Medical Congress Still further, until Mr Lonnon s letter appeared I was quite ignorant of the fact that he was working on the subject I shall be grateful for any help from your readers and I have no doubt that I shall be able to obtain sufficient material without Mr Lonnon s help Incidentally, I may say that in the case to which he has referred the condition was probably due to a developmental defect, and not to injury at birth

I am, Sir, yours faithfully,

May 25th 1915 J F COLYER

THE ZEPPELIN • THREAT SURGICAL FIRST AID FOR THE METROPOLIS

To the Editor of THE LANCET

SIR,—With regard to the note appearing under this heading in your issue of May 22nd (p 1104) it is important to remember that the work and organisation of the Committee of the Royal Society of Medicine, in consultation with and with the assistance of the War Office, deals chiefly with the East Coast from Dover to the Wash, and that it takes no responsibility for organisation in the metropolitan area, which is exclusively in the hands of the Commissioner of Police Your notice suggests that certain steps suggested by the committee have been adopted and arranged for in the metropolis, but we have no knowledge that this has been done

With regard to the metropolis, the committee has laid before the Commissioner a memorandum of suggestions for the organisation of surgical aid for London, but we have no right to assume that the Commissioner either heeded or adopted these suggestions It has also provided the Commissioner of Police with a list of hospitals, infirmaries, and dispensaries willing to receive patients, and a map of London indicating the positions of these places, but the list did not include any extemporised emergency centres Further, it has undertaken, if called upon by New Scotland Yard, to send surgeons, assistants, and anæsthetists to any point in the metropolitan area where their services are required, but only if summoned by the police

We have no knowledge that copies of the map, which was prepared by Sir Rickman Godlee, Mr Ernest Clarke, and Dr H Moreland McCrea, have been distributed to every police office, or that copies of the map can be supplied on demand

Would you kindly allow me to add a personal note? You were good enough to say that the organisation has devolved upon myself, but this is only true in the limited sense that as honorary secretary of the committee I have endeavoured to the best of my ability to carry out its instructions The Executive Committee, consisting of Sir Rickman Godlee, Bart (chairman), Mr C A Ballance, Mr A H. Cheatle, Mr Ernest Clarke, Mr E M Corner, Dr J C Dunn, Mr Edmund Owen, Mr W H Clayton Greene, Mr G J Jenkins, Dr Moreland McCrea, Mr J W Thomson Walker, has been in every sense of the word a working committee, and has held numerous meetings here and at the private residences of its members, and the detailed work of arranging the list of receiving places, and corresponding with the officials has fallen almost entirely on Sir Rickman Godlee, the chairman of the committee

I am, Sir, yours faithfully,

J Y W MACALISTER.

Royal Society of Medicine, Wimpole-street W
May 26th 1915.

BAZETT *v* THE LONDON INSURANCE COMMITTEE

To the Editor of THE LANCET

SIR,—This action was brought as a test action to raise the questions (1) whether 'insuperable difficulty' such as the Committee alleges, is a legally justifiable answer—unless there is actual *physical* impossibility, uncontributed to by incompetence, and not merely *moral* impossibility aggravated by slack enforcement of provisions to meet it—to a about half an inch of close wire tube of some 24 coils, withdraw the pencil and extend the tube to six inches, thus producing a tube of which the spirals are about a quarter of an inch apart, bend each of the sharp cut ends into a small closed eye and then turn back the eye itself into the lumen of the tube whence it cannot irritate the wound

Spiral wire tubes can be rendered to any shape without the angling and occlusion which occur when rubber tubes are bent such shapes as horse shoe, squares, discs The introduction of a wobbly spiral tube into a deep pocket is facilitated by mounting the wire tube upon a length of pliable lead or compo piping, the lead pipe, being bent as desired, is passed down inside the length of the wire tube and the open end of the lead pipe engages the eye at the further end of the wire tube The extraction of a spiral coiled tube from a wound may be facilitated by drawing on the end of the wire and at the same time twisting it a little in that direction which will coil the coils more tightly —I am, Sir, yours faithfully,

Warwick-street, W May 20th, 1915 FRANCIS H. POTT

MENTAL TREATMENT BILL

To the Editor of THE LANCET

SIR,—The Early Mental Treatment Bill was "not proceeded with" on the day of its introduction, but I do not know that it has been definitely withdrawn, if not, there are several things in it that need explanation In the first place, the title is misleading The Bill does not propose to enact or legalise mental treatment, whether early or late At first sight I took it to be a Bill to enforce matutinal treatment by Christian Science, and it occurred to me that a shorter and more appropriate title would be "Christians, Awake!" but it appears on perusal to be a Bill for legalising the temporary detention of persons in the early stage of mental disease

I do not know, and I cannot learn from the text of the Bill, whether "nervous breakdown affecting the mental condition" and "mental breakdown" are intended to mean the same thing or whether either or both of them mean the same thing as madness, lunacy, or insanity Insanity was introduced as a euphemism for madness, but it has long gathered about itself the same implications, and is now as forbidding and stigmatising as madness itself If nervous breakdown or mental breakdown is to be substituted for insanity it will very soon have precisely the same implications as insanity and madness and lunacy, but whether or not it means the same as these terms I think the Bill should make the meaning clear

That the "mental condition" may be disordered without the disorder amounting to insanity is, or should be, a commonplace among those who treat mental disorders There are very many mental disorders that are not insane, and such disorders are very frequent Is this Bill intended to facilitate the treatment of such disorders? If so, it is unnecessary and uncalled for Persons suffering from them can now legally "obtain residential treatment" without "being certified insane and sent to an asylum or hospital under the Lunacy Acts"—in fact, it would be impossible to certify them

If, on the other hand, the Bill is intended to legalise the detention of insane persons under formalities less complicated, and safeguards not less assured, than those at present in force, there is much to be said for it, but whether this is or is not the intention should be made clear No one but a German would lacerate unnecessarily the feelings of the unfortunate, but the intention of an Act of Parliament should be placed out of doubt, even at the cost of hurting people's feelings If "nervous breakdown," "mental breakdown," and "mental disorder" mean insanity, they should be so defined in the Bill

It is forgotten, but I think it should be remembered, that until the Lunacy Act, 1890, the procedure for placing a lunatic under control was much simpler and more ready than the procedure under that Act, and that during the 45 years that this simpler procedure was in force not one case of improper detention ever came to light The Lunacy Act, 1890, was passed under the driving power of the popular feeling aroused by the attempt to place Mrs Weldon under control as a lunatic The attempt was not successful. Mrs Weldon's liberty was not interfered with for one moment, but for the unsuccessful attempt the parties making it were very heavily fined, and some were ruined, by actions at law That law thus proved its efficacy up to the hilt, and the plain lesson to be drawn from it was that no law could do more However, in face of the fact that the existing safeguards had proved thoroughly efficient, public opinion demanded additional safeguards, and additional safeguards were enacted These additional safeguards are not more efficient than the old—they could not be, but they have made the procedure for placing a lunatic under control more cumbrous, and more dilatory, and more difficult than it was before The consequence has been that, whereas under the old law practically every lunatic whom it was desirable to certify was certified, and received all the benefits of the protective provisions of the law, under the new law a multitude of lunatics who ought to be certified are not certified, but are either at large, to the detriment of themselves, their families, and the public, or are illegally detained, or at least taken charge of, without any formalities or any legal safeguard

If the opposition to what is miscalled the Early Mental Treatment Bill arises from an apprehension that it would facilitate the detention as lunatics of those who ought not to be so detained, it is misconceived and ill directed. Its effect would be just the reverse It is not true, as the memorandum of the Bill asserts, that "such patients can only obtain residential treatment if they are certified as insane and sent to an asylum" It is true that under these conditions only can they legally obtain such treatment, but, as has happened in so many other cases, the excessive stringency of the law has led to its evasion, and such patients do obtain residential treatment in violation of the law

It is a mistake to suppose, as the memorandum seems to suppose, that nursing homes are deterred, by the need of certification, from receiving cases of mental disease The ordinary medical and surgical nursing homes constantly do receive such cases and do not recognise that the patients are certifiably insane until they become unmanageable or objectionable, and then the home is glad to get rid of a case that it is not fitted to undertake The Bill will not, therefore, facilitate the treatment of such cases in the ordinary medical or surgical nursing home What it will do is to legalise a half way house between the free world and the lunatic asylum, a refuge from which many will return to the world without having to pass the portals of that unreasonably dreaded institution

	£	s	d
Dr Sir Bertram Windle	5	0	0
Dr James J Fitzgerald	3	0	0
Dr R. H Barter	3	3	0
Dr M. C McFetridge	3	3	0
Dr J Dunden	3	0	0
Dr J J McMahon	3	0	0
Dr J J Harding	3	0	0
Dr A. E Moore	2	2	0
Dr N J Townshend	2	2	0
Dr R. W Hodges	2	2	0
Dr M. Cagney	2	2	0
Dr E H. Montgomery	2	2	0
Dr R. Crowble	2	2	0
Dr T J O Meara	2	2	0
Dr Col. F McCartie I M.S	2	2	0
Dr A. E. Dixon	2	0	0
Dr P J Cremen	2	0	0
Dr T Gelston Atkins	2	0	0
Dr P G Lee	2	0	0
Dr R. Barrett	1	1	0
Dr J B Horgan	1	1	0
Dr T H Denny Townshend	1	1	0
Dr R R. Leader	1	1	0
Dr J O Connell	1	1	0
Dr Ashley Cummins	1	1	0
Dr Robert Cummins	1	1	0
Dr T O Callaghan	1	1	0
Dr R P Byrne	1	1	0
Dr H Corby	1	1	0
Dr J Guisani	1	1	0
Dr E V Cantillon	1	0	0
Dr T D Barry	1	0	0
Dr W F O Connor	1	0	0
Dr C B Pearson	1	0	0
Dr P J Cullinane	1	0	0
Dr P Fitzgerald	1	0	0
Dr R. C Foott	1	0	0
Dr D McCarthy	1	0	0
Dr W E. Verling	1	0	0
Dr T J O Donovan	1	0	0
Dr T P Maguire	1	0	0
Dr J J Kearney	1	0	0
Dr J J O Connor	1	0	0
Dr D Morrisy	1	0	0
Dr R Morgan	1	0	0
Dr P J Hayes	1	0	0
Dr Col. Nicolls R.A.M C	1	0	0
Dr G Gwynne, Crosshaven	1	0	0
Dr G Hegarty	1	0	0
Dr D F Hegarty	1	0	0
Mr B McSweeney	1	1	0
Messrs Killoh and Co	1	1	0
Mr Ernest E Wolfe	1	1	0
Cork Chemical and Drug Co	1	1	0
Mr Thomas White	*1	0	0
Mr A. Nelson Cole	1	0	0
Mr A. B Lester	1	0	0
Mr D Enright	1	0	0
Mr and Mrs Wilson	1	0	0
Mr A. H. Jones	1	0	0
Mr R. Blair	1	0	0
Mr W Yeats	1	0	0
Mr J Scher	1	0	0
Dr Fielding	2	2	0

* This donation was credited last week in error to the Stewartry of Kirkcudbright

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A. Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries begs to acknowledge the receipt of surgical instruments kindly contributed by the following donors since the publication of the last list —

Dr A. M Ware Queen s Gate Gardens, Mr J W McVitie Hove, Sussex, and Dr H J Starling, Norwich

Instruments should be sent to the Apothecaries Hall, Blackfriars, E C

NOTES FROM INDIA

(FROM OUR OWN CORRESPONDENTS)

Retirements in the Indian Medical Service

Surgeon General G F A Harris, I.M S, the Inspector General of Civil Hospitals, Bengal, has retired after many years service in India His departure means the breaking of another link between the old school of sahibs and the present race of administrators, and he was held in as high esteem by the Indian population as by the European community Surgeon General Harris s family has been associated with India since 1749, when his great grandfather came to India with a medical commission and died in the Hon. Company s service His own connexion with India has been long and varied His work in Bengal dates as far back as 1882, with interludes of work in the Central Provinces the Re united Provinces, and the Punjab Many of the improvements in the Calcutta Medical College of which he was formerly the head, are due to his suggestions, and all the assistant surgeons and sub assistant surgeons are under a debt to him for his active steps in improving their pay, position, and prospects

The retirement from the service is also announced of Lieutenant Colonel R H Elliot, I.M S the distinguished ophthalmologist

Victoria Caste and Gosha Hospital, Madras

The annual report of the hospital has been laid before a general meeting of the governors and disclosed an unsatisfactory financial position, for the budget estimate for the current year showed an estimated deficiency of nearly Rs 6000 The managing committee of the hospital, the Countess of Dufferin Fund Committee, have recently adopted measures with a view of increasing the income and decreasing the expenditure, among others the introduction of a gradual scale of fees according to means of patients in the general wards with an income of Rs 50 or more per mensem

Small pox in Darjeeling

The sanitary authorities at Darjeeling have been recently concerned over sporadic cases of small-pox Each case was immediately segregated, and fortunately the disease was stamped out before it assumed epidemic proportions

St John Ambulance Red Cross Gifts

The Indian branch of the St John Ambulance Association has despatched close on £50 000 worth of Red Cross gifts to the hospitals at the various fronts and has received many appreciations from various sources, one of which is quoted here Lieutenant Colonel W G Pridmore, I M S, who is in command of No 5 Indian General Hospital, Alexandria writes as follows "Before I left Karachi with No 5 Indian General Hospital 50 ten bed units of Red Cross gifts were handed over to me by your orders My hospital is now opened out and ready and I have been able to unpack nearly all the St John Ambulance Association gifts These gifts have been, and are, most useful If those who have laboured to make them could sometimes see the delight which the gifts give the wounded men they would be fully repaid for their trouble On behalf of the wounded who are being and who will be treated in this hospital, I thank you and the kind people who have laboured to provide them most heartily The articles which have been especially appreciated are mufflers Balaclava caps, socks, rezais, blankets, and cigarettes

Military Assistant Surgeons

The Government of India have sanctioned the following redistribution of senior military assistant surgeons on the old presidential lists Bengal, lieutenants 14 captains 14, Madras, lieutenants 2, captains 4 Bombay lieutenants 7, captains 6, total 47 The necessary adjustment in the existing number of senior assistant surgeons in each presidency will be carried out in due course

The Inspector General of Civil Hospitals, United Provinces

His Excellency the Viceroy has selected Lieutenant Colonel C Mactaggart, I M.S, Inspector General of Prisons, United Provinces, for the appointment of Inspector General of Civil Hospitals, United Provinces, in succession to Colonel C C Manifold, I.M S

A Church Missionary Society Officer for France

Mr Arthur Neve, of the Church Missionary Society s Hospital, Kashmir, has accepted a post on one of the base hospitals for Indian troops, and has sailed from Bombay to take up his temporary duties His brother, Dr Ernest Neve, will remain in charge of the hospital at Srinagar

April 2 h

demand for the carrying out of an Act of Parliament, and (2) whether, if such insuperable difficulties really exist, resignation and not statute tinkering is not the only honourable course for persons—especially if salaried—to whom impossible duties have been assigned, and to maintain that the breach of agreements on such a plea cannot destroy the right to damages Under this particular Act it was hoped to establish that no apportionment of money for a year could be an adequate substitute for assignment of patients, but that, if it were the only alternative available, it had to be done by no "pro rata" rule of thumb—as inequitable a method as could well be conceived—but on the same principles of doing the best for patients and equalising the remuneration of doctors as would have guided common sense persons in the legal distribution, and to claim that, taking the original date without power of alteration, every man then on the panel had his right both to a voice and to a share Mr Justice Darling suggested a compromise, which I did not accept, to my personal detriment, because it would have compromised my position as fighting for *principles* for all and not for mere cash for myself

I was defeated, apparently, on the extraordinary contention, upheld by the judge in spite of my protests, that the doctors' complying with every detail the Committee might choose to demand, although it could not be found either in the Act or the Regulations, was a condition precedent to the obligation of the Committee to carry out the assignment of the doctorless persons, and that at the same time the gross errors in the doctors' lists which the Committee have made by the thousand were of little or no import, though they largely contributed to the difficulty of the assignment I have succeeded, therefore—if this is left where it stands and where I, unaided, must leave it, I regret to say—only in showing that it is as useless for doctors to invoke the aid of our Courts of Justice as it is for them to trust to the word of honour of Insurance Committees or to the sense of equity of the Commissioners or to the pledges of the Government

I am, Sir, yours faithfully,

HENRY BAZETT

St. Mary's terrace, Paddington, May 21st 1915

"DIFFERENTIAL DIAGNOSIS, PRESENTED THROUGH AN ANALYSIS OF CASES"

To the Editor of THE LANCET

SIR,—In the review of Dr R C Cabot's book with this title, which appears in THE LANCET of May 22nd, attention has been called to the fact that in the first volume the diagnosis is definitely stated at the conclusion of the consideration of each case, but that the same plan is not adopted in the second volume In Vol II the diagnosis is given in the table of contents against the number of the case which appears in the body of the book This change was made deliberately at the express request of a large number of subscribers to Vol I, who pointed out that with the diagnosis printed at the end of the case and frequently catching the eye it deprived the reader of the mental training in diagnosis obtained by logical reasoning and led to the solving of the problem with the answer as a basis

We are, Sir, yours faithfully,

W B SAUNDERS COMPANY

Henrietta street W C, May 21st 1915

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE subscriptions received during the week include a cheque for £250 from the Agent General for South Australia, on behalf of the South Australian Belgian Relief Fund The continuance of open handed support from the Colonies is a most gratifying feature, and accords thoroughly with the noble national spirit which the outlying parts of the Empire have displayed in every regard since the war began

A handsome donation has been sent by the doctors and pharmacists of the city and county of Cork The local committee spent a little money in judicious advertisement, and the cheque received amounted to £116 11*s* 10*d*

THE WEEK'S SUBSCRIPTIONS

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, are as follows —

	£	s	d
West London Medico-Chirurgical Society proceeds from sale of tickets for Reception given on behalf of the Fund (per Dr O L Addison Hon Sec.)	44	12	0
South Australian Belgian Relief Fund (per the Agent General for South Australia)	250	0	0
Dr A Graydon	1	1	0
Dr Barrs (collected by)—			
Dr Radcliffe.	1	1	0
Dr Robertson	2	2	0
Dr Spong ..	5	0	0
Dr Woodcock	1	1	0
Warrington Division B M A. (per Dr J A Murray Hon Sec)	2	2	0
Dr C J Battle (per)—			
Dr Morton Dr Wright, Dr Battle and A N Other ..	4	4	0
North of England Branch of Fund (per Dr J Don and Mr A S Perceval Hon Secs) (eleventh donation total £516 13*s* 6*d*)—			
Dr A. Fairlie	1	1	0
Dr W H Dickinson	2	0	0
Dr E J Burnett ...	1	1	0
Dr H W Dixon	0	10	6
Fees for the Examination of Recruits by Members of the Sunderland Division during 1914—			
Dr D Allan ..	11	2	6
Dr Blair Aitken	10	2	6
Dr Gordon Bell	4	12	6
Dr A. E Legat	6	17	6
Dr N F Rowstron	8	12	6
Dr J Chalmers ..	8	12	6
Dr A. Campbell	17	0	0
Dr S E Murray	11	10	0
Dr Pearcey	14	5	0
Dr R S Hubbersty	9	12	6
Dr Easton	6	2	6
Dr Renney	19	2	6
Dr Raw..	6	10	0
Dr Blair ..	8	0	0
Dr W J Woodburn	2	2	0
Dr M O Brien	1	1	0
South West Wales Division B M A (per Dr D R Price Hon Sec.)	1	15	0
Dr E Hyla Greves (second donation) ..	5	5	0
West Bromwich Pharmaceutical Association (collected by (per Mr J Rex Allen)—			
Mr Griffiths sen	1	1	0
Mr Griffiths jun	1	1	0
Mr Withers	0	10	6
Mr Barnes ..	0	5	0
Mr Beattie	0	5	0
Mr Bourne	0	5	0
Mr Allen	1	1	0

	£	s	d.
Folkestone and District Chemists Association (per Mr F C Jones)	1	1	0
Mr W Riley of Derby (collected by)—			
Mr Judge	0	5	0
Mr Evans	0	5	0
Mr Wright ...	0	5	0
Mr J E Owen	0	5	0
Newcastle and District Pharmacists Association (collected by) (per Mr W Kerse)—			
Messrs Wilkinson and Simpson ..	5	5	0
Messrs Mawson and Procter	3	3	0
Messrs Owen and Son	1	1	0
Mr J Stableforth Hill	1	1	0
Mr T H Fleming ..	1	1	0
Mr R Wright	1	1	0
Mr H J Bates ...	1	1	0
Mr W Kerse	1	1	0
Mr H S Williamson	1	1	0
Mr H W Noble ..	1	1	0
Mr E H S Baker ..	1	1	0
Mr John Elliott	1	0	0
Mr W Clark ..	0	10	0
Mr C I Russell ..	0	10	0
Mr W Stephenson	0	10	0
Mr W Atkins	0	10	0
Mr T M Rutherford	0	10	6
Mr J F Simpson	0	10	6
Mr C E Layne	0	10	6
Mr J Todd	0	10	0
Mr J Corrigill	0	10	0
Mr F Beattie	0	0	6
Mr E G Power	0	10	0
Mr R. McClumpha ...	0	10	6
Mr F R. Parker	0	10	0
Mr J Kinnis	0	10	0
Mr W Kinnis ..	0	10	0
Mr J Elder..	0	7	6
Mr G Whitehead ..	0	5	0
Mr W J Smith..	0	5	0
Mr T Robson	0	5	0
Mr A Turnbull ..	0	5	0
Miss Dunlop	0	5	0
Mr E H Turnbull ..	0	5	0
Mr B Caley	0	5	0
Mr A. D Hunter	0	5	0
Mr Doig ..	0	5	0
Mr Poole	0	5	0
Mr W Buckley	0	5	0
Mr H Ismay	0	5	0
Mr Weddle ..	0	2	6
Mr Padley	0	2	6
Mr J White	0	2	6
Mr H C Bailes ..	0	2	6
A Friend	0	3	0
Dr J Gair Johnston	1	1	0
Cork City and County of from Doctors and Pharmacists (total £124 19s, less expenses £8 7s 2d £116 11s 10d)—			
Dr D D Donovan	5	0	0
Dr A. M Sandford ..	5	0	0
Dr P T O Sullivan ..	5	0	0
Dr C T Pearson ...	5	0	0
Dr J Cotter ..	5	0	0
Dr H R. Townshend	5	0	0

Finance (Councillor John Harrison) hospital accommodation (Professor H H Littlejohn) equipment (Mr H M Rush) personnel (Mrs Maxtone Graham), work parties and clothing (The Dowager Duchess of Abercorn) Samaritan (The Marchioness of Linlithgow), and transport (Sir M Mitchell Thomson, Bart) The Lord Provost is now making a further appeal for funds which are required for general purposes and particularly in the equipment and maintenance of hospitals, the provision of materials for clothing, and the maintenance of transport for the sick and wounded In Edinburgh and its immediate vicinity 750 beds have now been provided in hospitals organised and staffed by the Red Cross Society and these hospitals have been largely equipped by the equipment committee. The donors of the houses converted into hospitals have supplied a considerable part of the equipment and much of the clothing needed A large number of patients from the front have now passed through these hospitals since the war began, in addition to Territorials The military—i e., first line hospitals—are provided in the Edinburgh district, with the exception of the Dalmeny House Hospital, entirely by the War Office without imposing any burden on subscribers to Red Cross funds The provision of the auxiliary hospitals is, at the request of the War Office, left to the efforts of the Red Cross Society The contributions by the committee to the Scottish Hospital at Rouen have hitherto amounted to £400 a month

The work parties and clothing committee at 42, Frederich-street cut out large quantities of material, and arrange for this being made into garments At the music hall workers receive gifts of clothing and other articles, and pack and distribute them and also make garments for which at the moment there is special need. There have been sent abroad in this way to various hospitals 49 000 articles, to hospitals at home over 17 600 articles and to the navy 1280 articles This does not include medical stores The Edinburgh Committee has provided for work abroad nine ambulances capable of carrying 36 stretcher cases and has sent to our French allies three motor ambulances for 12 stretcher cases. In addition it has arranged for the transport of the sick and wounded at home Since the beginning of the war 12 010 patients have been carried by Edinburgh ambulances and motor cars 1263 patients have been naval cases of which 85 were German prisoners mainly from the *Mainz* and *Blücher* From the hospital trains over 1500 patients have been taken to hospital while to auxiliary hospitals 1400 have been conveyed From the camps in the Edinburgh district 4600 patients have been transferred to hospital For this work the transport committee has provided four motor ambulances carrying 14 stretcher cases There have been given for the period of the war three others carrying eight stretcher cases while 16 motor ambulances carrying 34 patients have been lent—a total of 23 motor ambulances capable of carrying 56 stretcher or lying-down cases at a time. The cost of providing the ambulances and maintaining and altering the plant has been £6072. In addition to this motor cars to the number of 200 have been lent to the Edinburgh Transport Committee for the purpose of conveying sitting up cases, as they are termed to and from hospital.

THE ARMENIAN RED CROSS AND REFUGEE FUND—An appeal signed by Lady Henry Somerset, Lady Frederick Cavendish Viscount Bryce, and the Dean of Manchester, has been issued asking for immediate assistance for the above fund The appeal states that there are now in the field 10 000 Armenian volunteers fighting with the Russian Army who have been equipped and maintained by Armenians all over the world at a cost of £6000 per day It is estimated that there will soon be between 20 000 and 25 000 Armenians in the field and at present they have no medical man and there are only five untrained Armenian ladies assisting as nurses. Fifteen medical students from Kieff have gone to their assistance but there are no Red Cross appliances of any sort and these are urgently needed

The civilian population is also sorely in need of medical aid There are 12 000 Armenian refugees at Sarikamysch alone to be provided for hundreds of old men, women and children having tramped there through the snow without shoes or stockings these articles having been seized by the Turkish soldiers who in many instances drove the wretched people out as they entered the villages where they were billeted The Armenian Society, composed of British and American people is administering the Red Cross and Refugee Fund free of all cost, while the British Consul General at Moscow is coöperating

Donations of money may be sent to the honorary treasurer, Mr H A. Godson Bohn, at 17 Holland Villas-road, Kensington, or to the honorary secretary, Miss E J Robinson, at 35A, Elsham road Kensington

THE RED CROSS IN MONTENEGRO—Montenegro is being served for military medical purposes by the Montenegrin Red Cross and by two hospitals of 100 beds each established respectively by the British Red Cross and the Russian Red Cross The Montenegrin Medical Service has now also 24 medical officers and 22 medical students distributed to the hospitals (from 60 to 100 beds) at Cettinje, Rondno, Nikchitch, Kalochine, Podgoritza and elsewhere There are army ambulances at various stations The needs of Montenegro remain very sore for typhoid fever is rife, and the population has been added to by an influx of refugees from Bosnia and Herzegovina. More medical men are needed who are prepared to offer their services voluntarily, and funds are urgently required Contributions may be sent to the Duchess of Rutland, 16 Arlington street, W , or to Lady Parkington, 58, Green street, Park lane W

The Red Cross ambulances which have been presented by various towns to London are to be reviewed as a fleet in July by Her Majesty the Queen

THE KING GEORGE HOSPITAL.—This enormous hospital, whose medical surgical and special personnel we have already published was opened without formality on Wednesday last, patients being received in a certain number of wards which had been prepared An urgent message having been received by the committee that the hospital was, as far as possible to be made ready for the reception of sick and wounded soldiers by May 26th, the first batch of resident medical officers entered into residence by that date and the two top floors and the kitchens were placed in working order The labours of organisation during construction have been considerable as industrial questions with the workmen have periodically arisen

As the result of the notice in THE LANCET four of the five microscopes which were wanted for work in the wards have been promised, the donors being Dr Noel D Bardswell, Midhurst , Mr M C H Moberly Winslow Bucks , Mr W F Mellersh Wimpole-street London and Mr F W Edwards Stanstead road Forest Hill S E

The department for electro-therapeutic and massage treatment is now under the charge of Dr T Grainger Stewart, physician at the Queen square Hospital for Diseases of the Nervous System

QUEEN MARY'S CONVALESCENT AUXILIARY HOSPITALS.—Lady Falmouth and Mrs Gwynne Holford ask us to state that Roehampton House, near London will shortly be opened as a convalescent hospital for sailors and soldiers who have lost their limbs in the war Mr J Pierpont Morgan also has offered Dover House, almost adjoining, for the use of officers These houses together are capable of accommodating about 300 cases

The Queen has consented to the hospitals being named 'Queen Mary's Convalescent Auxiliary Hospitals " and has given a donation of £200 The scheme has also gained the patronage of Queen Alexandra, who in sending a donation of £100 expressed her delight that the subject she had very much at heart was being taken up

A strong committee has been formed, and the following is the list of the consulting staff Mr Thomas Openshaw Mr Robert Jones Mr R. C Elmslie Dr Thos J Horder and Dr Theodore Thompson At these hospitals the wounded who are admitted will be cared for until they have learned to use their artificial limbs, and are capable of taking up some employment, when by working in conjunction with other societies every effort will be made to fit the men to earn their living Grants have been made to the hospitals by the National Relief Fund and the Red Cross Society but a large sum is needed in addition for the equipment and maintenance Communications and donations should be addressed to Mr C H. Kenderdine (marked Auxiliary Hospital) at St Stephen's House, Westminster, who will be pleased to answer all inquiries

The War.

The Casualty List

THE following names of medical officers appear in the casualty lists published since our last issue —

Killed Captain F M Bingham, King's Own (Royal Lancaster Regiment) 5th T F , and Lieutenant G M Chapman and Lieutenant G H Lunan, both of the R A.M C

Died of Wounds Major W P Dillon, No 2 Canadian General Hospital , Captain G C Glidden (attached 10th Battalion Western Canada Regiment), Canadian Army Medical Corps

Wounded Lieutenant W Kelsey Fry, Lieutenant W A Stewart, Lieutenant P W James (from gas), Lieutenant A. C Perry (attached 2nd Battalion Sherwood Foresters—from gas), Lieutenant J R Marrack (attached 1st Monmouth Regiment, T F), Captain H. F Panton, Captain E A P Brock (attached 2nd Royal Irish Fusiliers) Lieutenant P Cagney (attached 2nd Essex Regiment), Lieutenant W T Quinlan, Lieutenant D G Watson, all of the R A M C , Captain H S Hollis, R A M C T.F , Captain F C Bell, Major G S Mothersill, both of the Canadian Army Medical Corps

Prisoner Surgeon probationer W W K Brown, R N V R

Deaths among the Sons of Medical Men

To the list given in our last issue of the sons of medical men who have fallen in the war must be added Captain P Beattie Crozier, only son of Dr J Beattie Crozier, Lieutenant R E J Thomson, eldest son of Lieutenant Colonel S J Thomson, C I E , I M S (retired) , Second Lieutenant T F Stocker, R E , elder son of Surgeon Major E G Stocker, R E , Captain H de B Riordan, only son of Colonel W E Riordan, R.A M C (retired) , Lieutenant R H Ackerley, eldest son of Dr R Ackerley, of Llandindrod Wells , Second Lieutenant Sidney Blair, son of Dr John Blair, of Wigan , Captain R C C Campbell, son of Colonel R N Campbell, C B , C I E , I M S (retired), and Lieutenant E J M Robertson, son of Dr J R S Robertson, of Hayling Island

The Prosthetic Surgery of War in Germany

A Swiss correspondent writes —" Professor Stoppany, the Director of the Zürich Dental School, who has just returned from a long stay in Germany, has published an interesting account of the way wounds of the mouth and face are now being treated there If their condition permits, soldiers suffering from injuries to the mouth or face are conveyed, he says, to Strassburg, where they are treated in a special hospital organised and directed by Professor Römer After mentioning that a large proportion of the wounds received in the trenches are those of the mouth and jaw, Professor Stoppany proceeds 'The hospital which exists at Strassburg is the first that has ever been organised in any war for the treatment of wounds of the face and jaw The staff numbers 55, and all the work (including the cooking), which is done by the wives and daughters of the professors, is performed without fee The hospital itself is divided into two sections In the first a dozen dentists examine the teeth of the soldiers, extract, and make plates This work is carried out at the cost of the military authorities, who adopt the very reasonable point of view that a soldier with defective teeth cannot be thoroughly efficient The remaining section of the hospital itself comprises two subdivisions—the operating theatre and the department in which are made the prosthetic moulds destined to replace the bones or sections of bone sacrificed in the operation, and the surgical work is entirely done by dentists, most of whom have taken their medical degree The wounded are photographed and radiographed on their arrival and photographed before departure, and these photographs and radiographs will constitute a collection of the highest scientific interest '

At the moment when Professor Stoppany left Strassburg more than 200 soldiers were undergoing treatment there, and the results already obtained were almost marvellous

One other and not the least interesting point Professor Stoppany is convinced that, contrary to allegations made some months back, no 'dum dum' bullets have been used against the German troops "

Employees of Local Authorities and the Army

The Local Government Board have addressed a circular letter to the local authorities, dated May 21st, in which they say that in their previous circular of March 11th the necessity was pointed out for economising labour to the greatest extent possible, and, where substitutes are needed, for engaging only men who are not eligible for the army or suited for the special occupations in question While acknowledging that many local authorities have recognised the importance of applying a similar principle in cases where vacancies arise in offices and employments, cases have come under their notice in which men who are eligible for the army or for the special occupations referred to have been selected to fill such vacancies, although it might have been possible to make some other arrangement The circular continues —

' The Board accordingly suggest that, whenever vacancies occur and it is unlikely that candidates suitable for permanent appointment who are not eligible for the army or for special work in connexion with the war can be obtained the local authority should consider first whether it would be possible by a rearrangement of duty among other officers to avoid any fresh appointment during the period of the war , and that if this should be found impracticable they should endeavour to secure the services of any retired officer with the requisite experience who might be able and willing to act during that period or failing this should engage persons temporarily who are not eligible for the army or the special occupations as recommended in the previous circular in the case of substitutes

It is recognised by the Board that persons so engaged may not always possess the same standard of qualification as would be required in the case of permanent appointments, but it can be made clear to them when engaged that the employment is only temporary, and that permanent appointments made after the war will be subject to all the ordinary conditions

Red Cross Work in Edinburgh A Résumé of Much Work —At the outbreak of war the Edinburgh Committee of the Red Cross Society recognised the importance of strengthening its organisation A meeting presided over by the Lord Provost was held in the Council Chambers when the general committee was reconstituted and the following seven adjuvant committees were formed, with their respective conveners

ROYAL COLLEGE OF SURGEONS OF EDINBURGH —At a meeting of the College held recently the following gentlemen were admitted Fellows —John Coffey, L.R C S Edin (triple qualification) Dublin , Norman Grenville Walshe Davidson, L R C S Edin (triple qualification) Wolverhampton , Andrew Graham L R.C S Edin. (triple qualification) China , Garnet Reginald Halloran M B , Ch M Univ Sydney, London , George Laurence M R C S , L R C P Lond Chippenham , Joseph Currie Lorraine, M B , Ch B Edin Burma , and Vernon Laurie Miller, M D , C M McGill Univ , Halifax, Canada The bronze medal and microscope presented to the College by Colonel William Lorimer Bathgate, in memory of his late father William McPhune Bathgate, F R C S Edin , lecturer on materia medica in the Extra Academical School, was awarded after the usual competitive written examination, to Mr James Hood Neill, Edinburgh.

ROYAL MEDICAL BENEVOLENT FUND —At the last meeting of the committee 15 cases were considered and grants amounting to £104 voted to 12 of the applicants The following is a summary of the cases relieved —

Daughter aged 59 of M R C S Eng who practised at Liverpool Until the war broke out managed to earn a living as a teacher of singing but practically all her teaching work has ceased Has an invalid brother partly dependent on her Voted £10 in two instalments. —Widow aged 52, of M B Aberd who practised at Watlington Oxon Left totally unprovided for at her husband's death after a long illness Has one son who is an invalid. Relatives allow her £5 per month but this is not sufficient to provide all that is required for herself and son and applicant unable to work Voted £10 in two instalments and referred to the Guild —M.R.C.S Eng aged 77 who practised at Manchester and Brighton Has been in failing health for some years and is partially blind and suffering from right hemiplegia. Only income the Old Age Pension. Has one daughter who has had to give up her situation to nurse her father Voted £18 in 12 instalments and referred to the Guild.—Daughter aged 60 of L.R.C P Edin who practised at Cheadle Cheshire Health very indifferent and unable to undertake regular employment. Only income £30 per annum Relieved nine time £76 Voted £12 in 12 instalments —Daughter aged 64 of M.D St. Andrews who practised at Dover Has a sister and niece dependent on her Resides at seaside town and takes in paying guests but recently had difficulty in obtaining them Relieved once £10 Voted £10 —Daughter aged 64 of M R C S Eng who practised at Derby Health very indifferent for many years. Only income £5 per annum from a friend Lives with a sister who provides her with a home Relieved five times £60 Voted £12 in 12 instalments.—Daughter aged 65 of M.R.C S Eng who practised at Durham Has been an invalid for years and unable to leave her bed and practically blind Only income a pension from another charity Relieved three times £30 Voted £5.—Wife aged 49 of M R C S Eng Deserted by husband Has one daughter who was a governess but has lost her employment in consequence of the war Applicant very delicate Only joint income recently 10s per week. Relieved twice £14 Voted £12 in 12 instalments —Widow aged 62 of M.R.C S Eng who practised in Jamaica. Has three married sons but none able to help Only income £26 per annum from another charity Too old to work Relieved twice £20 Voted £12 in 12 instalments and referred to the Guild

Also three emergency grants of £1 each pending further inquiries Six additional annuitants at £20 each were also elected making the total number 148 Subscriptions may be sent to the honorary treasurer Dr Samuel West 11, Chandos street, Cavendish square W

MR NEIL MCLEOD, who died suddenly at his residence Whitehall Drighlington, near Bradford, on May 12th was the medical officer and public vaccinator for the fourth district of the North Bierley union, and had a large local practice

Parliamentary Intelligence.

HOUSE OF COMMONS

THURSDAY MAY 13TH

The War and Elementary Education

SIR HENRY HIBBERT spoke of the excellent results obtained from the medical inspection of elementary school children He was afraid that that inspection might have to be stopped or greatly curtailed during the war In his own county (Lancashire) there was a permanent staff of 13 doctors of whom 10 had gone to the war Three of them were serving under the Serbian Government Two other medical men on their staff were going and that would leave them with one They had 25 nurses and 18 had gone They expected two to go almost any day He did not see what could be done in the matter because it was absolutely impossible to engage fresh medical men

Dr ADDISON (Parliamentary Secretary to the Board of Education) said that the Government now contributed a share to the medical inspection of school children whereas formerly the cost fell upon the local authorities Many authorities were now working with greatly reduced medical staffs As to the use of schools for military hospitals, he had been round the country with a committee making provisional arrangements. In Liverpool and other places they visited with the local authorities all available buildings which were anything at all likely to be suitable, and their anxiety was to spare school children from dislocation and disturbance where possible It had been suggested that chapels should be used for hospitals A chapel was very seldom a suitable place A place was wanted where a man lying on a bed could see out of the window and get a glint of sunshine and it often happened with chapels and halls and such like buildings that they only had windows high up, so that a man lying on a bed in the middle of the floor would see the light come in from above Such buildings would not make suitable hospitals All these considerations had been taken into account, and it was not with any avidity that the Board of Education consented to the use of schools as hospitals It was found advisable by the Army Council to have a committee on this matter, and make a comprehensive scheme in case great numbers of beds were needed The various local authorities coöperated with the committee in every way, and it was found quite possible by friendly negotiations in all the great cities visited to arrive at a scheme and, notwithstanding the criticisms from outside arrangements were made which he thought would be found to meet the full requirements of the case and cause as little disturbance and friction as possible Arrangements for 1500 beds could not have been made without disturbing someone

MR PEASE, replying to a question relating to physical education said that the Board of Education had recently had appointed two or three extra inspectors in connexion with physical training, men who had studied the subject and had passed tests in Sweden or elsewhere to go round the country and see that the best system of physical training was adopted in schools They were to examine the curriculum of the school and to see that as much attention as possible, having regard to the other interests of the school, was given to physical training and exercise He believed that more could be done, especially in connexion with the first few minutes of the school day In many of the schools the first ten minutes were given to breathing exercises and to certain simple exercises in addition to the regular period set apart of from 20 to 40 minutes for physical training A real advantage would thus be secured by the children Physical exercise was being made a compulsory subject in all the training colleges

WEDNESDAY, MAY 19TH

Consulting Surgeons' Service with the Army

MR JOYNSON HICKS asked the Financial Secretary to the War Office whether the following surgeons, Sir G H Makins, K.C B Sir A A Bowlby C M G , Mr F F Burghard, Mr W T Lister Mr H. M W Gray and the following physicians Sir W P Herringham, Sir A. E Wright Sir J R Bradford and Sir B Dawson K.C V O were employed at the front at ordinary Royal Army Medical Corps salaries; and whether he had any difficulty in getting eminent doctors to serve in consulting positions either abroad or at home at the ordinary rates of pay given to the officers of the Royal Army Medical Corps —MR H BAKER replied The officers named are employed at the front with pay as colonels of the Army Medical Service, and so far there has been no difficulty in obtaining eminent medical men to serve in consulting positions either at home or abroad at the rate of pay offered

Medical Men and War Service

MR GINNELL asked the President of the Local Government Board to state the number of medical officers of local administrative bodies in England and Wales who had volunteered for service in the present war the number of them serving and the treatment of them by those bodies generally in regard to continuance of salary payment of substitute, and keeping their positions vacant for them —MR HERBERT SAMUEL (in a written reply) answered The number of medical officers of health serving with the naval or military forces, so far as the Local Government Board know is 171 and the number of tuberculosis officers and assistant tuberculosis officers so serving is 52. I have no information as to the number of officers who have volunteered but are not serving A large number of assistant medical officers of health, superintendents of isolation hospitals Poor law medical officers, and school medical officers are also serving Generally speaking local authorities pay such officers during their absence the difference between their civil pay and their navy or army pay keep their positions vacant for them, and appoint temporary substitutes where necessary

MR GINNELL asked the Chief Secretary to the Lord Lieutenant a similar question in regard to the medical officers of local administrative bodies in Ireland —MR BIRRELL

VACANCIES FOR MEDICAL OFFICERS —We are asked to state that there are three vacancies for officers in the 2nd Line and two in the 3rd Line, South Wales Mounted Brigade Field Ambulance, the former of which will be going into camp at an early date Particulars can be obtained from Lieutenant Colonel Herbert Jones, The Barracks, Hereford

There are also vacancies for medical officers (carrying commissions as lieutenants R A M C T) in the 3rd (Foreign Service) Line 3rd East Anglian Field Ambulance Enquiries and applications should be addressed to the Officer Commanding, 3/3 East Anglian Field Ambulance, Walthamstow, London, E

There are also vacancies for five medical officers prepared to serve abroad in the 2nd and 3rd Line Welsh Border Mounted Brigade Field Ambulance Pay and allowances as in the Regular Army, together with outfit and camp kit grants Full particulars can be obtained on application to Officer Commanding, 2nd Line Welsh Border Mounted Brigade Field Ambulance, Lambton Park Camp, co Durham

WOUNDED ALLIES RELIEF COMMITTEE AND SERBIA.—The Wounded Allies Relief Committee has received a most satisfactory account of the typhus hospital at Kragujevac from Dr Lauwens, the medical officer in charge, who reports that the building provided by the Serbian Government is spacious, clean, and in all ways suitable, that the unit has received the utmost attention from the Serbian Government, and that the typhus epidemic is already declining, a total of 20 000 cases in March having dropped in April to 12 000 He further relates the safe arrival of the committee s motor ambulance, to be used at first, for the transport of infectious cases The committee is shortly dispatching to Serbia, to the Kragujevac Hospital, four R C H touring cars, for the transport of the wounded, and their comparative lightness will be of great advantage on the heavy Serbian roads The committee also appeals to the British public to supply the Serbian sick and wounded with boots and overcoats As the typhus epidemic is already on the decline, the Kragujevac unit will shortly be adapted for purely surgical purposes Dr Lauwens urgently asks for surgical instruments, dressing materials and bandages, disinfectants, iodine, &c Gifts in kind should be addressed to the Committee at Sardinia House, Kingsway, money to the honorary treasurer, Mr T O Roberts (manager), London County and Westminster Bank, 217, Strand, W C

MILITARY HOSPITAL ACCOMMODATION IN ABERDEEN —For some time past negotiations have been in progress between the military authorities and the Aberdeen parish council with a view to the transference of Oldmill Poorhouse to the former, to be used at a hospital The City of Aberdeen Territorial Association has now received instructions from headquarters to take over the Poorhouse, the parish council being allowed a certain period within which to remove the inmates The Poorhouse was originally licensed to receive 967 patients but by using sitting rooms as wards it should be capable of accommodating over 1000 beds It is calculated that the taking over of the institution will result in a gain to the Scottish General Hospital of some 550 beds

THE BRITISH FIRE PREVENTION COMMITTEE AND THE WAR EMERGENCY —The following particulars show the work done by the British Fire Prevention Committee (8 Waterloo-place, London W) during the first nine months of the war The committee s special fire survey force of honorary surveyors have surveyed in detail 500 establishments taken over for war emergency work including extensive groups of buildings such as auxiliary military hospitals In each case the honorary surveyors reports, which are prepared on special lines and accompanied by sketch plans serve as a basis for the detailed written reports to the authorities concerned prepared at the committee s London headquarters A warning service has issued a large number of public "fire warnings" in the form of posters over 25 000 of which have been issued to auxiliary hospitals at home in France, in the Mediterranean and in Egypt, as also translations in French Flemish Urdu, and Panjabi The issue of posters involved not only a careful distribution with directions but also resulted as a rule, in correspondence on technical points Authorities and public corporations receive the posters free upon written application to the registrar of the committee "Warnings" have also been issued to factories and workshops engaged on Government supplies in respect to air raids A special fire service force has been organised by the committee, comprising ex fire-brigade officers and firemen, and 200 firemen with the necessary appliances are available for mobilisation in sections within 48 hours Calls upon this force have so far only been made to a moderate extent for fire patrols The work in each department has been carried out by the honorary officers of the committee and a small clerical staff without materially interfering with the routine work of the organisation The Committee have recently issued some valuable hints on fires arising from air raids, and they may be warmly congratulated upon their public service

PROHIBITED EXPORTS —The Privy Council, under its powers to supplement or vary, whilst a state of war exists and on the recommendation of the Board of Trade any Proclamation or Order dealing with goods for exportation, has prohibited the exportation to all destinations of crude coal tar, and to all destinations other than to British possessions and protectorates the following drugs and chemicals—magnesium chloride, oxides and salts of cobalt, oxalic acid, phosphorus, and all forms of aluminium

ST THOMAS'S HOSPITAL is preparing to enlarge the accommodation there provided for wounded and sick soldiers by 300 extra beds, which are to be placed in huts now under construction

THE Royal Insurance Company, Liverpool, and the Liverpool, London, and Globe Insurance Company have each presented to the Liverpool Civic League a fully equipped motor ambulance for the transport of wounded soldiers to the Liverpool hospitals

Medical News.

BOARD OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND THE ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW —At examinations held recently the following candidates were successful —

First Examination —Robert Austin Joseph Black Apcar Galustian Francis Xavier Hayes Donald Leslie Henderson Robert Alexander Chermside Pooley Sidney Hill Waddy and Robert Wilson.

Second Examination —Philip George Bainbridge Alexander Balfour Black Donald M Kenzie Black James Calder Jean M Murray Crawford Robert Phillips Crawford Reginald Douglas Howat William Jackson Reginald John Thomas Malcolm Gasper Joseph Michaelson Patrick Aloysius O Brien and Samuel Sloan

Third Examination —John Carden Bedwell William Campbell Borrie (with distinction) Kaikhasru Sorabji Bhiwandiwalla William Brown John George Buchanan Harry Ellison Owen Glendower Evans John William Irvine William Paterson Hay Lightbody James Young M Lean H Morley and Charles Edward Stuart Runciman

Final Examination —Frederick Arthur Vere Denning (with honours) John Walker George Thomson John Mellon Smeaton Stewart Newnham Toulmin Wilson Thabo Mongoli Sebeta Victor Albert Goonetilleke, John Scott William Pigg Over and Thomas Ross Scott

SOCIETY OF APOTHECARIES OF LONDON —At examinations held recently the following candidates passed in the subjects indicated —

Surgery —C D Banes (Section II) King's College Hospital; A L L Bennett (Sections I and II) Royal Free Hospital and Birmingham H A De Morgan (Sections I and II) Middlesex Hospital C S Dodson (Sections I and II) University College Hospital J C Lee (Section I) McGill and L N Lee (Section II) Geneva H B Padwick (Sections I and II) and M C Stark (Section I) London Hospital and T J Thomas (Section I) King s College Hospital

Medicine —W Bailey Thomson (Section II) Aberdeen J A A Boddy (Section I) Manchester A Butterfield (Section II) Durham W Fox (Section II) Charing Cross Hospital J C Lee (Sections I and II) McGill W F Matthews (Section I) King s College Hospital S Rawlinson (Sections I and II) Manchester and A H Taymour (Sections I and II) Guy s Hospital

Forensic Medicine —L M Arnold Cambridge and St Mary s Hospital A Z Abushady St George s Hospital L S Goss Middlesex Hospital J C Lee McGill I H Lloyd Westminster Hospital A H Taymour Guy s Hospital and T J Thomas King s College Hospital

Midwifery —L M Arnold Cambridge and St Mary s Hospital A Butterfield Durham F W Chamberlain Middlesex Hospital K M Dyott London Hospital and J C Lee McGill

The Diploma of the Society was granted to the following candidates entitling them to practise medicine surgery and midwifery: C D Banes A L L Bennet C S Dodson L N Lee H A DeMorgan, and H B Padwick

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon and Anæsthetist Salary £150 per annum with board residence and laundry

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon, unmarried Salary £150 and £120 per annum respectively with residence board and laundry

WESTERN GENERAL DISPENSARY, Marylebone-road N W —Honorary Ophthalmic Surgeon

WEST HAM AND EASTERN GENERAL HOSPITAL.—Resident Medical Officer Salary £160 per annum. Also House Physicians Salary £120 and £100 per annum with board, residence, and washing

WIGAN ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY—Junior House Surgeon. Salary £150 per annum with board apartments and washing

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer and House Surgeon for six months. Salary at rate of £150 per annum, with board rooms and laundry

WORCESTER GENERAL INFIRMARY—Resident Medical Officer Salary £150 per annum with board residence and washing

WREXHAM INFIRMARY—Resident House Surgeon. Salary £125 per annum with board lodging and washing

YORK RETREAT—Junior Assistant Medical Officer Salary £200 to £225 per annum with board lodging &c

Births, Marriages, and Deaths.

BIRTHS

BRODRIBB—On May 21st at Pevensey road, St Leonards-on-Sea, the wife of Arthur W Brodribb, M.A. M.B L.R C.P of a son.

CUNNINGHAM—On May 18th at Gwynfa, Llandrindod Wells the wife of J B. Cunningham M.B. Ch.B of a daughter

GLENN—On May 19th, at Merrion-square Dublin, the wife of John H R Glenn M D of a son.

MASEFIELD—On May 20th at Tolima," Trentham Staffs, the wife of W Gordon Masefield, M R C S L.R C.P of a son

TAYLOR.—On May 18th at La Jaspellerie, Sark Channel Islands the wife of Ashby Taylor Medical Officer of Sark of a daughter

MARRIAGES

GILLON—HUTCHISON—On May 19th at St George s Hanover square Lieutenant Colonel G Gore Gillon F.R C S Edin., R.A.M C (temp) late New Zealand M.C to Jean Frances Hutchison widow of Joseph Hutchison, of Woodside, Lanarkshire

LEE—GOMPERTZ.—On May 21st in London James Carrel Lee, M.D McGill University Montreal son of Mr and Mrs Lee of Quebec Canada, to Ethel Gompertz, M.B Glasg., daughter of Colonel and Mrs Gompertz, of Teignmouth Devon.

WILSON-SMITH—LAWES.—On May 18th at St Mark's Church Regent's Park London Lieutenant William Arthur Wilson-Smith M.D R.A.M.C., to Dorothea Grace second daughter of Mr and Mrs. J Edward Lawes Woodford House, Aldershot.

DEATHS

BEATTIE.—On April 28th at Maidugurl W Africa, John Abernethy Beattie M D., of the West African Medical Staff aged 27 years

CHAPMAN—On May 13th killed in action in France Lieutenant G M. Chapman M.B Cantab R.A.M.C

GORDON—On May 20th, at Calcutta, of heart failure Reginald Gordon, M B Ch B., Surgeon, s.s. *Nankin* aged 33 years.

PAYNE.—On May 21st at 76 Onslow-gardens South Kensington S W Surgeon General Arthur James Payne, M.D , I.M.S (retired) in his 89th year

N.B — A fee of 5s is charged for the insertion of Notices of Births Marriages and Deaths

BOOKS, ETC , RECEIVED

ALLEN GEORGE AND UNWIN LIMITED London.

The Arcana of Freemasonry By Albert Churchward, M.D., M.R.C.P F G S., P.M. P.Z., 30° Price 7s 6d. net

ARNOLD EDWARD London

Eye-Witness's Narrative of the War From the Marne to Neuve Chapelle Price 1s net

CASSELL AND CO LIMITED, London, New York, Toronto and Melbourne.

Materia Medica and Therapeutics By J Mitchell Bruce and Walter J Dilling Tenth edition. Revised to correspond with the British Pharmacopœia, 1914 Price 6s 6d. net

KING P S AND SON London.

The Nature and Purpose of the Measurement of Social Phenomena. By A. L. Bowley Sc.D Price 3s 6d. net

LEWIS H K London

Occupational Affections of the Skin A Brief Account of the Trade Processes and Agents which Give Rise to Them By R. Prosser White M.D Edin M.R.C.S Lond. Price 7s 6d. net.

ROUTLEDGE, GEORGE, AND SONS London.

Towards Racial Health: A Handbook for Parents Teachers, and Social Workers on the Training of Boys and Girls By Norah H March B.Sc. M.R San.I With a Foreword by J Arthur Thomson M A., LL.D Professor of Natural History in the University of Aberdeen Price 3s 6d. net

SAUNDERS W B COMPANY London

Medical Electricity Röntgen Rays and Radium. By Sinclair Tousey A M., M D Consulting Surgeon to St Bartholomew's Clinic New York City Second edition thoroughly revised and greatly enlarged Price 35s net

Infection Immunity and Specific Therapy By John A. Kolmer M D., Instructor in Experimental Pathology University of Pennsylvania. Price 25s net

Notes, Short Comments, and Answers to Correspondents.

PATENT MEDICINES

THE Commissioners of Customs and Excise in their latest report give the subjoined particulars respecting the number of licences issued to makers or vendors of patent medicines in England and Scotland and the amount of duty collected (the duty, it is pointed out, does not extend to Ireland)

Year ended March 31st.	England		Scotland		Total.	
	No	Amount.	No	Amount.	No	Amount.
1905	36 999	£9248	3130	£782	40 129	£10 030
1906	37 568	9392	3166	792	40,734	10 184
1907	38,166	9544	3187	798	41,353	10,342
1908	39 023	9757	3249	813	42,272	10 570
1909	39,262	9815	3301	825	42,563	10 640
1910	39 113	9777	3300	827	42,413	10 604
1911	39 430	9856	3267	817	42,697	10 673
1912	39 848	9961	3283	820	43,131	10 781
1913	39 849	9963	3269	817	43 118	10 780
1914	39 914	9980	3242	811	43 156	10,791

The net receipts for medicine stamp duty are shown in a separate table as follows —

Year ended Jan. 31st	England.	Scotland.	Total.
1905	£329,171	£2,268	£331 439
1906	321,543	2,569	324 112
1907	324,180	2,926	327 106
1908	330 735	3,407	334 142
1909	312,204	3,285	315,489
1910	310,203	2,911	313,114
1911	322,696	2,950	325,646
1912	324,861	2,996	327 857
1913	325 420	2,899	328,319
1914	357,570	2,807	360,377

It should be explained that the licence duty payable by makers or vendors of patent medicine is in Great Britain 5s per annum and that the duty payable on medicine labels is 1½d , 3d , 6d , 1s , 2s , or 3s , according to the price of the medicine

HEALTH AND SANITATION IN THE EAST AFRICA PROTECTORATE

THE report on the East Africa Protectorate for the year 1913-14 has been received at the Colonial Office and presented to both Houses of Parliament. In the section of the report dealing with medical matters it is mentioned that "if it were not for the disastrous effects of the epidemic diseases which so seriously affected the Protectorate during the year it could be said that a better standard of health was maintained than has yet been recorded. The grand total of those who presented themselves for treatment in 1913 was 108,520 as against 93 408 in 1912 The predominating diseases affecting all zones in almost equal proportions, were diseases of the digestive, respiratory, and locomotory organs, and affections of the skin Of the more preventable diseases malaria easily comes first, very few parts of the country escaping this infection Dysentery also is generally prevalent. Antityphoid inoculation has been inaugurated " Then follow details, of which we subjoin a summary —

Coast zone —The number of cases of malaria treated was less than in the previous year, the decrease being to a great extent due to the spread of knowledge and an extended use of quinine. There were 11 cases of black water fever and 1 case of trypanosomiasis the subject being a derelict native brought in by the police, of whom no history could be obtained There is a large field for research in the study of elephantiasis, as cases are common though rarely presenting themselves for treatment There were 203 cases of plague (as compared with 27 in the previous year) with a death rate of 85·6 per cent the vast majority of cases occurring in Mombasa The type was largely bubonic, with a serious proportion of pneumonic cases Small pox furnished the following written reply About 26 or 27 Poor law medical officers have been granted leave of absence to join the Army Medical Service Their positions will be kept open for them In some cases the guardians are paying the medical officer his salary and also paying the substitute In others the salary is paid to the temporary substitute only

Disabled Soldiers

Replying to Mr ELLIS GRIFFITH, Mr H BAKER (Financial Secretary to the War Office) wrote A wounded soldier considered to be permanently unfit for further service is brought before a medical board, and may be discharged from the service before complete convalescence is attained He can, however remain in hospital as a free patient until it is considered advisable that he should leave, and during this period he draws any pension or disability pension awarded him All insured soldiers while suffering from disability are entitled on discharge from the service to full benefit under the National Insurance Act, except that, as provided by the Select Committee on Pensions, sickness and disablement benefits are reduced by 5*s* a week for men who are drawing the total disability pension at the new rate

National Insurance Payments to Medical Men

Mr BRIDGEMAN asked the Chancellor of the Duchy why it was that medical men were not paid each quarter the full amount due to them under the National Insurance Act, what means doctors had of recovering arrears due to them, and why in the border parishes they received mileage pay on the Welsh side but not on the English side for patients distant more than three miles —Mr MONTAGU wrote in reply In answer to the first part of the question, the remuneration due to practitioners on the panel under their agreements with Insurance Committees is ascertainable annually and not quarterly The quarterly payments are advances on account of remuneration which cannot be determined until the close of the year, and no quarterly settlement is therefore practicable As regards the latter part of the question, the distribution of any mileage grant among the doctors in any particular area is largely a matter for the doctors themselves If, however, the honourable member has in mind any particular case, I should be pleased to make inquiries

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication*

BOYCOTT ARTHUR E M D Oxon. F R S has been appointed Director of the Graham Research Laboratory

EWAN J A M D Edin has been appointed Temporary County Medical Officer of Health for Kesteven.

GEMMELL, A. C M B B C Cantab, M R.C S L.R C P Lond has been appointed Resident Medical Officer to the Red Cross Hospital Ampton Hall Bury St. Edmunds

JONES PETER M D Edin has been appointed Medical Officer of Health for the Abergele and Pensarn Urban District

KELLEHER T A M B B Ch R U I has been appointed Temporary Medical Officer of Health to the Waterford and New Ross Port Sanitary Authority

SHORLAND W L R C P Edin. M.R C S., has been appointed Medical Officer and Public Vaccinator for Briton Ferry and Baglan Lower

Vacancies

For further information regarding each vacancy reference should be made to the advertisement (see Index)

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

BIRKENHEAD BOROUGH HOSPITAL.—Female Senior and Junior House Surgeons Salary £180 and £150 per annum respectively with board and laundry

BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer unmarried Salary £250 per annum with apartments attendance &c

BOLTON INFIRMARY AND DISPENSARY —Third House Surgeon. Salary £170 per annum with apartments board and attendance

BRIGHTON COUNTY BOROUGH ISOLATION HOSPITAL —Resident Medical Officer Salary £200 per annum with board and lodging

BRISTOL, BISHOP S KNOLL HOSPITAL (2ND SOUTHERN GENERAL HOSPITAL) Stoke Bishop —Surgeon in Residence Salary £250 per annum with board lodging and laundry

BRISTOL GENERAL HOSPITAL.—House Surgeon and Casualty House Surgeon both for six months Salary at rate of £150 per annum with board residence &c

BRISTOL ROYAL INFIRMARY —Throat Nose and Ear House Surgeon for six months Salary at rate of £120 per annum with board apartments and laundry

BURNLEY VICTORIA HOSPITAL.—House Surgeon Salary £135 per annum with residence board and washing

BURY INFIRMARY —Senior and Junior House Surgeons Salary £175 and £150 per annum respectively with board residence, and washing

BUXTON DERBYSHIRE DEVONSHIRE HOSPITAL.—Assistant House Physician for six months Salary £100 per annum with apartments board and laundry

CAMBRIDGE ADDENBROOKE S HOSPITAL.—Honorary Assistant Surgeon for Ear Nose and Throat Department *Also Honorary Assistant Surgeon for Ophthalmic Department*

CARLISLE NON PROVIDENT DISPENSARY —Resident Medical Officer Salary £200 per annum with apartments (not board)

CARMARTHEN JOINT COUNTIES ASYLUM —Temporary Second Assistant Medical Officer Salary at rate of £200 per annum with board lodging washing &c.

DENBIGH NORTH WALES COUNTIES ASYLUM —Second Assistant Medical Officer Salary £3[illegible]0 per annum with apartments board attendance and washing

EALING BOROUGH OF —Medical Officer of Health and School Medical Officer Salary £700 per annum

EDINBURGH ROYAL ARMY MEDICAL CORPS DEPOT Easter road Barracks —3RD LOWLAND FIELD AMBULANCE Commissions

EVELINA HOSPITAL FOR SICK CHILDREN Southwark, S E —House Physician for five months Salary at rate of £75 per annum with board residence and washing

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Physician for six months Salary at rate of £150 per annum with board apartments and washing

GREAT MISSENDEN BUCKS.—3RD/2ND SOUTH MIDLAND MOUNTED BRIGADE FIELD AMBULANCE (T): Two Medical Officers SANITARY SECTION 2ND/1ST SOUTH MIDLAND DIVISION: Medical Officer

HARROGATE INFIRMARY —Resident House Surgeon. Salary £100 per annum.

LEEDS CITY —Medical Assistant in Public Health Department Salary £350 per annum

LEICESTER ROYAL INFIRMARY —Resident Medical Officers. Salary as arranged

LIVERPOOL, HIGHFIELD MILITARY HOSPITAL, Knotty Ash —Resident Assistant Medical Officer Salary at rate of £300 per annum with rations and apartments

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—Honorary Assistant Laryngologist for Ear Nose, and Throat Department

MANCHESTER COUNTY ASYLUM Prestwich —Assistant Medical Officer unmarried Salary £250 per annum with board apartments attendance and washing

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN Park place Cheetham Hill road.—House Surgeon. Salary £120 per annum, with apartments and board

NEWCASTLE UPON TYNE POOR LAW INSTITUTION AND INFIRMARY Westgate-road —Assistant Resident Medical Officer unmarried Salary at rate of £250 per annum with apartments rations and washing

NORTHAMPTON COUNTY BOROUGH —Temporary Clinical Tuberculosis Officer Salary £350 per annum

NORTHUMBERLAND CHILDREN S SANATORIUM Stannington —Female Resident Medical Officer Salary £200 per annum with board and washing

NOTTINGHAM CHILDREN S HOSPITAL —Female House Surgeon Salary at rate of £150 per annum with apartments board, and washing

PADDINGTON GREEN CHILDREN S HOSPITAL W —Temporary Surgeon in Charge of Out-patients

PLYMOUTH SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon Salary as arranged with board residence and washing

ROTHERHAM HOSPITAL.—Junior House Surgeon Salary £125 per annum with board lodging and washing

ROYAL FREE HOSPITAL, Gray s Inn road W C —Two Resident Medical Officers to Military Block

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL 234, Great Portland street W —Resident Medical Officer

ST MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plaistow E —Resident Medical Officer and Assistant Resident Medical Officer Salary at rate of £110 and £90 per annum respectively with board residence and laundry

SALISBURY GENERAL INFIRMARY —House Surgeon and Assistant House Surgeon unmarried Salary £150 and £100 per annum respectively with apartments board lodging and washing

SCARBOROUGH HOSPITAL AND DISPENSARY —Senior and Junior House Surgeons Salary £100 and £80 per annum respectively with board residence, &c

SHEFFIELD ECCLESALL BIERLOW UNION —Resident Assistant Medical Officer Salary £350 per annum with board washing and apartments

SHEFFIELD JESSOP HOSPITAL FOR WOMEN (GYNÆCOLOGICAL AND MATERNITY DEPARTMENTS) —Female Junior House Surgeon unmarried Salary £80 per annum with board residence and laundry

SHEFFIELD ROYAL INFIRMARY —House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

SHEFFIELD WHARNCLIFFE WAR HOSPITAL Middlewood road —Resident Medical Officers

SHREWSBURY ROYAL SALOP INFIRMARY —House Physician Salary at rate of £110 per annum with board and apartments

SIDLAW SANATORIUM —Resident Medical Officer Salary £200 per annum

SINGAPORE, STRAITS SETTLEMENTS —Resident Medical Superintendent for Infectious Diseases Hospital Salary 420 dollars for first 450 dollars for second and 480 dollars for third year with free quarters

SOUTH SHIELDS INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY —Female House Surgeon Salary £150 per annum with residence board and washing

STROUD GENERAL HOSPITAL —House Surgeon Salary £120 per annum with board lodging and washing

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician Salary £125 per annum with board apartments and washing

TINGWALL, WHITENESS AND WEISDALE PARISH —Medical Officer and Public Vaccinator Salary £45 per annum

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Isle of Wight.—Assistant Resident Medical Officer

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY Burlington House London W

THURSDAY —Papers —Mr E J Russell: Soil Protozoa and Soil Bacteria (communicated by Mr H T Brown) —Mr C Dobell and Mr A. P Jameson The Chromosome Cycle in Coccidia and Gregarines (communicated by Prof J B Farmer) —Prof O W Richardson: The Influence of Gases on the Emission of Electrons and Ions from Hot Metals.—Prof C H Lees On the Shapes of the Equipotential Surfaces in the Air near Long Buildings or Walls and on their Effect on the Measurement of Atmospheric Potential Gradiants —Mr J W Nicholson: The Band Spectrum associated with Helium (communicated by Prof A. Fowler)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street W

MONDAY

SECTION OF ODONTOLOGY (Hon Secretaries—F Coleman F R Smyth): at 8 P M

Annual General Meeting —Election of Officers and Council for Session 1915–1916

Casual Communication

Mr J G Turner: A Note on Extraction.

Paper

Mr F J Bennett Recent Studies in Calcification of the Teeth

THURSDAY

SECTION OF DERMATOLOGY (Hon. Secretaries—S E Dore, A. M H. Gray): at 5 P.M.

Adjourned Meeting

Debate on the Pemphigoid Eruptions

FRIDAY

SECTION OF EPIDEMIOLOGY AND STATE MEDICINE (Hon. Secretaries—G S Buchanan William Butler): at 8.30 P.M

Paper

Mr Major Greenwood jun., and Mr G Udny Yule Anti typhoid and Anti cholera Inoculation a Statistical Study

WEDNESDAY (June 9th)

SECTION OF OPHTHALMOLOGY (Hon. Secretaries—Leslie Paton Elmore W Brewerton)

Cases (at 8 P.M)

Paper (at 8.30 P M.)

Mr Fisher: Retinitis in Pregnancy

NORTH EAST LONDON CLINICAL SOCIETY Prince of Wales s Hospital Tottenham N

THURSDAY —4.15 P.M. Election of Officers 1915–1916 Clinical Meeting

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, Society's Rooms West London Hospital, Hammersmith road W

FRIDAY —8 P M Cases 8 30 P M Paper —Dr F S Palmer The Functional Palsies and their Recognition

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST GRADUATE COLLEGE West London Hospital, Hammersmith road W

MONDAY —10 A.M Dr Simson Diseases of Women. 2 P.M Medical and Surgical Clinics. X Rays. Mr D Armour: Operations Dr Pritchard: Bacterial Therapy Department. Mr B Harman and Mr Gibb: Diseases of the Eye.

TUESDAY —2 P.M Medical and Surgical Clinics X Rays Mr Baldwin: Operations Dr Davis: Diseases of the Throat, Nose and Ear Dr Pernet: Diseases of the Skin

WEDNESDAY —10 A.M. Dr Saunders: Diseases of Children. Dr Davis: Operations of the Throat, Nose, and Ear 2 P.M. Medical and Surgical Clinics. X Rays. Mr Pardoe: Operations Dr Simson: Diseases of Women Mr Gibb: Diseases of the Eye

THURSDAY —9 A.M Dr Bernstein Bacterial Therapy Department 2 P M Medical and Surgical Clinics. X Rays. Mr D Armour Operations Mr B Harman: Diseases of the Eye

FRIDAY —10 A.M Dr Simson: Gynæcological Operations 2 P.M. Medical and Surgical Clinics X Rays Mr Baldwin: Operations Dr Davis: Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin.

SATURDAY —10 A.M Dr Saunders Diseases of Children Dr Davis: Operations of the Throat Nose and Ear Mr B Harman: Eye Operations 2 P M Medical and Surgical Clinics X Rays. Mr Pardoe: Operations

NORTH EAST LONDON POST GRADUATE COLLEGE Prince of Wales s General Hospital Tottenham N

MONDAY —Clinics:—10.30 A M Surgical Out patients (Mr E Gillespie) 2.30 P M Medical Out patients (Dr T R Whipham) Gynæcological Out-patients (Dr Banister) 3 P M Medical In patients (Dr R M Leslie)

TUESDAY —2.30 P M Surgical Operations (Mr Carson) Clinics —Medical Out patients (Dr A G Auld) Surgical Out patients (Mr Howell Evans) Nose Throat and Ear Out patients (Mr H D Gillies) Radiography (Dr Metcalfe) 3.30 P M Medical In patients (Dr A J Whiting) 4.30 P M Clinical Demonstration—Mr J Howell Evans: Selected Surgical Cases

WEDNESDAY —Clinics —2.30 P M Throat Operations (Mr Gillies) Children Out patients (Dr T P Whipham) Eye Out patients (Mr R P Brooks) Skin Out patients 5.30 P M Eye Operations (Mr R P Brooks)

THURSDAY —2.30 P M Gynæcological Operations (Dr A E Giles) Clinics —Medical Out patients (Dr A J Whiting) Surgical Out patients (Mr Carson) Radiography (Dr Metcalfe) 3 P M Medical In patients (Dr R M Leslie)

FRIDAY —2.30 P M Surgical Operations (Mr Howell Evans) Clinics —Medical Out patients (Dr A G Auld) Surgical Out patients (Mr E Gillespie); Eye Out patients (Mr R P Brooks)

THE THROAT HOSPITAL, Golden-square W

MONDAY —5.15 P M Special Demonstration of Selected Cases

THURSDAY —5.15 P.M Clinical Lecture.

KING S COLLEGE (UNIVERSITY OF LONDON), Physiological Laboratory King's College, Strand W C

Course of Advanced Lectures in Physiology:—

MONDAY AND WEDNESDAY —4.30 P M Prof T G Brodie: The Gases of the Blood (Lectures I and II)

For further particulars of the above Lectures &c , see Advertisement Pages

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention should be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

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The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows —

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TO COLONIAL AND FOREIGN SUBSCRIBERS

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied

SOLE AGENTS FOR AMERICA—Messrs WILLIAM WOOD, AND Co 51 Fifth Avenue, New York, U S A.

occurred at infrequent intervals The number of cases of dysentery increased considerably, the chief sufferers being imported labourers from Kikiyu and Kavirondo There were 28 cases of beri beri, the patients being all from up country There were 4 cases of enteric fever (all Europeans), none of which proved fatal There were sporadic cases of cerebro spinal meningitis The improvement in general conditions of health of the European population was satisfactorily maintained, malaria was the principal cause of sickness

Mountainous area —The health of both Europeans and natives was more satisfactory than in the previous year There was an appreciable decrease in the number of cases of malaria, the type was largely subtertian There were 3 cases of blackwater fever, 1 of which proved fatal There were 25 cases of plague at Nairobi, with 19 deaths, and 31 cases at Kisumu, with a mortality of 87 per cent 63 cases of small pox were recorded, of which 12 were fatal A severe outbreak of dysentery occurred amongst the labourers employed on the construction of the Eldoret-Londiani road The total number of cases throughout the zone was 777, as against 612 in 1912 There were 21 cases of enteric fever, 1 of which proved fatal The number of cases of cerebro-spinal meningitis reported was 288, with 152 deaths The rains were early and prolonged, and it was during these cooler months that the epidemic was more apparent Amongst the European population the most noticeable feature during the year was the large number of children's diseases, chiefly cases of intestinal trouble

Kenya and Nyanza Provinces —During the wetter and colder months rheumatic affections prevailed very largely in the neighbourhood of Mount Kenya 3627 cases of malaria were recorded, as against 3134 in 1912 Some of the native chiefs in the Kenya Province have taken to sleeping under mosquito nets One case of blackwater fever was reported One imported case of sleeping sickness was discovered at Kisii, 30 or 40 miles from the lake shore, but notifications of the occurrence of this disease are yearly getting rarer The epidemic of cerebro spinal meningitis which broke out in May was the most disastrous experienced in the Kenya Province since the advent of European occupation So severe was it that at one time it threatened to paralyse the interior economy of the province It is quite impossible to estimate the number of cases, but it is probable that the normal sick rate among the native population was more than doubled The death rate is estimated at from 3 to 10 per cent above the normal The infection did not reach the Nyanza Province till the latter part of the year 31 cases of plague occurred at Kisumu, with a mortality of 87 per cent There were 15 cases of enteric fever with 3 deaths For the first time on record no cases of small pox were reported in the Nyanza Province, but desultory cases were met with in the Kenya Province

Desert zone —There were several cases of conjunctivitis and corneal ulcers, probably due to glare, sand and flies The predominating cause of sickness was malaria, 445 cases being notified in Kismayu alone Dysentery was common in Jubaland, owing to the dependence of the population on the muddy waters of the Juba River and polluted wells There were 2 cases of beri beri and cerebro spinal meningitis appeared in two instances The general standard of health of Europeans in these regions has always been good and this year was no exception, only 1 case of malaria was recorded

Vaccination —During the year 131,757 vaccinations were performed The lymph used was prepared at the Government laboratory, and the quantity issued was 376,202 doses

Sanitation and preventive measures —The Sanitation Division of the Administration was created on April 1st, 1913, under a chief sanitation officer In June Professor W J Simpson, C M G, professor of hygiene at King's College, London, arrived to inquire into the sanitary conditions of the Protectorate Energetic measures are being carried out against mosquitoes by gangs maintained at Mombasa, Nairobi and Kisumu The measures adopted to suppress the outbreak of plague at Mombasa were house to house visitation, fumigation, segregation, inspection of travellers, and inoculation with Haffkine's prophylactic in 48,478 instances Similar steps were taken in other parts of the Protectorate No water borne sewage scheme has yet been installed but in a few isolated cases septic tanks have been added to residences The single bucket system is in vogue generally The contents of the buckets are thrown into the sea at Mombasa and buried in trenches at Nairobi Kisumu, and other towns Except in Nairobi where the Bransby Williams scheme is now well in hand no township possesses a drainage scheme of a kind that can be regarded as satisfactory At Mombasa and in the scattered residential districts the need is not acute owing to the absorbent nature of the soil but in the more densely populated areas the question is of more importance A large amount of the work performed by antimosquito gangs is caused by the absence of adequate provision for the removal of waste water It must now be accepted that all African rivers are more or less polluted, and general filtration, &c, is most necessary before water can be considered fit to drink The Mombasa service will not be completed for some time Similar services are being taken in hand for Nakuru and Kisumu Considerable work has been done during the year in bush cutting and in digging out roots The alterations in the general appearance of certain areas in Mombasa, Nairobi, and Kisumu are very much for the better The southern part of Mombasa is now clear of bush

RHUBARB POISONING

To the Editor of THE LANCET

SIR,—In your issues of May 8th and 22nd I note letters from "M D' and "M L J relating illnesses apparently due to eating rhubarb I should like to say that about two months ago I had a similar experience after partaking of rhubarb for lunch Two or three hours afterwards I was seized with colicky pains in the abdomen, which gradually increased in intensity, and were shortly afterwards succeeded by rise of temperature, quick pulse, vomiting and purging I felt violently ill for a few hours, then the symptoms gradually subsided, and, unlike your correspondents were not succeeded by any renal or vesical trouble I should add that a lady of my acquaintance was made similarly ill just previously after partaking of stewed rhubarb at a meal The symptoms may be attributed to the poisonous effects of the oxalic acid in rhubarb

I am, Sir, yours faithfully,

May 25th, 1915 M B

THE DANCES OF GREAT BRITAIN AND HER ALLIES

A RECITAL of patriotic dances will take place at 5.30 P M on Thursday next June 3rd, the birthday of His Majesty King George V, at the Fyvie Hall of the Regent-street Polytechnic, Regent street, London, W The children taking part will be relatives of airmen, soldiers, or sailors, and the proceeds of the recitals will be devoted to the expenses of the wards for nursing wounded soldiers at the Heritage Craft Schools, Chailey Sussex (Princess Louise Military Wards) Those who attend the recital are invited to bring gifts for the troops with them, such as handkerchiefs, socks, shirts, tobacco, cigarettes, sweets gramophone records, books, and magazines, sheets, single or in pairs, will also be most acceptable Tickets, price 5*s*, children 2*s* 6*d*, can be obtained from Mrs C W Kimmins, The Old Heritage Chailey, Sussex

There will be another performance at 7 on the same day and at the same place in aid of the same object For tickets, price 2*s* and 1*s* 6*d*, application should be made to Mrs Matthews, Glenkindie Drewstead road Streatham, S W, Miss Graham, 38, Mecklenburgh square, W C, Miss Kingston, 71, Corringham road, Golder s Green, N W, or Miss Simmons 8, Worple avenue, Wimbledon, S W A stamped addressed envelope should be enclosed

PERMANENT DISCOLOURATION OF THE SKIN

C B (Wolverton, Bucks) writes as follows "A man aged 53 had an attack of gout during the severe weather in January and February this year With the gout he also had an attack of eczema The penis, scrotum, anus, and calves of the legs were attacked by the eczema In a month both gout and eczema were cured The skin of the penis and scrotum is now normal, but that of the nates and the calves of the legs is of a dirty brown colour The patient has consulted several medical men with regard to this colour, and they have no suggestion to make It was thought that in time the skin would become normal Could any of your readers suggest a remedy to clear the skin on these parts? If the patient goes to the sea or the baths it is very inconvenient to have such patches of dirty skin visible! Is there no remedy?

COMMUNICATIONS not noticed in our present issue will receive attention in our next

METEOROLOGICAL READINGS

(Taken daily at 9.30 a m by Steward's Instruments)

THE LANCET Office May 27th 1915

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall	Solar Radio in Vacuo	Maximum Temp Shad	Min Temp	Wet Bulb	Dry Bulb	Remarks
May 20	30·020	S		80	61	49	52	54	Raining
21	30·020	S		112	71	54	57	60	Cloudy
22	30·070	N E		118	68	55	56	59	Cloudy
23	30·180	N E		119	74	52	55	60	Fine
24	30·210	E		121	76	51	53	58	Fine
25	30·130	N E.	..	121	78	47	53	65	Fine
26	29·934	N E		121	80	54	56	63	Fine

ABSTRACT OF

An Address

ON

ARTERIO-SCLEROSIS

Delivered before the Cardiff Medical Society

By W LYNE BLIGHT, M D Durh., F R.C S Eng

AFTER a brief introduction on the history of our gradually evolving conception of arterio sclerosis, Dr Blight continued —

INCIDENCE AND CAUSATION

Arterio sclerosis is a disease which, although mainly incidental to the middle period of life and becoming progressively and cumulatively worse as age advances, yet occurs in young people and even in infants It is more common in men under 50 years of age than in women, but after the climacteric period is passed it is as frequent in women as in men, if not more so There are four general causes of arterio sclerosis (1) The normal wear and tear of life, (2) the acute infections, (3) the intoxications, and (4) those combinations of circumstances which keep the blood pressure high

The occupations most subject to the wear and tear of life are those of navvies, blacksmiths, porters, labourers, soldiers and mountaineers, whose persistent use of muscles over prolonged periods to an extent sufficient to cause hypertrophy of the heart is a most potent factor in causing a heightened blood pressure The evidence of internal strain as a factor in raising the blood pressure is shown by the presence of sclerosis of the pulmonary artery in cases of prolonged mitral stenosis Of the acute infections causing the disease the most important is syphilis, the others being the exanthems, influenza, and tuberculosis Syphilis is the chief cause of arterio sclerosis in infants and young people Of the intoxications, the chief exogenous poisons are alcohol, lead, and tobacco The chief endogenous *poisons* are those of gout, diabetes, Bright's disease and obesity

In the prodromal stages of the disease a spasm of the arterioles is chiefly brought about by irritation of toxic products causing a contraction of the muscular coat, which becomes hypertrophied producing an increased peripheral resistance, with a compensatory increased force of the heart's action, causing its hypertrophy and a rise in the arterial pressure, which is the most frequent result of the persistent use of muscles The normal blood pressure in persons under 30 years of age is 125 mm Hg, and from this age onwards the blood pressure increases, but a pressure above 150 mm Hg, except in the aged is abnormal Other causes of increased arterial pressure are excesses in food and drink Dr F A Mahomed believed that this high pressure in the arteries precedes the development of renal disease before the albuminuric stage of scarlatinal nephritis, and that in the red granular contracted kidney the disease was primarily in the blood vessels generally The regular or frequent use of adrenalin and other agents which raise the blood pressure causes a necrosis of the muscular fibre and elastic tissue of the media

In the early stage of tubal nephritis high arterial pressure can only be produced by contraction of the muscular walls of the arterioles, and even in certain chronic forms this must still play an important part, but the presence of endarteritis obliterans produces and maintains the permanent peripheral resistance which leads to the high arterial tension of renal cirrhosis, as a physiologically hypertrophied heart cannot raise arterial pressure unless it is supported by a resistance in the systemic arterioles

The blood vessels are always in a state of activity, and they live under three main conditions (1) That use maintains and in a measure sustains structure; (2) that over use leads to degeneration, and (3) that at about 60 years or 70 years of age the arteries are unable to endure any longer the wear and tear of life, and if there be a poor variety of muscular and elastic tissue and fibre, as sometimes occurs not only in individuals but in whole families, the incidence of the disease, other conditions being equal, occurs at a much earlier period of life

SYMPTOMS

Arterio sclerosis disturbs function by lessening the amount of blood supplied to an organ unless the blood pressure rises concurrently with the narrowing of the lumen of the vessel The result is a slow progressive atrophy with gradual loss of function in all the areas supplied by a sclerotic vessel, and when the artery becomes finally obliterated especially if it occur suddenly, necrosis and gangrene of the part normally supplied by the sclerotic vessel occur, hence gangrene of the foot in the arterio sclerosis of diabetes An artery attacked by the sclerotic process becomes irritable and liable to spasm there is a sudden loss of blood to the part, with pain, loss of arterial pulse, and loss of function. The pain, when occurring in advanced stages of the disease, for instance, in the calf muscles, is frequently of a very severe character, and is more liable to occur in those patients who are of a full habit of body and have a gouty diathesis, frequently occurring in the night, and only relieved by opium. These vascular crises are the cause of the transient mono or hemi plegias, aphasia, paraplegia transient amaurosis, anginal attacks, and probably of lead colic and the crises of tabes

The premonitory symptoms of arterio sclerosis are frequently evident in a middle aged patient who comes to us complaining of headache, drowsiness, morning fatigue feeling more tired when he gets up than when he went to bed, *ineptitude* for work, coldness of the extremities, tinnitus, attacks of migraine or neuralgia, together with high pressure pulse and accentuated second sound of the heart On the other hand a middle aged man may have a feeling of good health and may be able to perform the ordinary duties of his life, *complaining* of no symptom and perhaps priding himself on his fitness, and in whom no organic lesion was suspected to exist Yet he may die suddenly by rupture of a cerebral vessel, thrombosis of a coronary artery, rupture of a small aneurysm or acute dilatation of the heart Death is thus the only intimation of anything being wrong with his system, demonstrating the great powers of adaptation of the body

Another type of case is that of a man beyond the middle period of life, who has worked hard with his muscles, eaten much, and drunk hard he has a persistent elevation of the arterial blood pressure and for some years has been feeling unwell, suffering from insomnia, cerebral confusion, despondency, and nervousness The insomnia is so distressing that the patients often resort to taking morphia or

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Renal Symptoms, Hæmorrhages

Although renal symptoms supervene in a large number of cases, widespread arterio sclerosis may occur without nephritis or recognisable cause The disease may be associated with small contracted granular kidney or come on insidiously in gout or chronic lead poisoning The true arterio sclerotic kidney is a red beefy organ which is firm, hard, and dark in colour, not at first reduced in size, sometimes even enlarged Very often there are large flat areas of atrophy of the cortex, or a large section may be involved in consequence of an obliteration of the arteries passing to the part The urine may at first contain no albumin, or if present it is not large in amount The specific gravity is normal or sometimes high Later on the albumin becomes larger in amount, and sometimes with cardiac dilatation the urine becomes scanty, with a large amount of albumin and numerous tube casts due to an intercurrent nephritis

Hæmorrhages into the retina and choroid, epistaxis, hæmoptysis, hæmatemesis (which may be fatal), hæmaturia, and hæmorrhages into the subcutaneous tissue may occur as the result partly of high arterial pressure and partly of arterio sclerosis It was pointed out by Dr Mahomed that even when the patient is much blanched by loss of blood the pressure in the arteries is still excessive

TREATMENT

The prognosis depends upon the stage of the disease In the early stage of high arterial pressure much may be done by hygienic measures to prevent and arrest the disease The patient should avoid all conditions which interfere with the nutrition of the body and lead as peaceful a life as possible, unattended by any mental worry or physical strain Although a protracted holiday is helpful, it is not advisable for the patient to give up work entirely but rather to lessen it in amount, and this will depend on whether marked cardiac failure, mental changes, or pronounced local features are present, and the advice will be given accordingly Warm baths or occasional Turkish baths with friction and massage are helpful. A most important point in the treatment at this stage is that the food should be lessened in quantity and meat food almost abolished, as this, with the general mode of life, is the best way of lowering blood pressure Natural aperient waters, as those of Cheltenham, in a moderate amount are beneficial. Generally speaking, all alcoholic liquors should be prohibited The most useful drugs are amyl nitrite, trinitrin, erythrol tetranitrite, and sodium nitrite

When fibrosis and calcification have taken place the damage is irreparable, but still the symptoms may be relieved and the arterio sclerosis prevented from increasing A milk diet is the best, especially at night, and when the patient suffers from a bad headache, dyspnœa, and insomnia these symptoms will often then disappear In addition to milk as a general diet the patient may have oysters, fish—excepting those of the crustacean order—most vegetables, bread, butter, and buttermilk, and plenty of fruit Iodide of potassium given for a period of some months has been most frequently used, but authorities differ as to its beneficial effect

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Ptomaine Poisoning at Leeds —An outbreak of ptomaine poisoning in the Woodhouse district of Leeds continues to cause some anxiety There are 120 cases, the condition of six of whom is still critical and one death has been reported The outbreak was first reported on May 22nd.

RHEUMATIC FEVER AND RHEUMATOID ARTHRITIS

THE GEOGRAPHICAL FACTOR

By J T Clarke, M.R C S, L.R C P Lond, D.P.H

Various theories have been published in the attempt to expound the cause of rheumatoid arthritis, but that none of them have been satisfactory is shown by the large amount of correspondence following any paper on the subject In this paper I shall bring forward what I believe to be an unrecognised fact, and shall endeavour to show how it bears on some of the more common theories I shall try to demonstrate that the geographical distribution of rheumatic fever and rheumatoid arthritis is the same, and shall argue that local as apart from universal distribution points rather to a specific cause than to the truth of any of the other theories of causation.

I must mention at the outset that Hirsch's book, which is still quoted as an authority on the geographical distribution of disease, was published as far back as 1886, and that there is much reason for correcting some of his statements, and as under the heading of rheumatism he "disclaims the possibility of making any sharp distinction between the several morbid processes included under the term rheumatism," his remarks on the subject cannot be accepted as having much value I must also say at once that I am not writing about any of those diseases often called rheumatism, which are really pains or swellings due to other diseases such as syphilis, gonorrhœa, septic absorptions, or injuries, nor of the various pains in muscles and fasciæ such as lumbago or pleurodynia, nor of the pains due to the various fevers, influenza, dengue, or malaria, and many other pains often called rheumatism. The word rheumatism is now omitted from the nomenclature of diseases

By rheumatic fever I mean the ordinary typical rheumatic fever, which I need not describe, but which, I would mention, has a special predilection for synovial and serous membranes, and by rheumatoid arthritis I mean the disease defined by Osler as "a chronic disease of the joints, of doubtful etiology, characterised by changes in the cartilages and synovial membranes with periarticular formation of bone and great deformity," in fact, the disease he calls arthritis deformans The fact to which I wish to draw attention is that there is no rheumatic fever and no rheumatoid arthritis in the Malay Peninsula, and I shall produce some figures which will show that it is extremely probable that neither of these diseases occurs in any part of the tropics By tropics I mean not merely hot countries, but that part of the world which lies between the north and south latitudes of 23° 28′, and in what I say I am considering only land at or near the sea level I mention this because Osler writes that "the two countries with the highest admissions in the British Army per 1000 of strength, Egypt and Canada, oddly enough, have climates the most diverse" But neither of these is a tropical country Egypt is a hot country, but not tropical

The following figures[1] show the *total* in patients and the number of cases of rheumatic fever and of

	Total in patients.	Rheumatic fever	Rheumatoid arthritis.
Perak ...	31,741	1	Nil.
Selangor	22 839	Nil.	"
Pahang	4 523	1 ..	"
Negri Sembilan	12,050	2	"

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[1] Journal of Tropical Medicine 1912.

other hypnotic The palpable arteries are found thickened and tortuous, there is an increased vigour of the cardiac impulse, the apex beat is displaced slightly outwards, the first heart sound is faint, dull or prolonged, or reduplicated or replaced by a murmur, and the second sound is accentuated with a loud ringing sound of a metallic quality

An early symptom of the general disease is a slight pallor As the vascular degeneration progresses the nutrition of the body generally and certain organs in particular suffer, the clinical history varying in every case according to the organ which suffers most and suffers earliest, whether brain, heart, or kidney, bronchitis and emphysema may be the first symptoms indicative of the disease There is a gradual atrophy of the parenchyma of the various organs and tissues of the body, so that the patient ages visibly within a few years, loses his intellectual keenness and bodily vigour, the skin becomes flabby and lax, and the hair turns prematurely grey, though neither this nor arcus senilis is pathognomonic of arterio sclerosis, the urine shows traces of albumin and tube casts may be present Defective metabolism is frequently indicated by dyspeptic flatulence and intestinal troubles of various kinds Anæmia becomes manifest A patient under 40 years of age, the subject of this disease, will have symptoms of neurasthenia, be of an irritable temper, emotional, and suffer from sleeplessness

It is probable the toxic agents are many and various, and arise from defective nitrogenous metabolism, and probably, as Bouchard suggests, consist of leucomaines produced in the body and ptomaines absorbed from the alimentary canal and improperly dealt with by the liver When the sclerosis affects the cerebral vessels an early symptom associated with high blood pressure is headache, usually frontal and continuous, occasionally paroxysmal and resembling migraine Another symptom is vertigo, usually transient and not so severe as in Ménière's disease, which may be accompanied by tinnitus and may occur with epileptiform crises, or, as in Stokes Adams disease, with epileptiform and syncopal attacks with a permanently slow pulse associated with high arterial pressure

Another important manifestation is the occurrence of transitory disturbance of function of parts of the brain or cord, leading to mono or hemi plegia, amaurosis, aphasia, and paraplegia, and ending in complete recovery These attacks may be frequent, sometimes occurring on one side of the body and sometimes on the other, but their transitory nature, frequent occurrence, and complete recovery distinguish these attacks, probably due to angiospasm of the cerebro spinal arteries, from the more serious ones of hæmorrhage, thrombosis, and embolism Associated with these symptoms are various neurasthenic conditions, such as absence of mind, temporary derangement of mind, irritable temper confusion of thought, dulness of comprehension or perception, failure of memory and faulty judgment in simple matters, an inequality in the size of the pupils, and exaggerated reflexes may be present, leading to a progressive dementia in which the grandiose delusions are usually absent

Cardio vascular System

In the cardio vascular system the sclerosis affects the valves, the myocardium, and the coronary arteries The lesions of the aortic and mitral valves are due to a sclerotic process in the segments identical with that which goes on in the vessels Most cases of aortic insufficiency in men occur from this cause In the myocardium in the early stage there is a pure hypertrophy of the left ventricle owing to increased peripheral resistance and of the right ventricle to a less and variable extent In the diffuse form of the disease there is a gradual failure of the hypertrophied cardiac muscle, which is a common and serious event leading to dilatation, orthopnœa, slight œdema of the feet and beneath the eyes, cough and perhaps blood stained expectoration, and progressive asystole According to Basch, dyspnœa is the only criterion of cardiac insufficiency due to sclerosis, latent or incipient It is often a most distressing symptom and frequently occurs in the night An important subjective feature is breathlessness, especially on going upstairs or ascending a slight hill

The objective symptoms are manifested by the visible, tortuous, pulsating, and thickened arteries especially noticeable in the emaciated, senile, or prematurely senile patient In the corpulent the only objective symptom of arterial change may be a high pressure pulse at the wrist, the artery being firm and incompressible A sphygmographic pulse tracing shows a gradual upstroke, no percussion wave, and a gradual down stroke in which the dicrotic wave is hardly visible The pulse should be taken when the patient is standing up and compared with that when the patient is sitting or lying down In the latter case under normal conditions it should become slower, but if it maintains its standing up rate the state of tension in the arteries is unnaturally high or if the pulse become more frequent in the lying down position it shows the still more advanced and serious state of the sclerosis It is necessary to distinguish between the hard sensation conveyed to the finger by a high tension pulse simply, in which case the pulse is scarcely felt when empty, and that in which there is a sclerosis and calcification of its walls and in which the artery is as prominent when empty as when full These two conditions may, however, coexist

The nutrition of the heart substance becomes inadequate from the increased resistance to be overcome and the participation of the nutrient vessels of the heart in the degenerative process, so that whilst the heart has increased work to do the quality and quantity of the blood supply become progressively more impaired and the myocardium undergoes fatty or fibroid degeneration, resulting in a dilatation of the ventricle with a mitral murmur appearing, and dropsy, due partly to cardiac failure, partly to the hydræmic condition of the blood, and partly to the altered condition of the vessel walls, gradually increases in extent, the patient ultimately dying from hypostatic pneumonia. Myocardial degeneration and weakness are frequent results of the narrowing of the orifices of the coronary arteries by sclerosis, which also causes anginal attacks in young syphilitic subjects, but these attacks are more frequent when the main branches are involved Dr Mott believes that angina pectoris occurs especially in cases of increased peripheral resistance, and is not due to a mere stenosis of the coronary arteries without this resistance The coronary arteries may be involved in this disease out of all proportion to the other vessels, and sudden death may occur in middle aged men who had never had any cardiac symptoms but on post mortem examination a gradual fibrosis or perhaps areas of anæmic necrosis with softening and occasional ruptures are found of my own experience and that of the writers I have quoted, and in view also of the small numbers diagnosed as valvular disease of the heart the probability that the few cases given are either an error in diagnosis or in the subsequent transcription of the returns is greater than the probability that they are true cases of these diseases And I further contend that these facts are sufficient to throw doubt on the statement of anyone who claims to have seen one or two cases In other words, I claim that these diseases do not occur in the tropics

In contrast with the figures I have given those of Dr Karl Grassmann[6] are worth attention He gives the deaths due to the circulatory apparatus at ages 15 to 30 as 7 per cent., and at the ages 30 to 60 years as 14 15 per cent of all deaths for Germany This, when compared with the 0 0 per cent of most tropical countries, or even with 0 26 per cent of Singapore, is very remarkable.

Without necessarily accepting Poynton and Paine's bacillus as the cause, there are many reasons for considering that rheumatic fever is a specific disease dependent on one particular organism According to Newsholme rheumatic fever shows great irregularities in its incidence from year to year Seasons of epidemic prevalence tend to extend over periods of one to three years, with intervals of three, four, or six years Epidemics vary in intensity The death rates are similar to those of some specific diseases, there are seasonal variations It is more common in the towns than in the country, its greatest incidence is on the young And I submit that its absence from the tropics is another link in the chain of evidence that it is a specific disease There is another specific disease, scarlet fever, which does not occur in the tropics, but I know of no non specific disease which does not occur in the tropics

There are various theories of the etiology of rheumatoid arthritis —1 That it is a neurosis 2 That there is a deficiency of lime salts 3 That it is due to a disturbance of metabolism 4 That it is caused by absorption from chronic sores such as those of pyorrhœa alveolaris, or those in the region of the anus 5 That it is due to insufficient sweating 6 That it has a relationship to rheumatic fever 7 That it is a specific disease Of these the first four are just as likely to occur in the tropics as in the temperate climates, and the fifth is just as likely to be an effect as a cause and is very variable in different people in the tropics No 6 of these theories is supported by the geographical distribution Neither rheumatoid arthritis nor rheumatic fever occurs in the tropics, and both are common in certain parts of the temperate zones

The chronic absorption theory is very attractive, but absorption from chronic sores usually results in anæmia of a kind which is in no way characteristic of rheumatoid arthritis, and when a joint is enlarged as a sequel to a chronic sore, as in dysentery, an organism is found in the joint, which in no respect resembles the joints of rheumatoid arthritis Where an inflamed joint is the result of a chronic infection the incidence is often on one joint only which may suppurate

It is begging the question to label rheumatoid arthritis as fibrositis and to give it and all fibrosites the same etiology The theory that rheumatoid arthritis is a specific disease is the one which seems the most probable The symptoms are very definite, especially in the acute cases Those of one case are as much like those of another as are the symptoms of any of the specific diseases Two typical cases are almost facsimiles of one another, and the sometimes sudden onset bears in the same direction But the point on which I rest my claim that it is a specific disease is its geographical distribution It occurs in one part of the world and not in another, and the most likely reason for this is that the heat of the tropics is inimical to some organisms

Many parasites are peculiar to hot climates, but many animals and plants can live only in the temperate zones, and just as some organisms are thermophilic so others have a low optimum temperature I would here refer to the bacillus mycoides, which normally will not grow above 22° C, but which by gradually increasing the temperature can with difficulty be made to grow at a temperature of 37° C It then, after a few passages through guinea-pigs, loses its flagella, develops a capsule, and produces symptoms in all respects similar to those of anthrax[7] In the same way the natural optimum temperature of the organism of rheumatoid arthritis may be low and yet it may, with difficulty at first, be capable of living at the body heat, and I go so far as to suggest that it might be best cultivated at very low temperatures

In this paper I have endeavoured to add to the reasons for believing that rheumatoid arthritis is a specific disease, that it may have a relationship to rheumatic fever or possibly require that disease as an antecedent, and I believe that the knowledge that these two diseases are absent from the tropics may give a clue to their etiology, but especially to the etiology of rheumatoid arthritis Finally, I must mention that Dr Leigh Canney[8] writes of Egypt as providing an almost certain cure for rheumatoid arthritis Egypt is not in the tropics, but in some parts its climate is somewhat similar to that of the tropics, and I suggest that many cases of rheumatoid arthritis would be benefited by a stay in the tropics

Since writing the above there has appeared in the *Indian Medical Gazette* of January, 1915, the Review of a Year's Medico legal Work in the Calcutta Morgue (1913) 281 cases were examined Under the heading of disease of heart and blood-vessels the following figures are given —

	Endocarditis and endarteritis	Atheroma.
Aortic valve	Nil	44
Mitral valve	"	0
Thoracic aorta	"	45
Pulmonary artery	"	1
Coronary artery	"	1

	Aortic valve	Mitral valve	Thoracic aorta, first part
Stenosis	Nil	Nil	Nil
Vegetations	"	"	"
Ulceration	"	"	"
Aneurysm	"	"	2

Ipoh Perak Federated Malay States

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[6] Munchener Medizinische Wochenschrift, Nov 11th 1913

[7] Thiele and Embleton THE LANCET Jan 25th 1913

[8] Brit Med Jour Sept 27th, 1913.

TUBERCULOSIS SCHEME FOR PLYMOUTH.—The sanitary committee of the Plymouth borough council has recommended a tuberculosis scheme for the town, to include the erection of pavilions at Mount Gold Hospital, providing accommodation for 52 patients, and the acquisition of 42 beds at various sanatorium institutions and 4 beds at general hospitals for cases necessitating surgical treatment The cost of the undertaking will involve an annual expenditure of £8496 rheumatoid arthritis in the Federated Malay States returns for the year 1911

My attention was first directed to this matter in the post mortem room, as I was never able to find a heart with rheumatic lesions of the valves For 18 years I searched for rheumatic hearts and have asked other medical men to find me one, but so far I have not come across a single instance In a period of this duration a medical officer in Malaya would have about 50,000 in-patients pass through his hands During my search for rheumatic fever and for rheumatic hearts I have been also on the look out for chorea, as it is generally considered to be a disease due to the same cause as rheumatic fever, but have found none I have heard of two cases diagnosed as chorea, but this is so small a number that there is the possibility of errors of diagnosis, and the disease is not certainly always of rheumatic origin, as cases have been reported which followed gonorrhœa and the puerperium

Rheumatoid arthritis I have also failed to find, and this concurrent absence of both rheumatic fever and rheumatoid arthritis in the Malay Peninsula contrasts so markedly with their concurrent presence in the temperate climates that it has left the impression that there may be a causal connexion between the two diseases

In addition to my experience in one part of the tropics which I first recorded in 1896,[2] I now refer to the opinion of others

Major Buchanan, I M S., wrote [3] "Up to the moment we have no reliable statement to justify the belief that rheumatic fever (acute rheumatism) has been met with within the tropics" Unfortunately in mentioning India he did not distinguish between India as a whole and tropical India, which is only about one third of the peninsula It is obvious that in the higher tropical latitudes cases may easily have come from the temperate zones, and so might vitiate figures collected in Bombay or Calcutta, which are only just inside the tropics

Mr James Cantlie wrote[4] "Rheumatic fever I have never seen in any hospital in China, India, or Egypt, in either native or European This may be a faulty observation on my part, but I only state what I observed whilst on tour in India, during which I visited hospitals in Madras, Madura, Bombay, Quetta, Lahore, Delhi, and Calcutta In Egypt I never met with a case of acute rheumatism, nor in Hong Kong nor South China during a nine years' residence" Mr Cantlie's Hong Kong experience is of fairly long duration and was in the tropics Dr McClosky, of Kuala Lumpur,[5] gave a similar result as the outcome of eight years' experience Those who stated that they have seen cases of rheumatic fever in India do not state whether they saw them in tropical or non tropical India.

From the *Journal of Tropical Medicine* (1911 and 1912) and from the Straits Settlements Medical Report I have collected the following figures —

	Total cases treated	Rheumatic fever	Rheumatoid arthritis
Singapore General Hospital	22 134	Nil	Nil
Penang	6 870	,,	6
Province Wellesley Hospital	2,696	,,	Nil
Labuan	307	,,	,,
Seychelles (Victoria Hospital)	388		,,
Northern Nigeria	Not given	684	,,
Ceylon	78 065	12	,,
Grenada ,	1,623	Nil	,
Gambia (Victoria Hospital)	665		,
Nyassaland	20,560	2	,

Of these figures, the 684 cases of rheumatic fever of Northern Nigeria are an obvious error of transcribing, for there are no cases of rheumatism, a heading which comes next below rheumatic fever and which in all the reports contains large figures Only 2 of these cases are recorded as having died, and under "valvular diseases of the heart" there are only 13 cases The medical report for the year 1910 for Ashanti, Northern Territories, and Gold Coast Colony is somewhat similar Out of 43,618 cases treated there were 614 cases recorded as rheumatic fever with 1 death I think that 1 death in 614 cases must throw some doubt on the diagnosis, but these figures may have got misplaced and should probably be placed under the heading rheumatism. In all these places many of the cases were probably diagnosed by native dressers, and native dressers when in a difficulty for a diagnosis are very apt to be satisfied with a name

In most of these returns there are a few cases given of valvular disease of the heart Some of these cases are probably the murmurs of dilated hearts, but post mortem examination fails to find on the valves the vegetations of rheumatic origin There are a certain number of atheromatous valves, but never have I found the rheumatic heart, and I do not think the atheromatous valve can be confused with the vegetative lesion of rheumatic fever

I have by me the 1912 medical report of the Straits Settlements, which is a very full report In Singapore hospitals there were 22,134 cases treated with 2584 deaths, but the words rheumatic fever, rheumatoid arthritis, and chorea do not appear Under the heading rheumatism there are 63 cases with 1 death Were these cases true rheumatic fever or did they even include a few cases of rheumatic fever I think there would be more deaths There were 52 cases of valvular disease of the heart, a number which is suggestive when compared with the number which are found in the hospitals of temperate climates Atheromatous hearts would easily supply this number, and Singapore is one of the big ports of the world, 409,328 passengers and 130,349 crew were examined in Singapore harbour, and these coming from all over the world might provide a few cases of rheumatic heart if any were found In the post mortem room of the pathological department, Singapore, there were performed 1422 necropsies, among which were found 19 cases of aortic chronic endocarditis and 7 cases of mitral chronic endocarditis If in a post-mortem room which serves a population of 312,000 inhabitants only 7 cases of chronic mitral endocarditis are found, if in a hospital return of 22,134 patients there are no cases given of rheumatic fever, chorea, or rheumatoid arthritis, I think I am justified in my statement that these diseases do not occur in Singapore

In almost every number of the *Journal of Tropical Medicine* are published the annual returns of some tropical country, and all show the same absence of rheumatic fever and of rheumatoid arthritis Occasionally a medical man is met with who asserts that he has seen a case of rheumatic fever in the tropics I have heard of a case diagnosed as rheumatic fever which turned out to be syphilis, and I was shown a supposed case which was undoubtedly a septic joint occurring in a case of dysentery For the majority of the tropical countries the figures in the returns under these headings are zero, and I contend that in view of the number of cases in which the figure is zero, in view

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[2] Indian Medical Gazette December 1896

[3] Journal of Tropical Medicine December 1909

[4] Ibid, October 1909

[5] Ibid January 1910

Since Landry's[1] paper was written in 1859 improved methods of staining nervous tissues have shown that cases of poliomyelitis and peripheral neuritis can produce a clinical picture practically identical with his case, and we shall never know whether his case was not one of these conditions. Ross and Judson Bury[2] were probably the first to suggest that Landry's paralysis was possibly a type of peripheral neuritis, and since the publication of their treatise many have recorded cases of acute ascending paralysis in which the pathological changes were those of a polyneuritis. Recently Pfeiffer[3] has published a full clinical and pathological report of such a case, and states that "it seems most probable that the pathology of this condition (Landry's paralysis) *per se* is to be looked for in the peripheral nervous system." Many writers have shown that acute poliomyelitis may show symptoms of an "ascending paralysis," and Harbitz and Scheel[4] have stated that many cases published as Landry's paralysis are really severe forms of poliomyelitis.

Nevertheless Buzzard[5] and Williamson[6] maintain that there is a distinct morbid condition worthy of the name Landry's paralysis. Buzzard[5] describes three cases, and in each a histological examination of the nervous system revealed an identical morbid change. The morbid change, and this only a slight one, was confined to the multipolar nerve cells of Clarke's column and the anterior and posterior cornua, there being a pericentral chromatolysis and in some cases excentration of the nucleus. No cellular infiltration of the vessels or white matter occurred, and no change was found in the peripheral nerves except the fine droplets of fat seen after staining by Marchi's method. This latter appearance Buzzard considers of slight importance, since he has seen it in all sorts of toxic conditions irrespective of paralysis.

The condition found in my own case showed an almost identical state of affairs. Although I should have preferred to examine the peripheral nerves more completely, it is probable that some indication of neuritis would have been found by the examination of the nerve roots and cauda equina, if it existed. Similar pathological changes have been reported in cases of acute ascending paralysis by Sheppard and Walker Hall,[7] Courmont and Bonne,[8] and others.

There is still considerable controversy about the pathology of Landry's paralysis, and on reading many of the published cases one is impressed with the chaotic state of the literature concerning this subject. This appears to be due mainly to two factors: in the first place Landry was unable with the methods of staining at his disposal to find any morbid changes, and secondly, the unfortunate alternative name, "acute ascending paralysis," seems to be responsible for the publication of many cases of poliomyelitis and polyneuritis as instances of Landry's paralysis. As we can never ascertain with certainty the actual disease from which Landry's own cases suffered, it would appear more satisfactory only to classify those cases of acute ascending paralysis as Landry's paralysis which do not show histological changes which can be identified as those of poliomyelitis, polyneuritis, &c. If the cases left after such a process of elimination were submitted to a full examination it seems probable that the present confusion would in a short time be remedied, and the pathology of the condition universally accepted. No useful purpose can be served by classing all cases of acute ascending paralysis as Landry's paralysis regardless of the pathological changes, and the sooner the alternative name for Landry's paralysis becomes obsolete the earlier will the point of controversy be decided.

I do not intend to discuss the clinical diagnosis of this disease, as this most difficult task has been considered very fully by other writers.

Summary.—1. We shall never know the precise pathological changes in Landry's cases. 2. Several nervous diseases can produce an acute ascending paralysis. 3. There is good reason to suppose that there is a distinct morbid condition causing a train of symptoms similar to those described by Landry and worthy of the name "Landry's paralysis." 4. There is no advantage in retaining the alternative name "acute ascending paralysis," and the name "Landry's paralysis" should be strictly reserved for a special type of ascending paralysis which does not show the morbid changes of poliomyelitis, polyneuritis, &c.

Manchester.

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[1] Landry: Gazette Hebdomadaire de Médecine et de Chirurgie, 1859.

[2] Ross and Judson Bury: Treatise on Peripheral Neuritis.

[3] Pfeiffer, J. A. F.: Brain, 1912-13.

[4] Harbitz and Scheel: Journal of American Medical Association, 1907.

[5] Buzzard, E. F.: Brain, 1907.

[6] Williamson, R. T.: Diseases of the Spinal Cord.

[7] Sheppard and Walker Hall: Review of Neurology and Psychology, 1907.

[8] Courmont and Bonne: Archives de Neurologie, November, 1899.

ON THE GENESIS OF CONSTITUTIONAL GASTROPTOSIS

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AND

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Introduction

As a preliminary to the discussion of this question we give a brief description of two out of several cases which have come under our observation.

Case 1.—A female, aged 43 years, tall, thin, complexion rather pale, hair quite white, childhood healthy, in fact, clinical history negative until five or six years ago, when she began to complain of backache. This occurred after a long spell of strenuous nursing with much lifting of patients. A palpable right kidney was found. Increasing uneasiness and discomfort after meals induced her medical attendant to suggest a bismuth meal. There had been no sickness. The measurements of the chest and abdomen were: (1) Minimum circumference of the abdomen between inspiration and respiration, 26 inches; (2) distance from the level of the upper edge of the clavicles and symphysis pubis, 21 inches; (3) distance from the sixth dorsal spine to the level of the iliac crest, 8 inches; and (4) circumference at the level of the nipple (mean), 28.75 inches.

$$\text{First enteroptotic index } \frac{21 \times 100}{26} = 80$$

$$\text{Second} \quad ,, \quad ,, \quad \frac{26}{8} = 3.25$$

$$\text{Relations of girth} \quad \frac{28.75}{26} = 1.1$$

Two ounces of bismuth subcarbonate well mixed with 10 ounces of bread and milk were administered, and a radiogram with the patient lying on the couch was taken after 20 minutes. In the diagram the depth of the lesser curvature even in the recumbent position lies at the level of the umbilicus and iliac crest, whilst the lower edge of the greater curvature closely approximates the pelvic brim. On the screen, the antrum was small but active, the sinus or

A CASE OF LANDRY'S PARALYSIS

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THE following case was admitted to the Rochdale Infirmary in August, 1912, under the care of Dr D Richmond, honorary medical officer to the hospital, to whom I desire to express my thanks for permission to investigate the pathology of the case and publish the notes

The subject of this report was a robust, athletic young man, 18 years of age, who had gained considerable repute as a weight lifter and swimmer, and who had never suffered from any illness since childhood He was a teetotaler and had never contracted any venereal disease He had complained of transient attacks of severe pain in the lumbo sacral region for some seven weeks previous to the onset of the paralysis, which he attributed to stooping at his work in the mill Some weeks before the onset he had been in camps in the Isle of Man and had there been repeatedly wet through

History of present illness —The patient noticed whilst out walking with some friends on Sunday afternoon, August 26th, 1912, that his left leg began to give way It grew rapidly worse, and he had considerable difficulty in reaching home owing to increasing weakness of both legs After having tea he attempted to go out again, but only succeeded in getting about 200 yards away when he had to give up He was assisted home and put to bed He had a good night and slept well, but awoke to find he was quite unable to move either leg On pushing them over the side of the bed and attempting to stand up he fell to the ground and had to be lifted into bed Later in the day he was seen by his doctor, who advised removal to hospital, where he was admitted at 5 30 P M (August 27th)

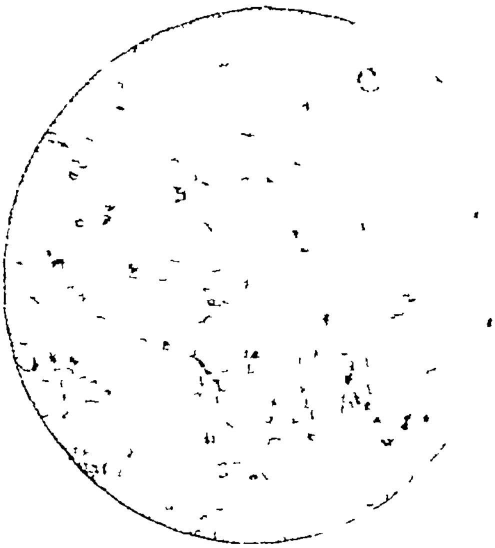
Condition on admission (24 hours after onset) —Besides the paralysis he complained of a tingling sensation in both feet and abdominal pain, somewhat of a 'girdle" type, in the region of the lower costal margin His appearance was that of a healthy muscular young man and his mind was quite clear Temperature 99° F, pulse 76 per minute, regular, strong and good tension (*a*) *Muscular system* —Complete flaccid paraplegia—no voluntary movement even at the hip-joint, and apparently no muscle of either leg spared Slight weakness of the hand grasp, but no weakness at the shoulder Practically no abdominal respiratory movements No tenderness or wasting of the affected muscles (*b*) *Sensation* —Tactile sensation (tested by a wisp of cotton wool) normal except for slight impairment on the soles of the feet Sensation of pain heat, and cold normal (*c*) *Reflexes* —Superficial and deep reflexes absent except the cremasteric, which gave slight response (abdominal reflexes absent) Organic reflexes normal No deformity of spine or tenderness at any point Special senses and cranial nerves normal Respiratory and cardio-vascular systems and urine normal, although respiration was somewhat feeble The spleen was not palpable

Progress of the disease —August 28th The hand grasp on both sides rapidly became weaker Retention of urine throughout the day necessitating the use of a catheter at night (This was thought to be due to the weakness of the abdominal muscles) August 29th The difficulty in breathing caused discomfort and the dyspnœa became more pronounced during the day He was now unable to move the fingers, and both arms were much weaker The movements at shoulder and elbow joints had become very limited, especially the latter He passed urine freely without any difficulty August 30th Respiration became much embarrassed and purely diaphragmatic in type There was almost complete paralysis of both arms No retention of urine August 31st The arms had now become flaccid and totally paralysed Respiration was even more laboured causing some cyanosis Dysphagia and slight difficulty in protruding the tongue were experienced during e day Some paresis of neck muscles seen for the first -, but eye muscles unaffected At night he complained of ' feeling funny in the head," and of "saying things he did not intend to" Sept 1st During the early hours of the morning the dyspnœa became steadily worse and he died of asphyxia at 6 A M —i e, 5½ days after onset.

Necropsy —Unfortunately permission was only granted to examine the spinal cord This, however, was removed with as much of the spinal nerves as possible The spinal cord was of firm consistency throughout, and exhibited no macroscopic change except well marked general vascular engorgement After hardening, portions were removed from the cervical, mid dorsal, and lumbar regions, and also pieces of the nerve roots and cauda equina for histological examination

Histological examination —After cutting sections of the various regions of the spinal cord and nerves they were stained by the following methods Nissl's toluidin blue Marchi, Weigert, Van Gieson, and Bielschowsky

Spinal cord —At first sight the changes were not at all obvious, being confined to the motor cells The majority of these were seen to be swollen and rounded rather than angular, retaining fewer processes, and they stained badly by Nissl's method (See figure) There was almost complete absence of any chromatin granules the protoplasm appearing homogeneous except in a few instances where some granules remained at the periphery of the cell In many of the cells no nucleus was to be found in others the nucleus was ill defined owing to its inability to retain the stain and was placed excentrically whilst in a very few the nucleus was only slightly displaced from the centre of the cell, but was swollen and badly stained although its excentric nucleolus was generally deeply stained The changes were seen in the multipolar cells of the anterior and posterior cornua and Clarke's column, and the changes appeared to be quite as well marked in the cervical as in the lumbar region There was no proliferation of the neuroglial cells The vessels in both the grey and white matter were distended with blood, but no hæmorrhages or perivascular infiltration were seen There was no cellular infiltration of grey matter or meninges as seen in poliomyelitis Marchi's stain failed to demonstrate any degeneration in the nerve fibres of the cord



Section from a case of Landry's paralysis showing cells of anterior cornu.

Nerve roots and nerves of cauda equina —No pathological change could be found in any of the numerous longitudinal and transverse sections of the nerve roots and nerves of the cauda equina which were examined Staining by the usual methods for demonstrating the presence of micro-organisms failed to reveal any

Remarks —Until the pathology of Landry's paralysis is definitely established and universally accepted it appears to be one's duty to make, as far as possible, a full histological examination of the nervous system in all cases of acute ascending paralysis

Also many cases of gastric ulceration, chronic appendicitis, and habitual constipation possess abnormal indices and do not show a trace of gastroptosis We have not yet seen the converse—that is, pure general gastroptosis with normal or supranormal indices, its occurrence, however, is indubitable

The investigations of Professor A Keith[1] and Professor C S Sherrington[2] have shown that the support of the abdominal organs is largely a question of the integrity of reflex arcs and abdominal muscles, the length of visceral bands and mesenteries playing a part of secondary *importance only* In the dead subject, when erect, removal of the abdominal muscles induces a degree of ptosis far beyond any displacement observed during life The tonic contraction of these muscles—recti, obliqui, and transversi—which occurs on standing, is evoked by a reflex the afferent end organs of which lie in the profuse terminations of the peritoneal nerves, including the Pacinian bodies A failure or weakness of this reflex has been assigned as a cause of Glénard s disease Keith has also drawn attention to the occurrence of a quasi inflammatory process in the peritoneum between the third and fifth months of intra uterine life This seems to be a necessary expedient for the attainment of the upright position.[3] The result is fixation of the mesenteries to the spine, the ascending colon to the kidney, the back of the cæcum to the abdominal wall, and the terminal ileum to the iliac fossa One of the *objects* in view is the prevention of twists and obstructions of the canal

In the constitutional gastroptosis now under consideration the abdominal muscles are often firm and tense in comparison with their condition in secondary splanchno ptosis We cannot, therefore, attribute the descent of the gastric viscus to an acquired laxity of the abdominal wall. The genesis is to be ascribed to the existence of prolonged attachments due to a deficient development of the embryonal adhesive processes already mentioned. This defect will be reinforced by the presence of a narrow upper abdominal opening, by downward displacement of the diaphragm, and by certain osseous changes which take place at the age of puberty It is, in fact, a partial indication of a general innate or embryonal anomaly, in which an aberrant configuration of the chest, elongated ligamentous bands of the abdominal viscera, prolapse of the stomach, liver, kidneys, terminal ileum, cæcum and colic flexures may one or all participate Naturally the picture is often incomplete, not only as regards the number of the factors involved, but also in the degree The relations of the neuro muscular and *nodal* tissue[4] (myenteric plexus) and of imperfections in the maternal internal secretions to this hereditary error present interesting problems for the clinician and pathologist

Individuals of this habit, more especially men, often exhibit little or no digestive disturbances There may be some gastric delay, with a tendency to diffuse habitual constipation associated with a liability, above the average, to impairment of health under *conditions* of strain The two cases described in the introduction illustrate the dangers of continuous abdominal stress This may lead to relaxation of these muscles, increased prolapse, and to gastric difficulties followed by hyperacidity, ulceration and chronic gastritis The acquired inter adjustment of years is dissolved

As long as reasonable care is taken in the way of food, exercise, and mental activity no evil effects may arise, and life may be prolonged even beyond the normal span A prudent protected mode of living is generally instinctively chosen In the case of the individual, however, with feeble and unstable nervous organisation, gastric neurasthenia, intestinal stasis, and toxæmia with colitis may supervene and become severe and chronic

Several secondary causes, contributory to the full evolution of the type, may arise during childhood, these are tuberculosis, thymo lymphatism with incoördination of the internal secretions, and grave attacks of the infectious fevers Tuberculosis of the lung, even if old and obsolete, may have increased the erratic development of the chest by implication of the diaphragm, hypertrophy of the thymus may produce premature ossification of the costal cartilages, while the incidence of serious attacks of measles, diphtheria, pertussis, and scarlet fever may induce general relaxation of muscular tone, favour the development of tuberculosis, and may leave indelible marks on the future metabolic processes of the whole organism

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[1] Keith The Lancet, vol i 1903

[2] Sherrington The Integrative Action of the Nervous System

[3] Keith Human Embryology and Morphology, third edition, p 267

[4] Keith British Journal of Surgery, April, 1915 p [illegible]

SOME POINTS IN THE CIRCULATORY SYSTEM IN ANKYLOSTOMIASIS

A NEW EXPLANATION FOR THE MURMURS

BY ABD EL AZIZ ISMAIL M R C P LOND,
D P H LOND, D T M & H CANTAB

THE hook worm is responsible for Egyptian chlorosis, which affects from 6 to 15 *per cent* of the adult population of the country Even in a crowded out patient room variations in the reserve force of the heart are striking Three stages seem to stand out Further observations have convinced me that these are quite distinct, and that the majority of patients present one stage or the other

Description of Typical Cases

The following is a description of typical cases in the various stages.

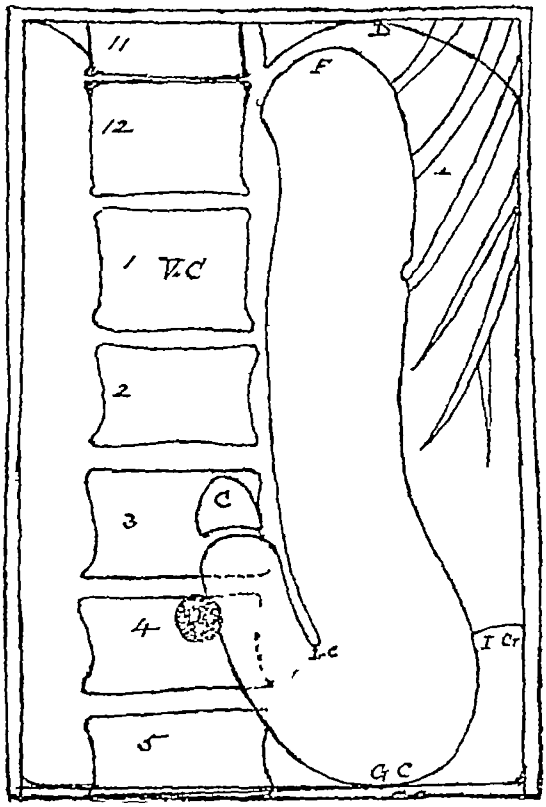
Stage I

Complaint on admission.—Breathlessness, dyspnœa, palpitation on exertion throbbing of the veins of the neck, and epigastric pulsation

Physical signs arteries, heart, and chest —The apex beat is distinct in the fifth space inside the nipple line, *often* quite an inch There are pulsation in the second and third left intercostal spaces, epigastric pulsation, and *arterial* throbbing in the neck The deep cardiac dulness is unaffected or slightly diminished The chest is *hyperresonant* The circumference at the fourth *interspace is 86-92 cm* , this is an average increase of 8 cm , the difference between full inspiration and expiration being almost one and a half times the normal No *less than 60 per cent* show a systolic murmur at all the orifices loudest *at the apex or base*, specially the second to the third *left costal* cartilage In this connexion the basal murmurs were *more* related to the degree of anæmia than the apical, and *often* in the progress of the case the apical heart sounds became clear while the pulmonary murmur persisted The second sound at the pulmonary area was *accentuated* or doubled in four fifths of the cases

Whenever *the* anæmia is under 40 per cent the *bruit de diable* is almost *sure to* be present by listening over the jugular bulb It is the only murmur that has a distinct relation to the degree of anæmia. Pulsation of the jugular often exists, and the rise in the tissues covering the vein will be found to correspond with a distinct *a* wave in the jugular tracing which is normal The *v* wave is not abnormally marked. No ventricular type of curve was seen.

vestibule lay in the ascending loop The pylorus and cap were low, and the whole stomach resembled a tube of uniform calibre Later it was seen that the transverse colon skirted the pelvic brim, the hepatic and splenic flexures were little if at all displaced, and the liver dulness was normal The muscles of the abdominal wall exhibited apparently no relaxation of tone



CASE 1 —Patient in the recumbent position D Diaphragm F Fornix GC Greater curvature LC Lesser curvature C Cap of duodenum VC, Vertebral column ICr, Crest of ilium A dark circle indicates the umbilicus

CASE 2 —The patient, a female, aged 68 years, had suffered from indigestion for two or three years, previous to which she had not experienced any bad health But about that time her husband became bedridden and required constant attention both day and night for nearly two years She began to suffer from sickness two months ago, she had never had hæmatemesis There were much wasting and occult blood in the stools A test meal showed the presence of hyperchlorhydria. There was pain in the lower part of the chest passing through to the back one hour after food, which was relieved by vomiting Liver dulness was normal. There were epigastric tenderness, a palpable right kidney and constipation. First enteroptotic index = 87, second enteroptotic index = 2 7 (*vide infra*)

In the recumbent position the stomach was cylindrical except in the lower portion, where it was somewhat dilated (secondary atony), the lesser curvature was at the level of the umbilicus, the greater curvature about 3 inches lower After 24 hours the cæcum and colon were still uniformly filled with the opaque meal the hepatic flexure was at the level of the crest of the ilium, the transverse colon over 2 inches below the umbilicus, the splenic flexure normal, and the iliac and pelvic colon dilated For the notes of this case we are indebted to Dr H Morley Fletcher

The Theories of Origin

In total gastroptosis the stomach, possessing an even diameter, presents the appearance of a long U shaped tube with the antrum and cap situated at the extremity of the ascending limb It has no resemblance to the contour of the normal stomach, and has apparently reverted to a primitive type The fornix is diminutive, the corpus elongated and slender Its production has been ascribed to the ect of a vertical distension exercised by weight and gravity upon a relaxed and yielding muscular wall. To explain the deviation, sometimes trivial, from the normal time of gastric evacuation, it has been assumed that while peristalsis is normal or actually increased the tone or peristole alone is impaired The idea is invalidated by the fact that uncomplicated examples exhibit no sign of the transverse dilatation which ensues when a normal stomach becomes atonic We must therefore reject the opinions of authorities who refer its causation to a weakness of the muscular layers No doubt atony may follow as the final result of hyperacidity and ulceration, but this loss of tone is secondary

Since its presence is often associated with a diminished lower thoracic and upper abdominal capacity, it has been maintained that, at the age of puberty, when every organ is striving to assume the size and configuration of the adult form the lessened space existing between neighbouring viscera—liver, kidneys, spleen—by concentric pressure hinders the stomach from expanding in the horizontal direction As a result it grows in length whilst preserving its volume unchanged. This idea, although attractive, does not survive careful examination

The diminished upper abdominal cavity is generally due to the peculiarities of the paralytic or expiratory thorax. In the absence of early disease, which may materially modify the normal outlines of the lower thorax, this unusual form must be attributed to a *congenital* or *hereditary* origin. The chest is long and flat, the lowest costal arches closely approach the iliac crest. The line of the ribs forms an acute angle with the sternum, and there may be a floating tenth rib Below the intermammary region there is, in reality, a general downward displacement of both soft and osseous tissues of the thorax—an altered direction of growth.

An attempt has been made to find a numerical expression for this change The distance from the level of the upper margin of the clavicle to the symphysis pubis is divided by the minimal circumference of the abdomen and the fraction obtained is multiplied by 100 In women the figure is usually about 75, in men about 66 An index above 80 is often found in palpable right kidney and in the asthenic constitution A more reliable index may perhaps be obtained by substituting for the denominator the distance between the level of the sixth dorsal spine and that of the crest of the ilium, and placing the minimal circumference of the abdomen as numerator A normal figure gives 3, in the habitus asthenicus it may fall below 2 The upper part of the chest and the upper lobes of the lung are not really concerned. Also the relation of the intermammary circumference to the minimum abdominal is of interest

Nevertheless, these figures, although instructive, are not of primary value There are individuals with extreme indices who *do not* exhibit the slightest sign of enteroptosis On the contrary, they may exhibit gastric hypertonus, with high hepatic and splenic flexures, non palpable kidney, and normal liver dulness Such a patient gave these numbers —

(*a*) Clavicle to pubic symphysis	22 5 inches
(*b*) Minimal (mean) abdominal circumference	23 5 „
(*c*) Spine of the sixth dorsal to the level of the iliac crest	11 „

First index (thoracico abdominal) $\frac{22\ 5 \times 100}{23\ 5} = 95$

Second index (mid thoracico-abdominal) $\frac{23\ 5}{11} = 2\ 1$

hospital on two or more occasions before When heart failure supervenes on this type the blood pressure may be kept up above normal for some time, and there is always the previous history of anginal attacks, but when failure follows Stage I the blood pressure is not raised and there is no such history of cardiac pains Dropsy is extensive and the hæmoglobin is generally very low (10–15 per cent) Such cases are more common in children

Post mortem the two types of hearts—(1) the hypertrophied fatty left ventricle, and (2) the small fatty left ventricle—are too well known

The Origin of the Mitral Murmurs

Many hypotheses have been offered Before discussing a new one let us consider the factors that operate in preventing dilatation of the ventricles 1 Tonicity of the heart muscle This is most important 2 The columnæ carneæ The first and second classes of these are well developed in the right ventricle 3 The valves of the tricuspid orifice are rarely competent to close the opening (John Hunter) Mayo declared that the tricuspid valves never perfectly close the orifice The pressure in the right ventricle cannot experimentally be much raised as the fluid leaks through the orifice In the case of the left side the columnæ carneæ are very poorly developed, and the mitral valves are competent to close the orifice

The left ventricle was shown to be overtaxed in cases of Type I, and with a poor blood supply it is apt to dilate This was shown not to be the case Evidently some mechanism must be in operation if the wall does not yield. What is this safety mechanism? Normally the left ventricle is already partly filled before auricular systole, which is followed by closure of the mitral orifice, and before the ventricle has thoroughly set into systole The vibration of the valves gives rise to the first sound In anæmia the ventricle was shown to fill well during diastole and with the onset of systole is probably over distended The papillary muscles contract later than the rest of the ventricle, and their object is to prevent retroversion of the valve flaps into the auricle

My hypothesis is this The contraction of the papillary muscles if continued further will increase the convexity of the auricular surface of the flaps, which would be supported by the column of blood in the ventricle, further contraction would pull the valve edges into the ventricle, the latter at the same time separating The chordæ tendineæ from each papillary muscle to both valves tend to prevent undue separation The origin of the papillary muscles from the anterior and posterior walls, the two contractile walls of the left ventricle, may be a means of regulating their action according to the degree of distension and integrity of the muscle A chink would be created between the valves—some blood would regurgitate, the overtension in the ventricle released, and possibly a more efficient contraction continued, but a murmur systolic in time results

Some facts favour this safety valve hypothesis 1 The murmur is best heard or only heard in the recumbent position In this the heart rate is slowed the diastolic period increased, the ventricle overfilled, and the mechanism is more needed With the short diastoles of exercise the murmur often disappears 2 The murmur resembles one of mitral stenosis in its conduction being localised to the apex or internal to it a thrill is sometimes felt Separation of the valves, as was shown, can at best be but slight, and the conditions simulating stenosis are present The edges of the valves being pulled inside the ventricle the murmur is essentially intraventricular, and the chance of its conduction with the current of blood is slight The character of the murmur differs from that of stenosis, for the surface of the normal valves over which the blood flows is also different from that in cases of stenosis 3 The presence of (?) doubled first sound at the mitral is in a quarter of the cases apparently due to vibration of the mitral cusps consequent on overaction of the papillary muscle When the condition advances a murmur is produced, and a case often passes from one stage to another and back again as conditions get better or worse 4 Post mortem the papillary muscles taken from cases in the last stages are found to be very fatty, but undoubtedly increased in bulk out of proportion to the hypertrophy of the left ventricle This is more apparent in the fresh state than in the stained condition The increase in the size and number of fibres points to previous hypertrophy and past overaction I had no opportunity of examining these muscles in cases in the earlier stages 5 A similar murmur is heard in Graves's disease (before actual dilatation has set in), and in overstress of the heart from exercise when there is no sign of increase in the heart chambers In these and other circumstances conditions obtain similar to those of anæmia which call for the safety valve mechanism (1) Over tension in the left ventricle, either absolute or compared to the weak condition of the muscle, and (2) slight diminution of the reserve force of the heart the tonus being hardly affected

As in all protective reflex phenomena, the mechanism comes into play consequent on other sources of stimulation or an irritable nervous system Hence the functional murmurs in the excitable hearts of the young, but even here over distension of the left ventricle has been suggested by Mackenzie as possibly playing a part

As regards the murmurs present in the area of the base, more than one kind have to be distinguished 1 In rare cases an artery enlarges in the second and third spaces one inch outside the sternum, and pressure on it by the stethoscope causes a murmur A similar one was described in arterio sclerosis by Berghe 2 A meso systolic murmur roaring with forced expiration and varying with pressure Pulsation, both systolic and diastolic, is often present in the same area This is possibly due to a dilated pulmonary artery approaching the chest wall 3 A murmur that has no relation to the respiration, or at least a very varied one, and may remain long after the apical murmur has disappeared 4 A murmur having a definite relation to the mitral one and only disappearing with the disappearance of the latter or its conversion into a (?) first sound I suggest that such a murmur is due to a slight kink that occurs experimentally in the aorta when the papillary muscles forcibly contract, pulling on the valves, as the fibrous ring to which the latter are attached is continuous with that into which the media of the aorta is inserted

Bibliography.—1 Yandell Henderson American Journal of Physiology vol xxiii 1908-9 2 James Mackenzie: Diseases of the Heart, third edition p 302 3. Sansom *Diagnosis of Diseases of the Heart*, 1892 4 Roy and Adami *Philosophical Transactions* London 1893. 5 Overstress of the Heart Sir Clifford Allbutt: System of Medicine Allbutt and Rolleston vol vi 6 Merklen and Jean Heitz Examen et Semiotique du Cœur 7 Mackenzie Diseases of the Heart p 327

Cairo

At rest the pulse is usually 80–100 with an average of 92 per minute, but some 5 per cent show 60–72 The systolic blood pressure is 110–130, and the diastolic 70–100 mm Hg

State of other organs and the reserve force of the heart —At this stage the patient is fairly nourished and with a yellow tinge in the conjunctiva There is no dropsy, no enlarged liver, and the amount of urine, which may be of low specific gravity, is normal. On walking 100 metres the pulse rate rises 5–12 per minute and the respirations rise from an average of 22–24 Walking on level ground does not seem exhausting I have known patients walk for miles with little rest before coming to the hospital out-patient room The majority were able to attend to their agricultural duties, involving manual labour, till three to seven days before admission One porter at a railway station was attending to his duties two days previously On running, however, for 100 yards dyspnœa becomes evident and the respirations rise over 30, the pulse-rate being 110–120 per minute If the exertion is continued there is a further rise in the pulse-rate up to 130, but the respirations with more exertion may be 60 per minute The patient then feels giddy and breathless, and is forced to sit or lie down Some suffer more from the throbbing of the arteries in the neck, which is then extreme, and also from palpitation In none of this group could a history of cardiac pain or attacks of angina be obtained. Certainly none were observed in the hospital. Going upstairs is more exhausting than running

Areas of hyperalgesia were looked for in the left mammary region, the left arm, left sterno-mastoid and trapezius, and in none were they present Some 5 per cent showed, however slight tenderness on the ulnar side of the left forearm, of which the patient was unaware previously No hallucinations or attacks of depression could be made out if pellagra, which so often complicates the disease, be excluded

This description refers to the majority of cases of this group But some will show absence of one sign or several but still have to be so grouped, the common link being *the state of the heart and its reserve force*, which is slightly affected

Stage II

While the out-patient room is daily crowded with patients in the first stage, cases in the second stage are comparatively rare When 400 cases had been examined the proportions were Stage I, 85 per cent, Stage II, 4 per cent, and Stage III, 11 per cent.

Complaint on admission.—In addition to the symptoms described under Type I a history of anginal like attacks can be obtained A common story of a patient is this ' On the slightest exertion, especially after meals a devil takes hold of my throat and chest, I cannot breathe, I imagine my end has approached, but I cannot say the last word of my prayers This lasts a few minutes " In some cases which I have actually observed during the attack it was followed by an area of tenderness in the left mammary region and the ulnar side of the left arm and forearm

Physical signs —The apex beat is now in the nipple line or slightly outside it The deep cardiac dulness is definitely increased at the fourth interspace The apex beat is of a heaving nature; the murmurs are more distinct than in Stage I, though of the same character The chest circumference at the same level measures 96–102 cm The pulse rate at rest is 105–115 per minute the respirations are 25–35, and the blood pressure is 140–160 mm Hg The sphygmographic tracing shows the characteristics of high tension pulse

The skin over the left breast is very sensitive and touching the hairs may be painful, most marked at the second intercostal space The left arm, especially the radial side, is also tender There are no such areas at the back nor on touching the muscles in the neck When the patient is asked to walk 50 to 100 metres the pulse rises to 130 and the respirations to 60, and he has to sit down breathless and giddy There are no œdema and no enlarged liver, the urine is free of albumin Attacks of angina were observed in the hospital. They are neither severe nor frequent in any one case the pain radiating most commonly to the ulnar side of the left forearm

Stage III

The patient is pale and dropsical, more commonly a child He is unable to make any exertion, sometimes sitting or standing up causes breathlessness The pulse is 120–130 per minute, small and readily compressible, the blood pressure is either 100–110 or 120–140 mm Hg The apex beat is outside the nipple line, with an increased area of deep cardiac dulness but in some no such increase could be made out, and the apex beat, which is hardly felt, lies 1 cm or more inside the nipple line Cardiac murmurs are now no longer roaring, and in a third of the cases are absent at the apex and slight at the pulmonary area A murmur at the jugular bulb was absent in 9 cases out of 20 There are an enlarged liver and œdema of the lungs The urine may contain albumin, sometimes merely a trace Cases that showed casts on examination were excluded Areas of hyperalgesia were present, but not marked as in Type II No attacks of angina observed, but in 20 per cent of the cases a history of such could be obtained

How the Circulation is Carried Out

Efficient circulation normally depends on—(1) the pressure of the blood in the capillaries, (2) the velocity of the blood in the same, (3) its volume, and (4) its quality

In anæmia the volume of blood is increased This volume has to be accommodated in the circulatory system The arteries, arterioles, and capillaries dilate, evidenced by (1) the size of the radials, (2) capillary pulsation, and (3) the free flow of blood from the pricked finger With a blood pressure not above the normal the smaller arteries dilate more than the larger ones

The chest enlarges and the suction action of the thorax is increased This is more marked in chronic than in acute cases The condition is one of hypertrophy of the lungs, not emphysema. The breath sounds are not diminished and expiration is not prolonged The amplitude of respiration is increased Bronchitis is a very rare complication Post mortem there are no signs of emphysema. The pulmonary vessels dilate, and the right side of the heart being more extensible than the left is also engorged Enough evidence is shown in the accentuated or doubled second sound at the pulmonary area

The output of the left ventricle, judging from its size and the difference between systolic and diastolic blood pressure, is not increased, but the rate of contraction is, and the output per minute must be above the normal With an arterial pressure almost normal the heart must be over taxed, but as can be seen clearly from the symptoms there is no depression of tonicity in 8 cases out of 10 The presence of symptoms such as breathlessness, palpitation, &c, on exertion is alone not evidence of dilatation but of diminution in the field of cardiac response, and, in other words, partial exhaustion of the reserve force of the heart The poor quality of the blood must play a part in the production of these symptoms on exertion

With the continuance of the anæmia the arterioles begin to contract, possibly due to stimulation of the vaso motor centre, and Type I, already described, drifts into Stage II The contraction occurs at first in temporary attacks, later becoming permanent, the blood pressure then rises, and the veins become relaxed though not engorged Further extra work is thrown on the left ventricle, with marked embarrassment evidenced by areas of hyperalgesia attacks of angina, and physical signs of cardiac dilatation The heart is able to maintain an efficient arterial pressure in the recumbent position, and evidence of non efficiency of the circulation is not apparent in other organs Stage II drifts to Stage III, where the arterial pressure can be no longer maintained and severe effects follow Type II is rare and occurs in cases exposed to prolonged and especially recurrent infections The same patient may have been to the

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

A CASE OF MOLLUSCUM CONTAGIOSUM CURED BY X RAYS[1]

BY LIDDBROOKE FRANK COPE, L S A,
STAFF SURGEON R.N

THE patient, a Krooman, was admitted to the Royal Naval Hospital, Simon's Town, with a group of little tumours situated just above the right elbow joint (Fig 1) Each tumour contained a soft central core from which there was an exudation consisting of serum, a few erythrocytes and cocci, together with the typical hard oval "molluscum bodies" In the occipital region he had a small hard tumour of the keloid type The history was indefinite, the only information the patient could give being that he had noticed the place on his arm "for some time"

Treatment in the first instance consisted of fomentations with 20 grain doses of potassium iodide thrice daily, without any improvement whatever After 10 days of this treatment it was decided to try the effect of X rays The affected part was accordingly exposed to X rays for 10 minutes every other day The condition at once began to improve, and at the end of the twelfth sitting had completely healed The second photograph (Fig 2) was taken 15 months later, and gives satisfactory evidence that the cure is permanent

The chief points of interest in the case lie in the fact that in the pigmented skin of the negro it is not easy to see zones of inflammation, &c, such as give characteristic appearances to skin lesions in Europeans, and the rapidity with which the condition healed with X rays—a result quite in accord with those obtained by Norman Walker[2] and other dermatologists

A DOUBLE MONSTER

BY B R CHATTERTON, M D DUB, F.R C S IREL,
LIEUTENANT-COLONEL, I.M S

AT my request the following account of a double monster has been written by Mr J R Mackenzie Jones, I M S

A Telin of village Fularia, P S Mirganj, gave birth to a double monster on April 9th, 1914 It was born alive and lived for three days, dying on April 12th

A post mortem examination was made on April 13th, when the creature was found to consist of twin fœtuses, united by their trunks and having two heads well covered with hair, four arms, and three legs two in the front and one at the back with seven toes The sex was female There was one anus, near the leg at the back (See Figs 1 and 2)

On opening the body the following were found and noted Stomach one and common liver, common and obliquely extended from right to left spleen, two kidneys two bladder one intestines common, sex (female) common, hearts two aorta common and lungs four

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION FOR THE STUDY OF DISEASE IN CHILDREN

Localising Brain Symptoms as Early Events in Tuberculous Meningitis —Demonstration of Cases and Specimens

A MEETING of this section was held on May 28th, Mr T H KELLOCK, the President, being in the chair

Dr C O HAWTHORNE read a short paper on Localising Brain Symptoms (Hemiplegia and Hemispasm) as early Events in Tuberculous Meningitis

Dr HAWTHORNE also showed a case of Hemiplegia in a girl aged 10 years with sudden onset but without convulsions, and no evidence of visceral disease There was a history of good health prior to April 4th On that day the mother left the child sitting on a chair by the fireside, and when she returned shortly afterwards found her lying on the floor paralysed on the right side and unable to speak plainly She did not observe anything in the nature of a fit or convulsion When admitted to the hospital on April 8th the girl had right hemiplegia, was unable to talk plainly, and had a temperature of 103° F Examination otherwise negative, and cerebro-spinal fluid apparently normal. The temperature fell to normal the next day, and the paralytic condition soon began to improve

Dr ERIC PRITCHARD exhibited the following cases: 1 A case of Cystic Lymphangioma in an infant, which he had shown to the section on Jan 23rd, 1914, as one of persistent "caput succedaneum" Subsequent events proved that this view of its pathology was incorrect, and that the tumour was probably a congenital cystic hygroma or lymphangioma in an unusual situation At the time the diagnosis was obscured by the fact that the tumour was the presenting part (left shoulder presentation) and that the contents of the cyst, which were drawn off by hypodermic needle consisted of a blood stained fluid like blood serum The tumour had continued to increase in size *pari passu* with the growth of the infant 2 A case of Polio-encephalomyelitis The patient, a healthy boy aged 7 years, developed a squint and double vision on April 27th He was brought to hospital on May 3rd, when he was examined, but no other lesion could be discovered. On May 8th the parents noticed weakness in the right arm and dragging of the right leg On the 10th he was brought again to the hospital, and then complete palsy of the sixth left nerve was discovered No nystagmus, discs normal, partial paralysis of the right twelfth nerve Shoulder girdle Some weakness of the right side Arms No wasting of arm and hand muscles temperature of both the same, weakness of right arm and hand, grip poor on the right, the right thumb and fifth finger could be opposed only with difficulty, jerks +, more so on left side Abdomen Reflexes on left side active, absent in upper half on the right side, no wasting Legs No wasting, the right leg and foot colder than the left, weakness of muscles, knee jerks active on the right, exaggerated on the left, no ankle clonus, extensor response on right, flexor on left On the 14th the boy was admitted to hospital New lesions were found to be present Seventh nerve palsy (incomplete type) on the right side, eighth nerve affected, partial deafness, taste normal Arms No wasting, grip on the right side weaker than the left, jerks exaggerated on the right, active on the left, total inability to oppose thumb and fifth finger, marked dysdiadokokinesis on the right side. Abdomen Reflexes absent on the right side Legs Weakness greater on the right side the right colder than the left, knee jerks, clonus on the right exaggerated on the left, no ankle clonus, Babinski's sign on the right side flexor response on the left No spasticity Incoördination in walking No Rombergism Sensation to light and painful touch on right leg and foot slightly diminished otherwise normal

Dr H THURSFIELD showed a child with Contraction of Limbs—a case for diagnosis The child was aged 8 months with asymmetry of head and chest The thumbs were flexed into the palms of the hands and the legs were flexed at the knee joints and could not be fully extended There was

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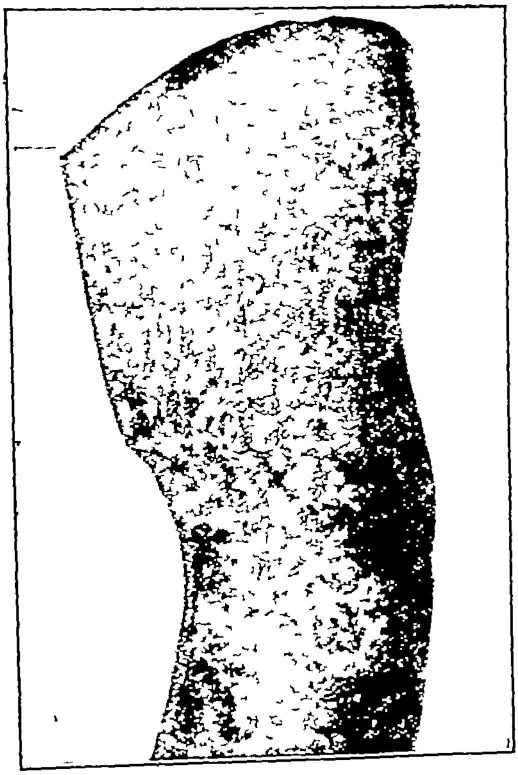
[1] [illegible] the Medical Director-General of the Navy

[2] Medical Annual [illegible]

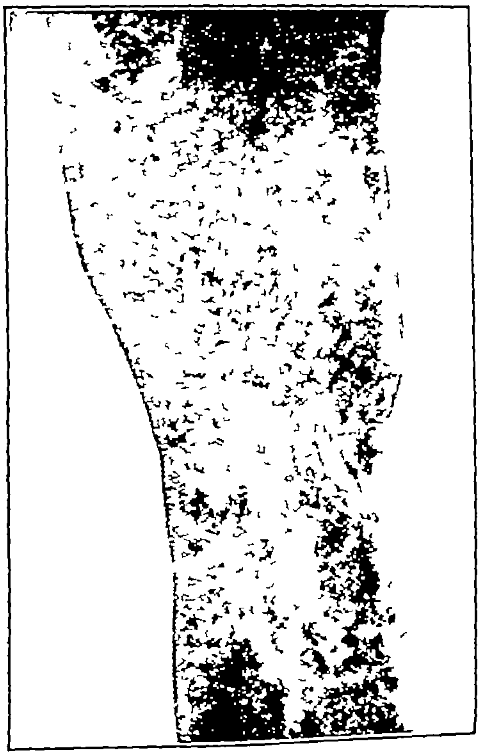
Reproductions of Photographs Illustrating Staff Surgeon L F Cope's Note on a Case of Molluscum Contagiosum Cured by X Rays

FIG 1



Condition of the arm before treatment with X rays

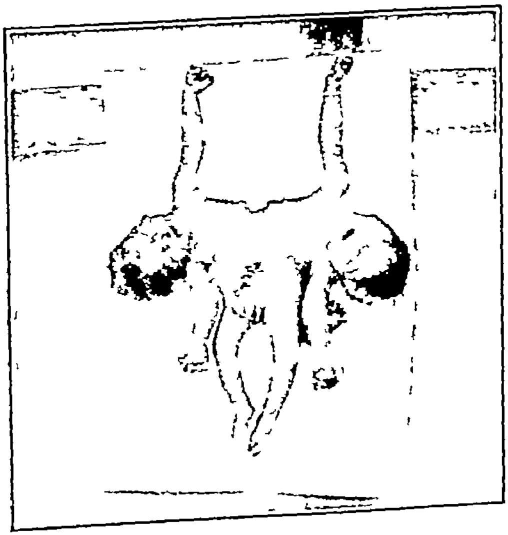
FIG 2.



Condition fifteen months after treatment

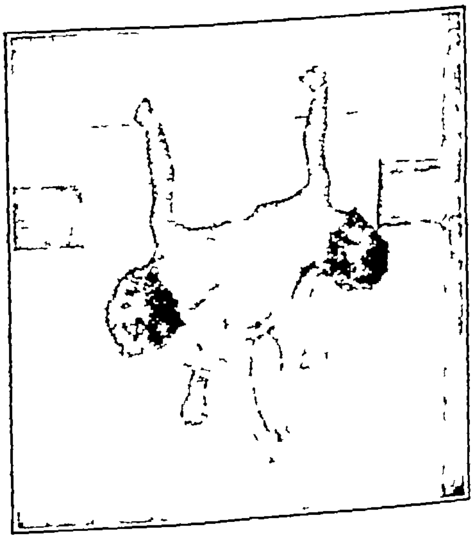
Reproductions of Photographs Illustrating Mr J R Mackenzie Jones's Account of a Double Monster

FIG 1



Double monster Viewed from the front

FIG 2.



Viewed from the back

Reviews and Notices of Books.

Human Physiology

By Professor LUIGI LUCIANI, Director of the Physiological Institute of the Royal University of Rome Translated by FRANCES A. WELBY With a Preface by J N LANGLEY, F R S , Professor of Physiology in the University of Cambridge Vol III Muscular and Nervous Systems Edited by GORDON M HOLMES M.D Dub London Macmillan and Co Limited 1915 Pp 667 Price 18s net.

VOL I of this work was reviewed in THE LANCET, July 1st, 1911, and Vol II on June 7th, 1913 This volume brings the subject matter up to 1913 In 1913 Professor Luciani received a commemorative medal and an album containing the autographs of almost all the world s most eminent physiologists as a mark of his colleagues esteem and as a tribute to the excellent and brilliant researches carried out by himself during a period of at least four decades Dr Gordon Holmes acts as editor in place of Dr M Camis, who is unable to act again in this capacity At the outset let us say that Miss Welby has done her part most efficiently The translation runs smoothly and does her much credit

The first three chapters deal with the Muscular Systems Over 90 pages are devoted to the general physiology of muscle In this, as in all succeeding chapters, the historical touches in the text are peculiarly valuable They show the author s erudition, his wide knowledge of the subject, and give that indefinable setting to the actual facts which raise this work to something more than a mere text book of bald facts and current theories Moreover the critical acumen of the author reveals itself in almost every chapter The matter in the chapter on muscle follows more or less conventional lines, but there are many details and acute observations incorporated which are not found in the ordinary text books Since 1871 Luciani has always had his own views as to the relaxation phase of a muscular contraction, skeletal or cardiac Those interested will find his position elucidated in the text *Rigor mortis* is more than a mere coagulation process In mammals, at least, it is due to loss of oxygenation owing to arrest of the vascular circulation so that according to Winterstein it is an asphyxiation phenomenon The little known ergograph of Treves—little known or at least little used in this country—is fully described An all too short description of Einthoven's string galvanometer is given A figure of the instrument and electrocardiograms would have been more illuminating Langley s "receptive substances are mentioned in the bibliography, but little is said of them in the text We heartily welcome the chapter on mechanics of locomotor apparatus (pp 96–128), a subject all too much neglected and even omitted in some of our English text books It is a subject requiring distinct anatomical as well as physiological knowledge Luciani has made ample use of the work of Braune and Fischer He was conversant with this work in his Leipsic days The work of Marey, Carlet, and the French school is also incorporated Phonation and articulation are the subjects of Chapter III (pp 129-174) This chapter has been considerably abridged It appears that while Grützner used carmine to determine the impression left by the tongue during the articulation of certain sounds Luciani and Baglioni used cocoa powder

The remaining part of the text deals with the Nervous System First, the general physiology of the nervous system is considered (pp 175–277), its structural elements, the theory of independent neurones and its opposite, that of continuity of neuro fibrils Both theories are carefully expounded, exemplified, and criticised, the laws, rate of conduction, and the diphasic character of a nerve impulse, excitation of a nerve, its metabolism and electro motive phenomena, electrotonus, and allied subjects Full justice is done to the results obtained by Golgi, Cajal, Nissl, Apathy, Bethe, and others The neurone theory, it is stated, "is not based on any conclusive evidence" It is known that a nerve requires a supply of oxygen to keep up its vitality But no one has yet proved that the oxygen absorbed and the CO_2 given off depend directly upon the state of rest or activity of the nerve It is because nerves have a low metabolism and specific differentiation that they represent a form of living protoplasm which is endowed with peculiarly high resistance to noxious influences The motor end plates lose their conductivity long before the nerve fibres themselves The most striking demonstration of the vital resistance of nerve is its comparative freedom from fatigue The discussion on degeneration and regeneration of nerves is interesting, and we are glad to see an excellent exposition of the elaborate and careful work of Perroncito, of Turin (1908), who used Cajal's photographic method English surgeons who have sutured and "crossed" two different nerves do not seem to be mentioned though the work of Purpura in the same sphere is given in detail Nor is much said of the observations of Head, Rivers, and Sherren. Perhaps this is reserved for a later volume

The fifth chapter deals with spinal cord and nerves (pp 278–358) Due credit is given to Galen, and the story of Bell, Magendie, Johannes Müller, Panizza, Longet, and Claude Bernard in relation to the functions of the nerve roots is told effectively Justice is also done to the epoch marking work of Sherrington on reflexes and allied phenomena and to the compensatory action of the cerebral hemispheres, where there is loss of afferent control in animals with paralysed sensibility Metamerism, segmental skin fields and their overlaps, the physiological unit of cutaneous metamerism—the dermatome, myelomeres, and "facilitation" are all fully discussed The author regards *it as far* from certain that the psychical functions are localised exclusively in the brain, and he gives his reasons (p 311) As to the knee jerk, its reflex nature was clearly brought out by Sciamanna in 1900, although it should be stated that its true reflex character is not universally admitted In any case it faithfully follows the oscillations in spinal excitability, hence its clinical value as a very delicate physiological indicator of the tone of the nerve centres in general, and those of the cord in particular The data as to "*trophic nerves*" are carefully collated and sifted Independent nerves of this class do not exist—i e , there are no special trophic nerves and centres entirely distinct from the sensory and motor A short chapter (VI) (pp 359-379) suffices for the sympathetic system Chapter VII (pp 380–418) is devoted to the medulla oblongata and cerebral nerves The cranial nerves are pretty fully dealt with as befits their importance Some additional clinical phenomena dependent on lesions of them in disease would have been helpful talipes of both feet The patient was the fourth child, born at full term, the labour being natural Three other children were alive There had been *no miscarriage* The mother had been quite healthy during pregnancy

Dr J D Rolleston showed a case of Ectrodactyly in a girl aged 3 years The right upper arm and forearm were of the same size as the left, but the right hand was rudimentary The right metacarpus was 2 5 cm long by 4 cm broad, the left 5 5 cm by 6 5 cm broad The phalanges of the right hand were represented by five small tubercles, the thumb tubercle was the largest, being 9 mm in length, and alone carried a nail, the little finger was 2 mm long, and the second and third fingers *only 1 mm long* The thumb rudiment and to a less extent, the other tubercles were movable at will, there was no trace of a scar The left upper limb and both lower limbs were normal, and there were no other external deformities nor apparent visceral anomalies Apart from the ectrodactyly the child was well developed The parents and two other children in the family presented no deformity The mother attributed the patient's deformity to having seen, during the fourth month of pregnancy, her eldest daughter catch her fingers in a mangle The girl escaped with slight bruising of the fingers, and the mother did not anticipate the deformity of her child.

Dr E G L Goffe showed a case of Syndactyly of the Left Hand with Constriction of the Right Forearm in a girl aged 4 years

Dr F E Batten and Dr Mildred A Jukes showed a case of Amaurotic Family Idiocy (Waren Tay Sachs Disease) in an infant, aged 11 months, born of Jewish parents at full term, and *apparently normal at birth Weakness of the arms and legs* was soon observed, and at the age of three months the mother noticed that the child was blind The child was the youngest of eight, one sister, similarly affected, *died in infancy one year ago* The *child shown* was a well nourished child, but feeble, she could not sit up without support There was no rigidity, all reflexes were normal The child *took no notice* of her surroundings, lay quietly in bed and was not irritable There was some perception of light, otherwise the child appeared to be blind On examination of the fundi, the *typical* white patch was seen on the macule with a central, cherry red spot The cerebrospinal fluid was normal The Wassermann reaction was negative

Dr Philip Figdor exhibited a specimen of Pericarditis in Diphtheria The patient a boy aged 3 years, was admitted to hospital for laryngeal diphtheria on Nov 30th, 1914 Tracheotomy was performed shortly after admission, with instant relief On Dec 14th the cardiac rhythm became irregular On Jan 11th 1915 a faint *systolic* murmur was heard at the apex On Feb 27th the cardiac dulness was greatly increased in both directions, and a soft ventricular murmur was heard at the apex, in the axilla and pulmonary area, and there was occasional *reduplication* of the second sound On March 1st the murmur was heard in all the areas but best at the apex The cardiac dulness was slightly decreased *on the right* On March 5th the general condition of the patient was much worse, cyanosis was marked The cardiac dulness was greatly increased in both directions, and a *harsh, double* murmur was heard in all the areas A diagnosis of pericarditis was now made On the 8th the cardiac dulness was considerably reduced A mid diastolic murmur was heard within the apex By the 15th the cardiac dulness was again greatly enlarged, and death took place on the 23rd Post mortem the parietal and visceral layers of the *pericardium* showed recent pericarditis There were about 10 ounces of serous pericardial fluid. Mitral valve Edges thickened and eroded Aortic and pulmonary valves healthy Left ventricle hypertrophied, right ventricle slightly hypertrophied Great œdema of pericardium and tissues at root of neck including the thymus Lungs *almost airless*, no tubercle, no evidence of consolidation Very little fluid in pleural cavity Slight œdema of mesentery Gall bladder œdematous, walls being about one third *of an inch* thick

Dr F Langmead showed a case of Hypopituitarism in a boy aged 19 years and 3 months *He was extremely* obese and his general development mental and physical, resembled that of a boy of 11 or 12 years The genitals were rudimentary There was no hair on the face, but *some* in the suprapubic region. The breasts and general development were of the female character The voice did not appear to have broken *The amount* of urine passed varied between 104 and 260 ounces *per diem* There was a corresponding polydipsia. The optic discs and fields of vision were normal The blood pressure ranged between 110 and 130 mm Hg Sugar *tolerance* had *not* been tested adequately The diagnosis was established by a skiagram of the pituitary fossa, which was seen to be minute, the anterior clinoid processes being greatly thickened

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Royal Academy of Medicine in Ireland—The Section of Anatomy and Physiology of the Royal Academy of Medicine in Ireland met in Queen's College, Belfast, *on* May 28th In the Anatomical Department Mr P T Crymble showed a large number of skiagrams, stereoscopic views, and so on, and the new X ray equipment installed for use in the Department of Anatomy Professor J Symington exhibited casts of the cranial wall and of the brain and its membranes in the Museum of Human Anatomy He also contributed a paper dealing with Some Additional Observations on the Estimation of *the Degree of* Brain Development from Endocranial Casts, and he gave a description of a new model to illustrate cranio-cerebral topography In the *Physiology Lecture Room Dr J A* Milroy read a paper on Some Applications of Electrolytic Reduction Dr J E McIlwaine read a communication on the *Electrocardiographic Method of Estimating the* Condition of the Heart Muscle Dr J M Gibson read a paper on Heart Block produced by Yohimbin and Quebrachin *Professor T H Milroy contributed a paper on the Action of* Rennin, Professor W H Thompson on the Effect of Racemic Arginin on the Excretion of Creatinine and Creatine, and *Professor B J Collingwood on Some Further Observations* on a Urinary Acid Index. On May 29th the members of the section interested in physiology visited the Royal Victoria Hospital, Belfast, where Dr McIlwaine *showed* the electrocardiograph and demonstrated its great usefulness in diagnosis and prognosis This instrument has been in practical use for over a year and a half, and *is the only one* in Ireland

North Staffordshire Medical Society—A meeting of this society was held on May 27th at the North Staffordshire Infirmary, when the following cases and *specimens* were *shown* among others Dr A Gill and Dr A. Hilton John Transposition of the Viscera in a man aged 23 years—Dr S King Alcock A specimen of "Anguillula Aceti" in *Urine*—Mr E E Young A man, aged 63, from whom the right half of the tongue was excised for Epithelioma on June 28th, 1912 the glands in the anterior *triangle* being *removed on* July 15th, 1912, apparent cure—Mr Harold Hartley (1) Living case, Cancer of Tongue operated upon, and (2) pathological specimen, Strangulation of the Undescended Testis—Dr A. R Moody A case of Miners Nystagmus—Dr F Shufflebotham A case of Miners Nystagmus aggravated by Incipient *Cataract*—Mr *George* A Carter Two cases of Nasal and Pharyngeal Syphilis, showing the result obtained by treatment with intravenous injection of "606' followed by intramuscular injections of mercury—Mr R H Dickson Cases of Entropion and Trichiasis, showing results of treatment by Transplantation of Buccal Mucous Membrane

The annual meeting of the Medico Psychological Association of Great Britain and Ireland has been fixed for July 22nd, and will be held in London

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Bridgwater Infirmary—At a special meeting of the subscribers held recently to consider the serious financial condition of this institution it was stated that an extension of the infirmary was now being carried out at a cost of £6000 towards which sum £4000 had been taken from reserve funds, which meant a *loss of £160* per annum in the income The donations of workpeople had decreased yearly *from £275 to about* £42 It was eventually decided that in future a charge must be made for all patients—viz for in patients 3s weekly and for out patients 1s weekly, patients under 14 years of age to be charged half that amount Accidents would be admitted free as hitherto

The section relating to inorganic materia medica maintains the former grouping, based upon chemical composition rather than pharmacological action, thus the alkalies and alkaline earths, the heavy metals and metaloids, the non metallic elements and acids are treated in separate groups It is only when we reach the vegetable and animal materia medica and the synthetic preparations that the pharmacological grouping is really adopted, and in this connexion it is interesting to note that the authors retain the term "bitter tonics" to which objection has so frequently been taken by those who wish to restrict the term "tonic" to its purely physiological sense

So far as the changes necessitated by the British Pharmacopœia are concerned the authors seem to have taken the actual words with a few unimportant omissions The definitions and the characters are practically identical with those of the British Pharmacopœia The omissions are mainly concerned with somewhat elaborate tests, which are of importance only to practical pharmacists

The section devoted to therapeutics has been carefully revised, and many of the dogmatic assertions of former editions have been eliminated in accordance with modern views A comparison of the information relating to syphilis in this edition with the corresponding paragraph in former editions will sufficiently indicate the care that has been taken to march in step with the times A few diagrams have been introduced illustrating the action of various remedies on blood pressure, while two diagrams of electro cardiograms serve to explain this method of investigation The authors are to be congratulated upon the industry displayed in avoiding deviations from standard authorities

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Defective Children

By Various Authors Edited by T N KELYNACK, M D Vict, M R C P Lond London John Bale, Sons and Danielsson Limited 1915 Pp 462 Price 7s 6d

The aim of this book is to provide trustworthy and authoritative information with respect to the medical supervision and educational care of the chief classes of defective children of school age, in order that measures may be taken for the rectification, arrest, or amelioration of their disabilities It is a book which will probably be of great use to school medical officers, but it is addressed also to medical advisers of all institutions concerned with the care of healthy as well as defective children Most of the chapters are from the pens of recognised authorities, and all of them are valuable contributions to the special subjects with which they deal There is no attempt made to separate physical from mental defects probably a wise arrangement since these two conditions are so closely interdependent But accordingly chapters on paralytic cripples and tuberculous cripples are wedged in between others on criminal children and defects of vision

The first chapter is concerned with the correlation of the public health services and administrative questions generally, and is contributed by Dr E W Hope the medical officer of health for Liverpool This very important subject scarcely receives its due share of space Dr Hope condenses his remarks into ten pages, but some amends for brevity are made in a very excellent bibliography of references at the end of the chapter This method of supplementing the many curtailments which are imposed by the limits of the volume, is pursued throughout most of the chapters, and will be highly appreciated by readers requiring fuller information on special points The chapters on the mentally defective child, idiots and imbeciles, and the epileptic child are respectively supplied by Dr Hamilton C Marr, Dr Douglas William Hunter, and Dr Andrew Fergus Hewat The very important chapter on speech defects in childhood and early adolescence is contributed by Dr L H F Thatcher, and follows in close detail the methods and teaching of Professor J Wyllie, of Edinburgh Mr Hastings Gilford's chapter on defective growth and development gives an interesting account of the rarer forms of abnormal development, including infantilism, ateleiosis, and progeria, but we venture to suggest that a wider view of the general principles concerned in the determination of anomalies of physical development would have been more in line with the general scheme of the work and more serviceable to the majority of readers Important chapters are those on open air schools, by Dr Lewis A Williams, and on schools for crippled children, by Mr R C Elmslie The interests of the deaf child are in the safe keeping of Dr James Kerr Love

Taking it all round, this is a very valuable addition to the rapidly growing library of the literature of medical school inspection

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Swanzy's Handbook of the Diseases of the Eye and their Treatment

Edited by LOUIS WERNER, M B Dub, F R C S Irel, Sen Mod Univ Dub Eleventh edition. London H K Lewis 1915 Pp xviii + 646 Price 12s 6d net

ANOTHER edition of this well known text book has been called for after an interval of three years Since the last edition was published the original author, Sir Henry Swanzy, has died, and the revision has been carried out by Dr Louis Werner, who had been associated with the author in preparing several of the previous editions The present one retains all the characteristic features which have become so familiar

The restoration of the chapter on the pupil, omitted in the last edition, is an improvement The trephine operation for glaucoma has been dealt with at greater length, and there has been considerable revision of the sections dealing with vascular diseases of the retina. Other additions and modifications bring the book up to date, and it will doubtless retain its well earned reputation as a reliable and convenient manual for students The coloured plates are the same as in the last edition The use of small print for the rarer conditions is a distinct improvement, but the retention of asterisks to signify subjects of intermediate importance seems unnecessarily elaborate

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MISCELLANEOUS VOLUMES

Perpetual Peace A Philosophical Essay By IMMANUEL KANT 1795 Translated with Introduction and Notes by M CAMPBELL SMITH M A With a Preface by *Professor* LATTA London George Allen and Unwin Limited. 1915 Pp 203 Price 2s net —Although the nations are at war, the reissue of this translation in a cheaper form—it was first published in 1903—is opportune, for, as Kant points out, the mere cessation of hostilities is no guarantee of continued peaceful relations unless a *guarantee* is given by each individual to his neighbour With Kant *perpetual* peace is an ideal to be sought after and his essay is devoted to the consideration of the best means, founded on mutual interest of pursuing that ideal Miss Campbell Smith, who had the help of Mr David Morrison M A, in revising the translation has accomplished a by no means easy task, and, to

Chapter VIII deals with the hind brain (pp 419–485) very fully indeed This is not to be wondered at, having regard to the important and now classic contributions (1891) which the author himself has made to the physiology of the cerebellum He does not subscribe to the doctrine of Stefani, that it is an organ for equilibration and orientation of the body in relation to its environment Much stress is laid on the work of Bolk from a purely morphological point of view, and on that of Van Rynberk from an experimental standpoint There is no decisive argument for localisation in the cerebellum, though some experiments on monkeys harmonise well with the localisation indicated by Bolk The mid brain and thalamencephalon are next discussed (pp 486–526), and the effects of removal of the cerebral hemispheres in the lower and higher vertebrates The last chapter (X, pp 526–633) is consecrated to the fore brain, its general anatomy, structure of the pallium, history of cerebral localisation, the excitable zones and localisation in dog, monkey, and man, and the physiological analysis of the motor reactions of the cerebral cortex association and other areas, basal ganglia, and speech As to the histology of the pallium—its myelo architecture and cyto architecture—the work of Brodmann is followed rather than that of Campbell

As to function, Haller (1708–77) regarded the *white* matter—*sensorium commune*—of the brain, not the grey cortex, as the seat of sensation and source of movement But of all the astounding theories advanced that of the anatomist Sömmering is the most preposterous In 1796 he localised the seat of the *pneuma psychicon* in the cerebral ventricles More strange still, he concluded that the *aqua ventriculorum cerebri* is the single medium of nervous activity, the *sensorium commune*, the organ and seat of the soul He dedicated his treatise to Kant—Kant of Königsberg, of Scottish origin, who in 1781 had published his chief work, "Critique of Pure Reason," and was professor of philosophy in his native town His lifetime covers the period 1724 to 1804 We seem to be switched back to the middle of the sixteenth century and to Crooke's "Microcosmographia" (1616) In Vicary's "Anatomie of the Bodie of Man," regarding the "Ventricle of Memory," we read "In the foremost Ventricle are the Five Wits, also the Fancy and the Imagination In the 2nd or middle Ventricle is Thought In the 3rd Ventricle is the Memory" Gall and Spurzheim are credited as the founders of the theory of cerebral localisation on the ground that they were the first who brought out the importance of the *grey matter* of the cerebral cortex in general Gall later lost all critical sense in his eager attempt to solve his phrenological problems

The alleged "inhibitory" reactions of the fore brain and organic reactions of cortical origin and epilepsy and the functions of the sensory motor area are next described, analysed, and criticised The two nuclei of the corpus striatum do not differ in function from those of the sensory motor area of the cortex The visual area is fully and luminously dealt with As to the other cortical centres—e g, auditory—it is more difficult to obtain direct experimental proof As to the pre frontal lobes, it appears that their destruction in the dog and ape leaves these animals unaffected in any obvious way in regard to intelligence "Clinical experience also militates against the theory which ascribes special value in regard to mental functions to the pre-frontal lobes" (p 621) It is far otherwise with Flechsig's great posterior association areas—parieto occipital areas The facts of the morphology, anthropology, experiment, and clinical observations point to the special importance of this region in mental functions and memory itself The parietal convolutions are extraordinarily well developed in men of high intelligence Disturbances of speech due to cerebral causes—e g, aphasia—are carefully analysed in the book, and the conclusion is arrived at that "Marie's cases do not invalidate Broca's theory If carefully considered, it will be found that they are not irreconcilable with that theory, as shown by Mingazzini" (1908)

We have said enough to show the commanding interest and practical value of modern physiology as set forth in this volume by one of its most masterly exponents New facts will be added daily, but this full account of the present aspect of physiology itself, as well as of its relation and applications to medicine and surgery, Luciani's "Human Physiology" ranks as a masterly exposition of the present state of a fundamental subject which, besides its importance in relation to medicine, allies itself with the moral sciences The author recognises that psychical development, even on the ethical side, depends to a large extent upon the somatic substrate We give a most cordial welcome to this volume, and express the desire and hope that the incubation period of the two volumes yet to appear may be largely diminished, but that will hardly be possible under present conditions To each chapter is appended a short but useful bibliography There is a double index—one of subjects and the other of authors Oddly enough, though Cajal's name occurs in the text, it finds no place in the "Index of Authors"

Materia Medica and Therapeutics

By J MITCHELL BRUCE, M A., LL D (Hon) Aberd, M D Lond, F R C P Lond, and WALTER J DILLING M B, Ch B Aberd. Tenth edition London, New York, Toronto and Melbourne Cassell and Company, Limited 1915 Pp 645 Price 6s 6d net

THE authors have taken the opportunity afforded by the new issue of the British Pharmacopœia to make a series of very radical changes in this text book The new standard has necessitated numerous omissions and additions, and the whole volume has been largely recast and rewritten Since the type had to be completely reset, it was possible to alter the arrangement of the material, and the authors have, we think, acted wisely in adopting a pharmacological grouping of the drugs, instead of following the older lines of many former text books The new grouping necessarily has some disadvantages, since there are few remedies which do not merit a place in more than one group, and there are some whose claim to the position assigned to them is of the slightest

An interesting section deals with questions of pharmacy At the outset the various official preparations are defined and the methods of preparing them are given in useful detail The directions concerned with practical pharmacy are clearly expressed and, although it is expected that the medical practitioner of the future will not have many opportunities to dispense his own preparations, the information afforded is sufficient to enable him to act on emergency The few pages devoted to prescription writing are clear and concise

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION

TUESDAY, JUNE 1ST

THE General Council of Medical Education and Registration began its summer session to day at its offices, 299 Oxford street, W Sir DONALD MACALISTER, the President, was in the chair

New Members

Sir BERTRAM WINDLE, M D, took his seat as representative for the National University of Ireland for three years from Dec. 10th 1914, and Sir ARTHUR CHANCE, F R C S I, took his as representative of the Royal College of Surgeons in Ireland for one year from Feb 5th, 1915

An Apology for Absence

A letter was read from Dr Hepburn, in which he intimated that he was unable to attend the Council this session owing to his duties as a medical officer of the Western Command at Cardiff

President's Address

Sir DONALD MACALISTER delivered his presidential address He said —

My first duty is an agreeable one I have in your name to welcome back to the Council two former members whose past services are still fresh in our remembrance Sir Bertram Windle from the National University of Ireland, takes the place of our late colleague Sir Christopher Nixon Sir Arthur Chance from the Royal College of Surgeons in Ireland, resumes his old seat, vacated in February last by Sir Lambert Ormsby on the completion of his term of office.

The Council will also be glad to see in his accustomed place our Registrar, Major King After strenuous labours with his regiment at the front Major King was invalided home some months ago He has now sufficiently recovered from his disablement to be allowed to give us his services as Registrar during the session, pending the decision of the War Office as to his future sphere of military duty During Major King's absence Mr Cockington as Acting Registrar, and the other members of the staff have carried on the work of the office with praiseworthy zeal and efficiency

I have to record with regret the death, since we last met, of our former colleague, Mr Thomas Bryant who retired in 1904, after 13 years of service as Treasurer of the Council

The stress of the great war is still urgent upon us all The country's call for service and sacrifice has been heard and answered in every part of the Empire The response from members of our own profession has been especially prompt and generous Many thousands of our brethren have freely given themselves and their sons postponing every other claim to the demands of national duty Members of the Council are fully sharing both in the service and in the sacrifice To those of our colleagues who are to-day mourning in proud sorrow, the loss of gallant and promising sons we offer the tribute of our heart felt sympathy And we deepen our resolve to ensure by every service within our power, that such sacrifices shall not have been made in vain

The call for qualified physicians and surgeons to take up duty with the Forces has become more and more insistent with the growth of the new armies Our professional reserves at no time large have been drawn upon to the full Throughout the kingdom organised efforts are in progress for such a readjustment of civil practice as will liberate all who can possibly be spared for the medical service of the Navy and the Army In these efforts the Scottish Emergency Committee and local committees of the British Medical Association with the effective coöperation of members of this Council have taken a leading part. The services of qualified women have been freely offered and accepted for many of the places that are now vacant at home Senior students enrolled in the combatant ranks have been recalled by the War Office and directed to complete their curriculum with a view to qualification for the Royal Army Medical Corps Special qualifying examinations have been held by the licensing bodies for candidates whose curriculum was completed. And from overseas have come large numbers of our colonial colleagues, who are possessed of qualifications registrable in this country, and so are eligible for commissions in our army By the opportune action of the Belgian Government and of the Privy Council the Executive Committee was enabled to give effect to the application of Part II of the Medical Act (1886) to Belgium, with the result that about 60 Belgian doctors of medicine have become legally qualified to practise in Britain, and to occupy professional positions in public and other institutions

From all these sources we have obtained timely and valuable help, but they must if possible be supplemented If we are to make good the losses in the Army Medical Service we must accumulate larger reserves The casualty lists, and, I am proud to add, the lists also of rewards for conspicuous gallantry, testify to the magnitude of these losses We must endeavour to fill the vacant places by men whose training and skill can be guaranteed, and whose devotion is not inferior to that of their fallen comrades We look with confidence to the medical schools and corporations to aid us in our endeavour to maintain, even in the present emergency, the standards of teaching and of testing which we regard as essential to efficiency

The inquiries, to which I referred in my address last November, regarding the number of students actually in attendance on courses of medical study at the several schools, have shown that at the end of 1914 there were considerably over 1000 fewer than in 1913 The recall of senior students from active service to resume their professional studies has had a favourable effect on the fifth year, now drawing to a close, but we must expect during the next few years a falling off of some 250 per annum in the number who become qualified as medical practitioners

In the same address I called attention to the fact that, from certain of the provinces of Canada, able and efficient surgeons were desirous of coming to the aid of the Mother Country, but were hindered by difficulties created by their local registration laws Encouraged by the reception accorded to my remarks here and in Canada I ventured to communicate with the various medical authorities concerned and to point out once more the Imperial bearings of the question of reciprocity The response has exceeded all my expectations. From Ontario, British Columbia, Saskatchewan, Manitoba, and Alberta have come messages often by cable stating that legislation has already been initiated for the removal of existing provincial restrictions, and that the provinces desire that reciprocity with this country may be established at the earliest possible date When the necessary steps are completed, and I have reason to think that no obstacles need be apprehended on this side of the Atlantic, all the provinces of Canada will have severally entered into reciprocal relations with the United Kingdom The way will then be open for the application of the Medical Act (1886) to the Dominion as a whole, as it is now open to the Commonwealth of Australia. Thus by the concurrent action of the separate provinces the Dominion Medical Act whose operation has hitherto been restricted so far as Imperial relations are concerned, will assume a more comprehensive character, and the medical federation of the Empire will be at length accomplished Canada possesses schools of medicine of the highest repute, and we may confidently count on receiving from them a further supply of graduates qualified in all respects for the medical service of the State, and legally entitled to practise in any part of His Majesty's Dominions.

The British Pharmacopœia 1914 was duly published in accordance with your instructions on Dec. 31st. The first issue of 20,000 copies is nearly exhausted Steps have been taken for the preparation of a second issue, in which a few typographical faults noted in the first issue, have been corrected As you are aware the Pharmacopœia Committee endeavoured to adapt the work to the general requirements of the British Empire, and at the same time to harmonise its directions with those of the States which were parties to the international agreement of 1906 The reception accorded to the new Pharmacopœia, both in the British Dominions and in foreign countries encourages us to hope that our efforts have in a large measure been successful The Government of India has intimated that a special edition, such as was prepared in 1900 for Indian use, will no longer be necessary in that country The Belgian quote the closing words of Professor Latta's preface, "Her work will have its fitting reward if it succeeds in familiarising the English speaking student of politics with a political essay of enduring value, written by one of the master thinkers of modern times "

The motto "Laugh and the World Laughs with You," which is placed on the title page of *Round the World in Strange Company*, by NICOLAS EVERITT (London T Werner Laurie, Limited Pp 283 Price *12s 6d* net), exactly expresses the spirit in which Mr Everitt writes about his travels in the United States and British Columbia His racy descriptions of men and things are amusing, but his contrast of English and American custom house methods in favour of the American does not ring wholly true The book is full of humour and makes excellent reading ——Mr JEFFERY FARNOL is a sound story teller In *The Chronicles of the Imp* (London Sampson Low, Marston and Co 1915 Pp 219 Price 3*s* 6*d* net) we have a love theme, but the main interest of the romance centres round a boy, who sustains in divers times and places the characters of mediæval heroes, legendary personages, and pirates, with all the intensity of conviction characteristic of the imaginative child Most of the action takes place in the open air, though the Borrovian element which marks some of Mr Farnol s other books is absent To those who can enter with sympathy into the romantic mind of childhood the book will prove delightful, but Mr Farnol has better work to his credit

An introduction briefly referring to the characteristics of the early herbalists, followed by a number of curious receipts, has been written by FLORENCE HINE, under the title of *A Chaplet of Herbs* (London George Routledge and Sons 1915 Pp 168 Price 2*s* 6*d* net), who evidently enjoys browsing among old herbals A longer introduction would have been an advantage, but it would be ungenerous to complain when such copious extracts that follow on "old fashioned lore, gathered some of it from manuscripts which seem to have escaped the eyes of the curious, and the rest from books which have long slipped out of the memory of man," are given There is an excellent bibliography

In *Brazil, 1913* (Printed by Messrs Butler and Tanner, Selwood Press, Frome, England Pp 604 Price *7s 6d* net), Mr J C OAKENFULL, the compiler, gives a very fair picture of Brazil in regard to its political and commercial position, together with information on its anthropology, ethnography, and history, as well as interesting descriptions of its fauna, flora, and geology Appendices include a gazetteer, information as to cost of living, and a bibliography The maps, plans, and illustrations greatly add to the value of this guide to a most important area of South America

Egyptian (Arabic) Self taught, by Captain C A THIMM, fourth edition, revised and enlarged by Major R A. MARRIOTT, D S O (London E Marlborough and Co 1914 Pp 80 Price 2*s* 6*d*), is a practical little hand book of colloquial Arabic as spoken in Egypt It contains vocabularies of words in common every day use and a selection of useful phrases Professor Flinders Petrie has revised the proofs The book should be a useful primer for the army and navy, travellers, missionaries, and traders in that country, which will doubtless be yet more opened up after the war

While no books can replace the official Medical and Dental Registers, the various unofficial directories, by reason of their classification of names with regard to localities, greatly facilitate reference, and the *Dental Directory, 1915* (London John Bale, Sons, and Danielsson Pp 236 Price 3*s* 6*d* net), which is now in its seventh year of issue and has been enlarged, is a most useful addition to works of this kind Besides alphabetical and topographical lists of registered dentists in the United Kingdom, the Channel Islands, the Isle of Man, the colonies and abroad information with regard to the L D S curriculum is included, as well as much general information concerning universities, colleges, schools hospitals, dental societies, and so forth

JOURNALS AND MAGAZINES

Quarterly Journal of Medicine Edited by WILLIAM OSLER, J ROSE BRADFORD A. F GARROD, R HUTCHISON, H D ROLLESTON and W HALE WHITE. Vol VIII, No 31 April 1915 Oxford At the Clarendon Press, London Edinburgh New York Toronto, and Melbourne Humphrey Milford Subscription price 25*s* per annum, single numbers 8*s* 6*d* net each.—The contents of this number are 1 Two Cases of Patency of the Ductus Arteriosus, by T Wardrop Griffith An interesting account is given of two cases of this developmental defect, in both of which the condition was recognised during life One of the patients died from infective endocarditis, and the diagnosis was verified post mortem In the other patient the signs were such as to suggest that there was some further anomaly of the great vessels, and possibly a developmental error giving rise to cyanosis, a symptom which is not usually met with in uncomplicated cases of patent ductus arteriosus Dr Wardrop Griffith discusses the causes and effects of this interesting abnormality 2 Alterations in Arterial Structure and their Relation to Syphilis, by Hubert M Turnbull The normal structure of the arteries, the changes which occur during the growth of the individual, and the functions of the coats are considered, and then the abnormalities of structure are classified as follows hypertrophies, degenerations, amyloid infiltration, inflammations, arteriosclerosis, aneurysm, and direct rupture Each one of these changes is then discussed, more especially in regard to its causation and the part played by syphilis in this connexion 3 Mumps A Critical Review, by Anthony Feiling An interesting summary is given of our knowledge in regard to this common infectious disease, together with a critical analysis of recent observations upon its pathology, bacteriology, and complications Dr Feiling incorporates some personal observations upon the blood in 42 cases of this disease He shows that there is a slight increase in the total number of leucocytes, together with a lymphocytosis which is both relative and absolute, that this lymphocytosis is present on the first day of the disease, and persists for at least 14 days He suggests that this blood change is of diagnostic value in differentiating mumps from other inflammatory swellings of the parotid or submaxillary gland A bibliography extending to 98 references is given

Cornhill Magazine —In the June number of *Cornhill* Mr Anthony Hope Hawkins contributes some observations in defence of the memory of his kinsman Lord Brampton and as in the case of Sir Herbert Stephen s vindicatory article in May, Sir Edward Clarke is given an opportunity to make an immediate, or simultaneous, reply This, it may be observed, is a convenient plan when anything in the nature of a controversy takes place in a magazine published at monthly intervals Mr Hawkins argues that Sir Edward Clarke could have raised the question of Sir Henry Hawkins s judicial conduct in Parliament, and incidentally describes his uncle as a "conscientious, wise and a compassionate judge" We can leave Sir Edward Clarke to assert the difficulty of securing the removal of a judge from the bench for the kind of conduct of which he alleges Sir Henry Hawkins to have been guilty, but with regard to the passage cited it may be suggested that probably the quality of compassion, which the late judge no doubt possessed overrode those implied by the other two epithets, with the result that he "got a verdict" which was not supported by the evidence Sir Henry Hawkins was not a man to risk being publicly proved wrong if he could help it but in the particular instance selected by Sir Edward Clarke he no doubt, was led by sympathy with the victim to underestimate the weight of the medical evidence called for the defence and of the medical opinion behind it

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MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY —*A meeting of* the executive committee took place at the society's offices on May 21st, Dr F J Allan being in the chair During the first few months of the year the sickness claims were heavy owing to the influenza epidemic but claims have since fallen to normal It was reported that since the outbreak of war the society had paid the sum of £250 in claims arising from injuries received by members on active service. The number of the society's members serving in the Royal Army Medical Corps steadily increases, and much satisfaction has been expressed at the treatment accorded them by the society in respect of their sickness and accident benefits In spite of the adverse conditions experienced among all insurance companies the society is maintaining its new business Prospectus and all information will be supplied by the secretary (300, High Holborn, W C) and dental practitioners to British registration. The report in regard to the medical practitioners stated that "Part II of the Medical Act (1886) having been extended by an Order in Council to the kingdom of Belgium during the continuance of the present war, the committee has considered the conditions under which medical qualifications granted in the kingdom shall be recognised for registration in the Foreign List of the Medical Register of the United Kingdom, and has adopted the following resolution That so long as the Order in Council of Jan 7th, 1915 remains in force, any person who produces evidence satisfactory to the Registrar that he has obtained the degree of Doctor of Medicine in the Belgian Universities of Brussels, Ghent Liége, and Louvain and is legally authorised to practise medicine surgery, and midwifery in Belgium, and who satisfies the Registrar as to the other particulars specified in Section 12 of Part II of the Medical Act 1886 shall be entitled to be registered in the Foreign List of the Medical Register '

The PRESIDENT said that, as he had already mentioned in his address between 50 and 60 Belgian medical men had taken advantage of this opportunity to register, and others were coming forward.

The report was formally received.

With regard to Belgian dental practitioners a separate report was submitted It was in the following terms "The Executive Committee at its meetings on Jan 22nd, 1915 and Feb 22nd 1915 as a matter of urgency arising out of circumstances connected with the war, instead of remitting the question to the Dental Education and Examination Committee for consideration and report to the General Council in the usual way considered the question of the recognition of Belgian diplomas in dentistry and dental surgery The committee at the latter date had before it official information in regard to the course of dental professional study and examination which had been furnished by the Belgian Minister of the Interior, and adopted the following resolution —

(a) That a person who has attained the grade of Candidate in Medicine at one of the four Belgian Universities of Brussels Ghent, Liége and Louvain, and has after pursuing the further course of study prescribed for dental practitioners passed the Diploma examination held by a Belgian Provincial Medical Commission shall be entitled to be registered in the Foreign List of the Dentists Register, provided he produces to the General Registrar satisfactory evidence in regard to the particulars set forth in Sections 9 and 10 of the Dentists Act 1878

(b) That in view of the urgency of the matter, this resolution (a) adopted by the committee on behalf of the Council become at once operative as an instruction to the Acting Registrar, and that the resolution be reported to the General Council for confirmation at the June session '

The PRESIDENT remarked that the information which the Executive Committee now had was that persons who since 1899 had passed the examination which was now prescribed for dentists were eminently worthy of recognition

The report was received and the resolution of the Executive Committee was confirmed

Dental Cases

The Council considered the reports of the Dental Committee in regard to certain dental practitioners

The first case was that of Walleck Cartwright Mallan who was registered in the Dentists Register on Dec 6th 1878 as "In practice on July 22nd 1878 A previous report of the Dental Committee dealt with the manner in which his practice at 106 Edgware road, had been conducted

In their present report to the Council the committee found that the following facts were established by the evidence — "Since the last hearing the said Walleck Cartwright Mallan has removed the tickets newspapers advertising letters from patients and photographs from the doorway and window of the premises and he put in a photograph of the premises as they now are He stated that he has also ceased and discontinued advertising his practice by means of circulars pamphlets or newspapers, by hand or through the post The complainants offered no evidence that the said Walleck Cartwright Mallan had not fulfilled the undertaking which he had given to the Council

The complainants, the British Dental Association were represented by Mr P W Turner, counsel.

Mr Mallan attended.

After deliberation the Council decided not to erase Mr Mallan's name.

The next case was that of George William Hammond

The Dental Committee reported that "The said George William Hammond was registered in the Dentists Register on Dec 31st, 1878 as 'in practice on July 22nd, 1878,' and his address in the Register for the current year is 56, Kennington Causeway, S E Mr Hammond did not attend. The solicitor proved the posting of the notice of inquiry on May 8th, 1915, by registered post to him at 56 Kennington Causeway and to Dental House Ripon his previous registered address In both cases the notice was returned through the dead letter office There is in fact, no such place as Kennington Causeway and Mr Hammond no doubt meant Newington Causeway, near Kennington. Inquiry at 56, Newington Causeway (a common lodging house) elicited the information that although Mr Hammond was well known and had stayed at that address he was not staying there then but would probably be found at Rowton House, Newington Butts, where the notice of inquiry was forwarded with a covering letter by registered post on May 17th 1915, and has not been returned The committee find that the following facts were established by the evidence That on Oct 10th 1912 the said George William Hammond was convicted at Ripon of felony, and that he was fined £1 and 7*s* 6*d* costs or one month s imprisonment with hard labour in default He was received into prison in respect of this conviction on Nov 25th 1914 and it was notified to the Registrar on Nov 27th, 1914 The evidence before the committee consisted of the certified copy of the said conviction and of the due posting of the notice of inquiry on the dates mentioned '

Mr Hammond did not attend

After consideration *in camera* the PRESIDENT said I have to announce that George William Hammond having been proved to have been guilty of the felony alleged against him in the notice of inquiry the Registrar has been directed to erase his name from the Dentists Register

The Council adjourned

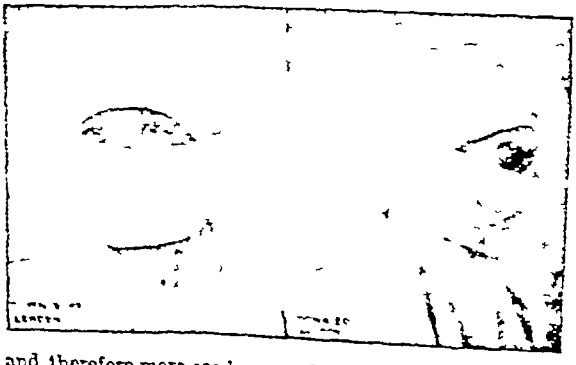
WEDNESDAY, JUNE 2ND

The Council considered charges against medical practitioners during the whole of the sitting

New Inventions.

COMBINED OPERATION CAP AND MASK

THE illustration represents a form of combined cap and mask which will be found exceedingly convenient in practice It is made in one piece, and is adjusted in the following manner After putting the cap on the head the long tail piece is passed across the face and fastened by buttons behind The advantages are —(1) More comfortable, no dragging on the ears, (2) it is fastened by buttons



and therefore more easily secured, and (3) there is a slit in the cap behind which ensures the cap fitting accurately when the mask is pulled across the face

The makers are Messrs Down Bros, Limited, 21 and 23, S Thomas's street London S E.

E J O'MEARA F R C S Eng,
Major I.M.S

Government, notwithstanding its present difficulties, has courteously undertaken the duty of intimating to the signatory powers the publication of the British Pharmacopœia, and the manner in which effect has been given therein to the recommendations of the international agreement

In India, legislation for the better regulation of medical practice, already accomplished as regards certain of the Presidencies, is in course of extension We have received official intimation of a proposed medical ordinance for the United Provinces, and of new regulations, by the Government of India, under which the educational and professional standards for the subordinate medical department will be considerably improved This will probably form the subject of a report to the Council from the Examination Committee

From the English Board of Education a communication has been received, from which it appears that there is now some prospect of the establishment in England of a central authority, charged with the coördination and supervision of secondary school examinations and the inception of a system of leaving certificates Such a system has long existed in Scotland, to the manifest advantage of secondary education in that country The Council in 1904 resolved "That any well considered plan which would tend to a diminution in the number of examinations in preliminary subjects of education, and to a unification of standard of those which remain, would meet with the hearty approval of the Council" The subsequent experience of the Education Committee and of the Council with reference to the recognition and supervision of preliminary examinations, has not been such as to suggest that a "well considered plan" of the kind would be other than welcome now I have referred the Board of Education's circular to the Education Committee in order that you may have its report on the proposals at the present session

At the instance of the Dental Education and Examination Committee inquiries have been addressed to the dental licensing authorities and dental schools as to the suggested deficiency of registered dentists The replies received indicate the prevalence of an opinion that the unsatisfactory state of the law concerning unqualified practice has a deterrent effect on candidates, and that the duration and stringency of the present curriculum do not constitute a serious obstacle The committee will present to you a synopsis of the views expressed by the various authorities, and will report on the questions raised by Dr Newsholme's motion of Nov 26th, 1914

Under the powers conferred by you on the Executive and Office Site Committees, these bodies have made satisfactory progress in the task of providing new and better accommodation for the medical and dental work of the General Council and the English Branch Council The present site and buildings facing Oxford street have been sold to advantage A new site in Hallam street, near Portland place and New Cavendish street has been secured Mr Eustace Frere, A.R I B A., has prepared a design for handsome and commodious buildings which has met with your approval, and has been accepted for exhibition at the Royal Academy A contract for the erection of the buildings has been made with Messrs Chinchen and Co who have undertaken to complete the work by Nov 1st The structure has already reached the first floor and there is a good prospect that the Council may be able to enter into occupation of it by the end of the year Much pains have been taken by your committee to ensure that the arrangements made for the disposal of the old building, which we have outgrown and for the new premises in which we count on carrying forward our work with greater efficiency and convenience, shall be profitable to the Council and adequate to its needs

Certain financial adjustments, as between the General Council the Branch Councils and the Dental Fund have been under the consideration of the treasurers and the legal advisers of the Council You will probably think this a suitable opportunity to define more clearly than heretofore the relations of their accounts in respect of capital and current expenditure Fortunately the financial position for the last year is a favourable one for although the expenses of the General Council have been unavoidably increased by certain temporary causes the income of the four Councils in the aggregate exceeds their total expenses by some £2300 the prospect of a greatly diminished income due to the g off in registrations during the next four or five years, which we must face as an incident of the war will make it wise to persevere in effecting economies wherever these are practicable

I am happy to say that our judicial work at this session promises to be less exacting than usual, and that our sittings need not be prolonged beyond this week In connexion with the enforcement of the penal provisions of the Medical Acts, our thanks are specially due to the Royal College of Physicians of Edinburgh for its public spirited action in prosecuting two firms of unqualified persons, who conducted so-called practices in that city to the scandal of the civic authorities and of the profession The penalties recovered have by order of the Executive Committee, been remitted to the Royal College as a contribution towards the expenses it has incurred The College, by undertaking this important service has demonstrated anew its corporate interest in the safeguarding of the public health

Appointment of Committees

The following committees were appointed —

Executive Committee —The President, Dr Norman Moore, Sir Henry Morris, Mr Tomes, Dr Langley Browne, Mr Hodsdon, Dr Norman Walker, Sir John Moore, and Sir Charles Ball

Penal Cases Committee —The President, Dr Saundby, Mr Tomes, Dr Norman Walker, and Dr Little

Business Committee —Dr Norman Moore (chairman) the President, Dr Norman Walker, Sir Henry Morris, and Dr Little

Pharmacopœia Committee —The President (chairman), Dr Norman Moore Sir Thomas Fraser, Sir George Philipson, Dr Cash Dr Caton, Sir John Moore, Dr Barrs, and Sir William Whitla

Finance Committee —Mr Tomes (chairman) the President, Mr Hodsdon, Sir Henry Morris and Dr Little

Dental Committee —The President (chairman), Sir Henry Morris, Mr Hodsdon, Mr Tomes, and Sir Charles Ball

Dental Education and Examination Committee —Mr Tomes (chairman), the President, Dr Knox Sir Henry Morris, Sir Arthur Chance, Mr Hodson, and Sir William Whitla

Students Registration Committee —Dr Norman Moore (chairman) the President, Dr Mackay Dr Langley Browne Dr Norman Walker, Sir William Whitla, and Sir Bertram Windle

The Finance Committee's Report

Mr TOMES submitted the report of the Finance Committee That report stated that the income of the General and Branch Councils for the year ending Dec 31st, 1914, was £9850 14s 6d The expenditure was £7550 16s 2d Consequently there was a surplus of £2299 18s 4d The report went on to state that the income of the General Council showed an increase of £67 11s 11d An increased sum of £80 was received for colonial and foreign registration fees, but the interest on deposits at the bank was less All the branches had increased receipts from registration fees, the English branch receiving £783 10s, the Scottish branch £420 9s 6d, and the Irish branch £189 7s 6d more than in 1913 making a total increase of £1518 3s 2d At one time it was feared that during the next year or two the registrations might fall much below the average owing to the number of senior students who had gone to the war in various capacities, their qualification being therefore delayed The War Office however, had made efforts to send back to their studies all fourth and fifth year medical students, and it might therefore be hoped that the decrease would be less than was anticipated The number of students registered was 1600 which was an increase of 120 over 1913 and compared favourably with the average of 1374 for the years 1911-1913 At the present day medical practitioners were in great demand and were easily able to procure employment, probably this fact was being more fully recognised by the public

Mr TOMES, in commenting on the report said it was satisfactory and it contained no recommendation to the Council So far the diminution of income had not been felt Some extra expenditure had been incurred owing to the meetings of the Executive Committee regarding the steps to be taken in connexion with the recognition of Belgian medical qualifications

The report was adopted without discussion

The Recognition of Belgian Qualifications

The PRESIDENT submitted reports from the Executive Committee in regard to the admission of Belgian medical

THE LANCET.

LONDON SATURDAY, JUNE 5, 1915

The War and the Supply of Medical Officers

THE forty first instalment of the *Times* History of the War, which appeared on Tuesday last, deals with British medical service in the war and takes an all round look at the medical work which has been done in the field and at home It does not pretend to be more than a very limited survey, but under the different activities and institutions selected for notice reference is made to most of those subdivisions of an enormous subject which are of essential importance The position of the Army Medical Service at the time of the outbreak of the war is fairly stated There is no doubt that we went into the war with a medical service good in personnel, but lacking many things in respect of which urgent demands were soon forthcoming The moment it was clear that we were to take part as a nation in a vast European land war every member of the medical profession with the slightest experience foresaw that around the Army Medical and Army Medical Territorial Services there would have to be grouped much voluntary assistance From the beginning of the war that assistance came in freely, and no doubt would have been offered more generally if exact knowledge had been provided as to the needs of the War Office In the absence of this knowledge it seemed to many civilian medical men that their services were not required, an impression that was confirmed in some places by the rejection of offers of adherence At first the transformation of various and numerous civilian buildings into war hospitals, some of which are mentioned in the *Times* History of the War, and many of which have been described in our columns, seemed unnecessary, particularly to those who were unable to imagine the developments in store Everywhere we heard of schools being transformed into hospitals, of buildings being modified for Red Cross or St John purposes, of country houses being handed over as hospitals and sanatoriums, and while the extent of the land war had not developed only a few people were able to read the signs of the times and to realise that the preparations which had been made would quite soon require to be strongly supplemented But the various stages of the struggle during the past ten months have enabled us to envisage the situation and we know that in the grim contest ahead, where all our national agencies and energies must be used with the utmost freedom, the medical profession will be further and further called upon

Our military authorities think that it is absolutely necessary that we should have in training further large numbers of soldiers to take the place of the heavy depletions which are expected in the future, and of which the casualty lists have given us most dismal proofs in the recent past More men mean more supplies, more camps, more barracks, more sanitation, and, implicitly, more medical officers, and already these officers have experienced considerable losses At the summer session of the General Medical Council, which was opened on Tuesday last, the President, Sir DONALD MACALISTER, in a presidential address which we publish elsewhere in full, stated that the call for qualified physicians and surgeons to take up duty with the forces had become more and more insistent with the growth of the new armies, and added that our professional reserves, at no time large, had been drawn upon to the full—unless, we presume, some practical methods of readjustment can be devised We know that the number of medical men already with the colours is very large, but even if the number remaining behind is in some directions barely adequate to our civil needs the further demands must be met We are a nation at war The needs of the army and navy are absolutely paramount The places of those removed from their civilian work must be supplied by falling back upon every medical man who is unemployed, and those who feel that they are to some extent superfluous in their existing positions, and that they would be able to do more in other directions, must be brought in to civilian work if unable to serve with the forces for any reason By arrangement of our scientific and administrative labour so that all suspicion of overlapping is done away with, there should be some gain of service, and, in the last event, the dropping of certain developments of public medicine, which though most valuable for the well being of the country at peace, can for the time being be considered as accessories to the social scheme in time of war, and not as vital necessities, can be effected No doubt in this way, by a rigid economy of the medical personnel of the country, coupled with some sorting up of that personnel, further civilian medical men can be found for the navy and army, and simultaneously it may be expected that the War Office will turn attention to the work that is being done by those who have already accepted commissions or who are doing part time service with the forces, and will make sure that no waste is taking place there If among these officers there is any systematic extravagance in numbers, if many are available for long periods where only few are wanted, this should be rectified at once If many are doing clerical work whose places could be taken under proper supervision by civilians having no other than a business equipment, we feel that substitutes could be found among laymen who should be as unfitted by various disabilities for actual fighting as they are by lack of qualifications for giving medical help It is possible that the supply of medical men already

# Reports and Analytical Records
FROM
THE LANCET LABORATORY

GLAND PREPARATIONS, VACCINES, AND NUCLEO PROTEIN TABLETS

(MESSRS PARKE, DAVIS, AND CO , BEAK STREET, REGENT STREET, LONDON, W)

CERTAIN of these tablets contain 2¼ grains of desiccated anterior lobe of the pituitary body, and others 3 grains of the posterior lobe (infundibular portion) The physiological action of the two lobes being different, it would seem correct to use the tablets independently The anterior lobe extract has been used in delayed physical and mental development in children of a neurotic tendency, and amongst other maladies, in suppressed menstruation The posterior lobe extract administered hypodermically or intravenously has been used with most favourable results in uterine inertia and uterine and pulmonary hæmorrhage Orally its administration has been tried in acromegaly, paralysis agitans, and in certain skin diseases It is reported that there is no increase in blood pressure when administered by the mouth, though that is the case when it is given hypodermically The parathyroid tablets contain an equivalent of ⅜ grain of fresh glandular tissue We have also received specimens respectively of cholera vaccine and a mixed vaccine for coliform infections, both of which are prepared in the vaccine laboratory of St Mary's Hospital under the direction of Sir Almroth E Wright Lastly, we have examined specimens of nucleo protein compound tablets which present an excellent formula Each tablet contains 1 grain of calcium glycero phosphate, ½ grain of lecithin, and ¼ grain of nuclein We had no difficulty in extracting and recognising lecithin This formula is useful in the treatment of nervous exhaustion and nutritive disorders founded on neuroses

PROTARGEN

(MELLIN'S PHARMACY, 48, REGENT STREET, PICCADILLY CIRCUS, LONDON, W)

Protargen is an effective substitute for similar silver compounds of foreign origin It is a light chocolate coloured powder readily soluble in water It is a true organic combination of silver in which the silver behaves chemically different from that present in the ordinary metallic salts It is compatible, for example, with sodium chloride and albumin It possesses the therapeutic activity of colloid preparations and readily penetrates the mucous membranes Its use is suggested in gynæcological, ophthalmological, and urological practice

THE ALLENBURYS CONCENTRATED FOOD PRODUCTS

(MESSRS ALLEN AND HANBURYS, LIMITED, 37, LOMBARD STREET, LONDON, E C)

Recent additions to the list of concentrated food products now made by this firm are (1) diet tablets, (2) nutrient lozenges, and (3) meat soup squares They are all easily portable foods and convenient for the soldier or the sailor or the traveller The diet tablets are made up of milk solids with wheat and chocolate They contain, therefore, all classes of food—proteins, fat, and starches We found that the amount of protein was just 13 per cent They are obviously useful for tiding over an emergency when substantial diet is not available The nutrient lozenges consist partly of milk products with wheat to which are added beef extractives In this case we found that the total proteins amounted to 25 61 per cent The addition of beef extractives gives them an appetising flavour These also serve a very useful purpose as an emergency food The meat soup squares contained 41 63 per cent of protein Though not to any large extent soluble, these squares enable a very palatable soup to be made The presence of meat fibre was confirmed by microscopic examination These preparations, of course, find a very useful place in times of military campaign

GRANSALO FOOD

(MESSRS S HENDERSON AND SONS, LIMITED, SLATEFORD ROAD, EDINBURGH)

This granular preparation contains all classes of food substance—fat, carbohydrate, nitrogenous materials, and mineral salts The proteins are derived for the most part from eggs and the carbohydrates from flour The complete analysis of the preparation gave us the following results Moisture, 7 80 per cent , mineral matter, 0 90 per cent , proteins, 15 43 per cent , fat, 8 44 per cent , total sugars, including milk and cane sugar, 34·24 per cent , and starch, 33 19 per cent The food in the course of its preparation is cooked, and may be used simply mixed with hot water, milk, or cream without any further treatment The fat extracted proved to contain lecithin It is a digestible and nutritious food and attractive in flavour

UNGUEMOL

(MESSRS JOHN BELL, HILLS, AND LUCAS LIMITED, TOWER BRIDGE ROAD, LONDON, S E)

According to our examination this is a combination of substances which are antagonistic to the activities of vermin It is free from any harmful ingredient or irritant, while it contains no corrosive or other agent which would spoil clothing It is a fine light yellow powder and is contained in a canister with perforated top, a lever lid preventing loss of material when the tin is not in use It contains, amongst other things, a bland oil, sulphur and naphthaline in a fine silica basis It is intended especially for the eradication of lice on the persons of soldiers in the field

TUBES OF TURTLE CUP

(TURTLE CUP, LIMITED, 27 ADDINGTON SQUARE, CAMBERWELL LONDON, S E)

The idea of packing "turtle cup" in collapsible tubes is an excellent one The tubes are very convenient in practice, and supply a portable nourishing, and sustaining soup The turtle gives the "cup ' an attractive flavour, and an appetising soup may easily be prepared in this way A spoonful or so placed in hot water yields all that is required Turtle cup has been much appreciated by invalid soldiers and by patients who have little or no appetite for ordinary food It contains something more than mere stimulating principles, it is a rapid and cheering nutrient

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DONATIONS AND BEQUESTS —By the will of the late Mr Thomas Groom Barker, of Eccles and Manchester the testator left £600 to the Manchester Infirmary, £400 each to the St Mary's Hospital Manchester and the Victoria University, £150 to the Royal School for the Deaf and Dumb, Old Trafford, and £150 to the Cheetham Hospital —King Edward Hospital Cardiff has received a gift of 2000 guineas from Alderman J H Mathias, of Porth, Rhondda, for the purpose of endowing two memorial beds too expensive a proposition. We still await a destructor which by automatically effecting economies can be brought into service in every community, whether large or small At present it is only the luxury of large and rich districts, and often then it is a source of nuisance

Annotations.

"Ne quid nimis

INDUSTRIAL ACCIDENTS IN AMERICA

IN the United States of America human life is cheap and industrial accidents frequent An estimate by Mr T J Riley in the Bulletin of the Department of Health, City of New York, places the number of deaths by such accidents at nearly 35,000 per annum It is calculated that the total number of both fatal and non fatal industrial accidents must be about 700,000 a year On the average, 9 railway employees are killed by accident every day in the United States, and 1 is injured every 11 minutes Out of every 200 coal mine employees, 1 is killed by accident yearly These figures refer to occupied males above 15 years of age, and do not include the women workers, it must be noted that four fifths of the men thus injured are 40 years of age or under, so that the economic waste due to these accidents is extremely large, the victims being struck down in the prime of life Among the transport workers, it is said, fatal accidents are about three and a half times as common in the United States as they are in Great Britain More than half the fatal and non fatal accidents are due to unguarded or inadequately guarded machinery in motion, the remainder are caused by falling bodies, collapsing buildings, explosives, hot liquids, acids, and steam These facts indicate the nature of the precautions that should be taken to reduce the excessive number of accidents Moving machinery must be guarded, lifts must be made fool proof, automatic mechanisms must take the place of human beings or human interference, and the inspection of scaffoldings, buildings in course of erection, lifts and the like, must be made effective In America, it seems, it still costs less to kill a man by accident than to protect him against injury Mr Riley advocates the wider recognition of the principle expressed in the terms "employers liability" or 'compensation , at the present time charitable help still plays an unduly large part in making good the social and economic losses caused by industrial accidents He points out that there is much room for the improvement of hygiene in the pit, shop, or factory improved hygiene means lessened incidence of disease, particularly occupational disease Fatigue, again, whether mental or physical, predisposes to the occurrence of accidents so that unduly long hours of labour should not be allowed The worker is to be insured for his own benefit against both accident and disease Who is to pay for the insurance? In the case of accident Mr Riley believes, the industry should bear the whole cost In the case of illness the conditions are not the same the work and the conditions of the work are responsible only in part for the sickness, and so the cost of insurance against occupational disease should be borne in part by the industry, in part by the worker Charitable help for these victims of accident or disease is still requisite, and should be given in adequate amount and intelligently But first and foremost steps should be taken to bring down the number of accidents and to lessen the incidence of occupational disease, both are altogether too high in America

THE MEMORIAL TO MADAME DEPAGE

THE following subscriptions have been received towards a memorial to Madame Depage, the wife of Professor Depage, who was drowned in the wreck of the *Lusitania*, when returning from the United States, where she had gone to collect funds for the Depage hospital at La Panne —

	£	s	d
Sir T Lauder Brunton, Bart, F R S	10	10	0
Mr D'Arcy Power	5	5	0
Capt W J Greer, R.A.M C (T)	3	3	0
Professor Sinclair White	2	2	0
Mr Robert Jones	2	2	0
Lieut. Col A W Sheen, R A.M C (T)	1	1	0
Mrs D Arcy Power	1	1	0
Mr W D Spanton	0	10	6

All who wish to contribute are requested to send their subscriptions to Mr D Arcy Power, 10A, Chandos street, Cavendish square, W

MUMPS

IN a critical review of this common infectious disease in the *Quarterly Journal of Medicine* (1915, vol viii, p 255) Dr Anthony Feiling brings forward certain observations not very generally known As regards its causation some valuable and suggestive experiments have been made by Nicolle and Conseille They were quite unable to find any micro organisms in the fluid obtained by aspiration of the parotid glands of patients with mumps But with the fluid so obtained they injected the parotid glands of three monkeys All three developed after an incubation period varying from 16 to 26 days, a febrile illness lasting two to seven days, and one suffered from a definite swelling of the left parotid gland The blood in one animal was noted to show a mononuclear leucocytosis The same monkey which developed this attack of apparent mumps was subsequently reinoculated, but failed to develop any illness, suggesting that immunity had been conferred by the first inoculation Dr M H Gordon induced in monkeys, in four out of the ten used, symptoms of severe meningeal irritation and death, following inoculation in sterile saline of a filtrate of saliva from patients suffering from mumps These experiments suggest that mumps is due to a filterable virus comparable to that of poliomyelitis small pox, and typhus fever[1] The blood changes in mumps are important, there is a relative and absolute increase of the lymphocytes, this is present on the first day of the disease, and persists for 14 days This is of value for diagnosis Besides the complication of orchitis, present in 20 to 30 per cent of cases and coming on during the height of the disease, pancreatitis may occur Nervous complications also are fairly frequent Mumps, then whilst usually not serious, the mortality being only 3 per 1 000,000 may present startling clinical symptoms in some cases, and these offer confirmatory evidence of the generalised infection suggested by the animal experiments with the colours could be made to go further The matter is one that has throughout engaged the attention of the War Office, and, of course, the members of a service can be manipulated to numerical advantage in a way that a heterogeneous mass of civilians, having nothing but their professional rank in common, cannot be

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[1] On a Fatal Illness in Children associated with Acute Interstitial Parotitis M H. Gordon THE LANCET August 2nd 1913, p 275.

We are foreshadowing what would come very near to mobilisation of the whole of the medical profession, and it may be that both individual justice to the medical officer and great advantage to our army and navy would follow if some such course were taken quickly But it is unfortunate that this unprecedented demand upon our profession should find us with our ranks abnormally thin At the end of 1914 there were over 1000 fewer medical students actually attendant on courses of study than in 1913 The recall to the schools of senior students who had volunteered for active service will arrest wastage of our numbers caused by the outbreak of war, and will enable the students in their fifth year of study to qualify in due time But Sir DONALD MACALISTER has warned the General Medical Council that for several years to come a falling off in the number of qualified men must be expected On the other hand, the possibility of complete medical reciprocity with Canada is at hand, and when the Medical Act of 1886 applies to the Dominion of Canada as it does already to the Commonwealth of Australia the evils of shortage will be counteracted The British Medical Association, through a war emergency committee, which has recently been formed, is proposing to obtain a census of doctors as a first step towards judging what further help the medical profession can give, and has issued a form inviting medical men in the metropolitan district to state if they are willing to go on active service, or if they will undertake whole time service at home or part time service at home We need hardly say that such voluntary registration, if it could be made effective, would be preferable in many ways to what is usually understood by mobilisation, for this in the case of a profession like ours presents an enormous amount of difficulty and would inevitably lead to many hardships But in making a voluntary register this fact remains—the responsibility is placed upon each individual to make up his mind as to the seriousness of the situation, and the different conceptions on this point lead to unfair results

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Sanitary Scavenging

THE Public Health Department of the Local Government Board have most opportunely published a Return as to scavenging in urban districts in England and Wales which has been compiled from the schedules furnished by the authorities of those districts at the beginning of 1914 Ostensibly the inquiry was undertaken with the view of precaution before the onset of hot weather and had no reference to the war, but the heavy imposition placed upon the efficiency of our sanitary system by refugees and by the great number of troops in every town and village in the country has added a special value and importance to the findings For, as is pointed out in a circular addressed to medical officers and the administrative bodies concerned, it is especially desirable at the present time, considering this congested state of affairs, and also when there are peculiar dangers arising from the spread of infectious diseases, that our sanitary authorities should do all in their power to prevent the retention of accumulations of refuse in the neighbourhood of dwellings and generally to maintain an efficient service for dealing with house refuse

The Return should materially help domestic sanitation, for the information and advisory measures which it contains will be valuable in many directions, while in an appendix are given the arrangements at present in force for the storage, collection, and disposal of refuse in each urban district In a preliminary memorandum the directions in which defective arrangements may prejudice public health are indicated, and how these arrangements may be improved is a further subject of consideration. The Board invite health authorities to deliberate whether in regard to their district certain elementary, though effective, principles are followed The use of the sanitary bin in connexion with all new houses and buildings is enjoined, and especially the covered model, and it is suggested that in the populated parts of a district the scavenging should be undertaken by the authorities' own staff, who should remove all refuse in properly covered carts at least once a week, especially during hot weather In places where no destructor is available the removal of refuse should be carried out with every precaution to prevent its causing nuisance and danger to health, and if tips are used these should be as remote as possible from dwellings and the material covered with earth and the tip fenced in All these are quite simple suggestions, and they should be carefully followed throughout the land Their application will go a long way towards preserving a clean bill of health during a period in which the beginning and continuation of infectious disease are alike favoured by summer conditions

It will be readily recognised that as the efficiency of scavenging is increased so will danger from flies diminish, since it is well established that ashpits and refuse depositories are their favourite breeding places From an ideal point of view house refuse should not be allowed to accumulate at all, and as the art of domestic architecture develops we can imagine that for every household there will be its own destructor This is not yet practicable, although to some extent such a position is realised when as much as possible of the refuse is destroyed in the kitchen fire With, however, the increasing use of gas and electricity for cooking purposes the domestic facilities for burning refuse will get smaller and smaller On grounds of public health fire is the best scavenger of all, but except in large towns the destructor is generally

THE WHITE MAN'S BURDEN IN WEST AFRICA

THE gravity of the white man's burden in the tropics is now generally recognised. In few places has this burden in the past been greater than in West Africa, and, indeed, it is not so long ago that one of our British colonies in that region was commonly spoken of as "the white man's grave." In recent years continued and strenuous efforts have been made to remedy the conditions which were deleterious to the health of Europeans and natives in West Africa. These efforts have already given encouraging results by reducing both the sickness and the mortality rates, especially among the officials serving in these colonies. In this connexion Dr. A. E. Horn, of the West African Medical Staff, in a paper which he contributed to THE LANCET of May 18th, 1912, drew attention to the improvement which had then taken place and pointed out that credit for the application of the recognised principles of tropical medicine and hygiene was due to the Colonial Office and also to local administrations. These latter, he showed, had consistently authorised and approved of expenditure on sanitary works such as the drainage of marshes, the carrying out of anti-mosquito campaigns, the demolition and reconstruction of native towns and stations, along with the provision and proper control of wholesome water supplies, and the like, all of which were calculated to improve the conditions of living, not only for Europeans but also for the African natives themselves, and assist, directly or indirectly, in the economic development of the colony. We have received a copy of the report for 1914,[1] just issued, on the vital statistics of non-native officials in the four West African colonies of the Gambia, Sierra Leone, the Gold Coast, and Nigeria, which together employ a white staff of 2641. Owing to the great European war and the resulting military operations in German Togoland and the Cameroons the burden placed upon the officials of these British colonies was much heavier than usual. Notwithstanding this the statistics now published present certain satisfactory features. In the year 1905 the death-rate from all causes in the non-native officials was 28·1 per 1000, but in 1913 the rate had declined to 11·8. The year 1914 was exceptional, and it therefore hardly lends itself for comparison with previous years. A large number of officials were released by the colonial Governments for service with the colours at home, others resigned or otherwise determined their appointments for a similar purpose. Moreover, besides the majority of the West African Frontier Force, a great many civil officers were attached to the forces operating in Togoland and the Cameroons, where, apart from the direct casualties in the field, they were naturally exposed in the circumstances to greater risks of disease and other dangers than if they had remained at their posts in their respective colonies. Further, the depletion of the normal staff threw extra work upon those who were left, and also necessitated the retention of many officers in West Africa for periods considerably in excess of the usual length of tour, with the result that the health of some of them suffered and a proportionately higher number of invalidings ensued. Reckoning all the deaths that occurred among the European officials during 1914 the mortality rate was 19·3 per 1000, but if the casualties, 18 in number, in the military operations in Togoland and the Cameroons are deducted, as also 3 other deaths directly due to these operations, the death-rate for 1914 is reduced to 11·6, which is actually just under that of the previous year. The invaliding rate, in spite of the adverse conditions above indicated, was 36·4 per 1000, as compared with 42·6 in 1913. It appears, then, that notwithstanding the exceptional circumstances of 1914, these West African colonies have continued to maintain the progress which had been previously observed. There are, therefore, reasonable ground for believing that the white man's burden in West Africa is being sensibly lightened year by year by the application of the principles of modern science.

VENEREAL DISEASE IN NORWAY

VENEREAL disease is notifiable in Norway, and during 1914 just over 2000 cases of gonorrhœa and syphilis were notified in its capital, Christiania, which has a population of about a quarter of a million inhabitants.[1] The notification is made by medical practitioners and hospitals, and over 85 per cent. of those notified were males; over a third of all the notifications were made in the month of December, June being the month with the next largest number of notifications. There were 556 cases of syphilis, and it is noted that the infection was extragenital in 20 of these, 6 males and 14 females, the tonsils or lips being the seat of the infection in 11. There were 38 new cases of congenital syphilis, and it is recorded that a special hospital for the treatment of this condition, with 20 beds, was opened in 1914 by the Oddfellows' Lodge at Christiania. It appears that in only 78 cases was the infection acquired in some other town, a low proportion in a harbour visited by so many seamen as Christiania. In 78 instances evidence as to the source of infection was given sufficiently definite to cause special inquiry to be made, and in 60 of these the inquiry gave a successful result. The law allows punishment up to three years of imprisonment to be given to any person who exposes another to venereal infection while knowing or suspecting that he or she has venereal disease himself or herself; 9 men and 18 women were prosecuted under this law, and 2 of the men and 7 of the women were convicted.

MEDICAL DEFENCE

THE annual meeting of the London and Counties Medical Protection Society was held at 32, Craven-street, Strand, W.C., on May 26th, Dr. G. A. Heron, the president, was in the chair. The report of the council which was submitted to the meeting and unanimously agreed to showed a satisfactory record of work for the year. During 1914 the number of applications from members asking for advice and assistance was 621, as compared with 603 during the year 1913 and 575 in 1912. The majority of cases were dealt with successfully without recourse to legal proceedings, and in cases where litigation was necessary the results were also satisfactory. The expenditure on legal action was somewhat heavy, but there was nevertheless a satisfactory increment of the surplus funds of the society at the end of the year. The report showed that 400 new members joined in 1914. Dr. Heron, in his address from the chair, spoke of the need for closer coöperation among medical men in regard to medical defence, and

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[1] West African Medical Staff, [illegible] Non-Native Officials [illegible] H.M. [illegible]

[1] [illegible] Tidsskrift for den Norske Lægeforening, Christiania, [illegible]

REMOVAL OF A SHELL FRAGMENT FROM THE CAVITY OF THE RIGHT VENTRICLE

AT a meeting of the Académie de Médecine of Paris on May 4th M Beaussenat reported a most extraordinary case—the survival of a man with his right ventricle pierced by a fragment of shell which lay free in its cavity, and its successful removal by operation Wounds of the heart have often been successfully sutured, but removal of a foreign body from one of the cavities does not appear to have been even attempted A sergeant of the 91st Infantry Regiment was wounded at Saint Hubert, in Argonne, on Oct 1st, 1914, by a hand grenade which exploded at his feet He was hit by three projectiles—in the left deltoid region, in the front of the right thigh, and in the chest The last projectile entered at a point a finger breadth below and to the left of the point of the xiphoid cartilage Severe præcordial pain and dyspnœa followed There were hæmoptysis and abundant hæmorrhage from the epigastric wound, which was arrested by applying a dressing After remaining 24 hours at a dressing station he was removed to hospital The hæmoptysis was arrested on the fifth day A radioscopic examination of the chest was made and the report was "Shrapnel bullet entirely free on the diaphragm" He was never free from painful dyspnœa on effort and præcordial anguish, especially at night He was taken to Nantes, where, after several radiographic and radioscopic examinations, the diagnosis was "Fragment of a ball implanted in the pericardium and following all the movements of the heart" Inspector General Delorme proposed an operation, which the patient declined He left hospital on Jan 26th, 1915, on seven days' leave, in the course of which he presented himself for medical examination at Paris He complained of a persistent sensation of anguish which had much increased since he had left hospital He was admitted to Auxiliary Hospital 147 on Feb 4th The face was pale and a little anxious The breathing was short and became very rapid when he stood up walked, or even spoke He was careful to walk quietly, to speak slowly, and not to make brusque movements He was more uncomfortable in the horizontal than in the vertical position, and his nights were particularly bad He had a tendency to hold his hand over his heart which was simply excitable without any murmur or other sign, except a kind of thrill at the apex A radioscopic examination was made by Dr Jaugeas, who found "a small fragment of a projectile with regular movements of little amplitude, synchronous with the heart beats and not influenced by suspension of respiratory movements, manifestly intrapericardiac" On Feb 17th Dr Beaussenat made a transverse incision 13 centimetres long over the left fifth rib, which he resected with its cartilage for a distance of 8 centimetres He pushed back the pleura and exposed and incised the pericardium it contained liquid, not tinted, but more abundant than normal Thinking that the projectile might be arrested in the myocardium, he explored the latter systematically On palpation of the right ventricle he found that it contained a hard movable body The heart was luxated out of the pericardium and so maintained by two silk loops passed into the wall of the right ventricle The projectile was brought in contact with the external border of the ventricle near the apex and held there between the left thumb and fingers While an assistant exercised traction on the silk threads, so as to strain the ventricular wall, M Beaussenat carefully incised it between them A gush of dark blood occurred and was instantly arrested by pressure with the index finger, over which during the diastole was passed a forceps and the projectile was seized and removed It was a metallic splinter of irregular outline 1¼ centimetres long and weighing 1¼ grammes The heart wound was sutured with silk and the pericardial and superficial wounds were closed For three days there was intense dyspnœa and the pulse was feeble and irregular A marked rhythm "à trois temps" was heard Recovery, though interrupted by three attacks of pulmonary embolism, was complete on March 17th Examination in April with the electrocardioscope by Dr Josué showed only predominance of the left ventricle

A NEW TEST FOR URINARY SUGAR

THE difficulties associated with the performance of the ordinary tests for sugar in the urine, of which Fehling's is by far the most commonly employed, are well known, so that the invention of a new diagnostic reagent is a matter of considerable clinical importance In the *Biochemical Journal* for March Dr William Cramer describes a method of employing the reduction of a weakly alkaline solution of mercuric oxide to metallic mercury in the presence of suitable sugars, which he considers to have special advantages as a test The reagent is prepared by dissolving 0·4 gr of mercuric oxide, red or yellow, with 6 gr of potassium iodide in 100 c c of water, and adjusting the alkalinity of the solution so that 10 c c are neutralised to phenol phthalein by 2·5 c.c. of decinormal acid The resulting solution is colourless in the cold and turns slightly yellow on boiling To test for sugar in urine 3 c c of the reagent are heated to boiling, then 0·3 c c of urine is added and the mixture again boiled On removing the test tube from the flame, the mixture darkens if sugar be present, and a deposit of black metallic mercury gradually settles to the bottom Not only glucose, but lactose, maltose, xylose, and arabinose give the reaction, while cane sugar does not The sensitiveness of the test fluid can be varied by increasing or diminishing its degree of alkalinity, and the point fixed, as stated above, corresponds to a degree which gives a faint reaction with normal urine, which is known to contain about 0·1 per cent of sugar If the reagent is made more alkaline and thus more sensitive, it may give a precipitate with creatinin and other organic substances Dr Cramer finds that the '2·5 standard' solution gives a definite reaction with small amounts of sugar in the urine, which only produce doubtful results when tested with Fehling's fluid He suggests as an indication of the degree of the reaction the possibility of reading print through the solution when boiled in an ordinary test tube 30 seconds after this is removed from the flame a few drops of acetic acid being first added to remove any possible turbidity due to phosphate Small quantities of sugar can thus be recognised and roughly estimated Ammoniacal urine must not be used for the mercuric test any more than in performing Fehling's reaction Possibly for ordinary clinical testing the "2·0 standard" solution, which gives no reaction with normal urine, may seem preferable, but Dr Cramer considers that there is no reason to ignore the minute amount of sugar normally present, when small variations from this percentage can be readily demonstrated

When ordered to form an advanced dressing station it is desirable to find some suitable house easily accessible from the road, with good accommodation for patients and the personnel, and near where horses can be stabled, but if possible at least 400 yards away from a battery, or a bridge, or chateau, and as near to the front trenches as the brigade commander thinks desirable If the sanitary condition of the place and its water supply are not all that could be desired, one has got to make the best of what one finds

It is essential that ambulance wagons should be hidden when not in use by covering them with branches of trees, as in the present campaign the Red Cross painted on the wagons has not secured their protection from shell fire It is unfortunate, but none the less a fact, that ambulance wagons have been shelled by the enemy from a distance at which he could not possibly have mistaken them for any other transport I have had the position of my dressing station marked by hostile aircraft having detected the ambulance wagons (a large red cross was painted on the top of them) and was severely shelled almost immediately afterwards It is a wise precaution to have dug outs or trenches made quite close, which can be utilised when necessary, and it will occur occasionally that a Bearer Division will be compelled to occupy dug outs entirely

Collection of Wounded

When the number of casualties is small the number of wounded are usually collected by the regimental stretcher bearers and carried to the regimental aid posts from which places it becomes the duty of the Bearer Division to evacuate them to the Tent Division, or possibly to some clearing station During and after severe engagements the number of casualties is necessarily large, and the work of collecting the wounded becomes too great for the regimental stretcher bearers Then the Bearer Division must assist them to get the wounded back from the trenches For this and other reasons it has been found necessary in the present campaign to place the Bearer Division in communication with the head quarters of the infantry brigade, from which it has to evacuate wounded Such communication is a matter of much importance and on the way in which it is maintained will, to a large extent depend the rapidity with which casualties are collected and evacuated It may be effected in the following ways 1 By means of a telephone wire laid from headquarters of the brigade to the advanced dressing station 2 By a cycle orderly In either of the foregoing methods the entire evacuation is carried out through the medium of the brigade staff, who send direct to the officer in charge of the Bearer Division information as to the number and disposition of casualties and the time when they consider it best to collect and evacuate them 3 By means of a 'liaison officer In this method a mounted officer of the Bearer Division with a cycle orderly is told off to remain with and accompany Brigade Headquarters His duty is 'to keep constant touch with the Officer Commanding the Bearer Division by means of his cycle orderly He must observe where casualties occur or are collected their numbers &c He must note the ground passed over by the brigade and must lead the Officer Commanding the Bearer Division to the position of the wounded when suitable occasion occurs In carrying out these orders the liaison officer must be constantly in touch with the regimental medical officers, and so become acquainted if the casualties are too numerous to be collected by the regimental stretcher bearers, and, if so, he reports how many stretcher squads from the Bearer Division each battalion or other unit will require He also becomes acquainted with the cases which are most seriously wounded (and these require to be evacuated first), how many cases can sit up when pressed for accommodation in wagons, and, further, the most suitable and safest place for a wagon rendezvous

All these facts communicated at once to the officer in charge of the Bearer Division bring about an extraordinary saving of time in the evacuation of casualties, when time is often of the utmost importance to the lives of the more seriously wounded This time saving, to my mind, makes the liaison officer method infinitely the best of any system with which I am acquainted for the collection and evacuation of wounded

No matter how anxious a brigade staff may be to give information of the type just mentioned, they cannot do so, it is not their work It is essentially the work of a medical officer, and if left to a layman (in the medical sense of the word) when casualties are numerous unfortunate mistakes are not unlikely to occur

I, in compliance with instructions, adopted this method during the entire period of the heavy fighting around Ypres in October and November, 1914, when casualties were numerous I was fortunate in possessing an efficient and capable liaison officer, whose prompt and accurate information enabled me on many occasions to save hours in the collection and evacuation of wounded The brigade staff readily expressed their approval of the method. It relieved them of all anxiety about the wounded, and thus gave them more time for matters of even still greater import

The objection most often raised to this method is that it deprives the Bearer Division of the services of one officer This to a certain extent is the case, but his services are being utilised instead to the best possible advantage where casualties are most likely to occur I am not at all at one with those who hold that several officers are required with a Bearer Division, indeed, for the greater part of the time around Ypres, during the most severe engagements, the only officer I had to assist me was my liaison officer, and I am quite satisfied that whilst so employed he gave me an amount of assistance which far excelled any work that he could have done for me had he remained at my dressing station. At that time I also had a most reliable non commissioned officer to assist me

Transit of Wounded

At the outbreak of the war the only means of transport for wounded which Field Ambulances possessed were two horsed ambulance wagons ten in number These wagons went to the advanced dressing station with the Bearer Division However since last November motor wagons with practically the same holding capacity as the horse wagons have been in use at the front, and their advantages over the latter are obvious

It is not possible that motor wagons will entirely replace the older horse wagons and as far as my experience goes there are sound reasons why they should not do so In the first place a horse wagon can travel over old, ill kept roads or over fields which would be quite impossible for a motor wagon alluded to a scheme for amalgamation between the London and Counties Medical Protection Society and the Medical Defence Union, which was considered as far back as 1893 without success He alluded to the support given by THE LANCET then and later to the idea of a fusion between the two societies in terms which suggest the possibility that the idea may revive

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SCIENCE IN CATALONIA

OVER the greater part of Spain the language spoken is Castilian, nowadays commonly known to us as Spanish But not less Spanish are two other tongues equally derived from the vulgar Latin once used in Spain—namely, Portuguese Galician, employed along the western border of the peninsula, and Catalan, spoken by some 3½ million Spaniards living along its eastern border and in the Balearic Islands As a language Catalan came into existence in the ninth century, when it was brought into Spain from the south of France, Languedoc, by the returning Spaniards, who had been driven northwards out of their country by the Arab invasion in the second decade of the eighth century Catalan literature, never very extensive in scope or large in quantity, was at its best in the fifteenth century, and after that period fell into decadence from desuetude, Castilian took the place of the Catalan tongue among the educated, and Catalan fell into the position of a *patois* But about a hundred years ago a revival of the Catalan language and literature was essayed with no little success, and at the present time the effort is well maintained in both poetry and drama A further example of the new vitality of Catalan takes the form of a "Biological Society" at Barcelona, which published its first year book in 1914 During the year this society held eight sessions, at which the members read and discussed 30 papers on medical and pathological subjects exclusively, and one on a matter of palæontology Seven of the papers deal with the electrocardiograph, and are illustrated with numerous electrocardiograms J Marimon discusses the question whether both myxœdema and exophthalmic goitre may not be two manifestations of the same disease, hypothyroidism R Carrasco details a number of blood counts in patients with Basedow's disease, showing that in it there is a deviation to the right in Arneth's neutrophil scheme, together with an increase in the nuclear number Ll Sayé finds a similar deviation in the leucocytosis produced in both man and rabbits by artificial pneumothorax He believes that the establishment of such a pneumothorax produces a mild aseptic inflammation in the collapsed lung, and that this accounts for the leucocytosis, which is polymorphonuclear in man, eosinophil in the rabbit J Peyri gives a contribution to the study of McDonagh's leucocytozoon syphilidis, finding himself not in complete accord with some of McDonagh's interpretations of the phenomena observed Of other papers in the year book three are written in Spanish, all the rest are in Catalan The Biological Society of Barcelona is to be congratulated on its scientific activity

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AMONG the new Knights there are two well known medical men who have earned the honour by scientific and administrative work in medicine We congratulate Sir James Mackenzie, the distinguished worker in cardiac problems, and Sir Frederick Needham, the well known expert in lunacy, upon the official recognition of their excellent work

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SIX MONTHS WITH THE BEARER DIVISION OF A FIELD AMBULANCE AT THE FRONT

By S J A H. WALSHE, D S O, M B, CH B EDIN,
CAPTAIN R A M C

HAVING been during the first six months of the present war in charge of the Bearer Division of a Field Ambulance at the front, I am tempted to record some of my experiences in the hope that they may be at least interesting, if not perhaps useful, to officers who at a later date may have to undertake similar duty

In this campaign, owing to modern gun fire, it has generally been found quite impossible for the Bearer Division whilst remaining with its Tent Division to go forward, collect the wounded during or after an engagement, and return with the casualties collected to headquarters that night The Tent Division must of necessity be some miles behind the firing line to be totally outside the zone of fire To perform its duties properly the Bearer Division cannot possibly remain so far back, owing to the distance and the time which would be lost in coming up It must almost invariably be in front of our own guns and take up its position from, say, 500 yards to two miles behind the front trenches Whilst the particular area held by the infantry brigade or units from which wounded are to be collected will be pointed out to one, the selection of the actual site to be occupied by the Bearer Division may be left to the officer in charge, in which place, as a matter of course, an advanced dressing station will be established

Selection of Site of Advanced Dressing Station

The selection of this site requires some consideration One may make it a rule that a battery in action, a bridge over a canal or river, or a chateau (marked as such on the map) are best avoided, as they are most likely to attract the enemy's fire Neither should the vicinity of a railway station be occupied owing to its gun range being known Billeting areas of troops are generally observed by hostile aircraft, and for that reason should be avoided

The most elaborate and possibly the best laid out advanced dressing station which I have seen was in a railway station Every available room and all the offices were commandeered for the purpose No detail appeared to have been overlooked There was quite a good operating room fitted up, also a room where patients were to be kept prior to operation, as well as one to which they were to be transferred when operated on This dressing station might well have been taken as a model, which, indeed, it would have been had it not from its environment been a still better model of a death trap Unfortunately, it was in a railway station, which in itself is a danger zone, a canal bridge previously shelled by the Germans was not 40 yards away, the adjoining village was entirely occupied by troops an armoured train came up daily to the station to fire, and as if to complete the picture there were two railway trucks of high explosive shells not 20 yards from the dressing station itself I have given this instance to demonstrate that the site of a dressing station is of infinitely greater importance than the particular type of house used for the purpose serum every day for four consecutive days. In two cases the cure was assured on the fifth day after the first injection. The patellar reflex became normal on the eighth day. The cure was complete on the twentieth day. The systematic examination established that there exists immediately after the period of incubation, at the beginning of the period of invasion of tetanus, a period of treacherous abeyance during which three symptoms, that are easy to discover, point on the surface to the toxic impregnation of the maxillary axis; these are the lessening of the usual width of opening between the jaws; a painful contraction caused by a slight increase in the opening of them; and the very considerable increase of the patellar reflex. At this initial period of infection the antitetanic serum possesses a marvellous efficacy, and its action is by no means inferior as a specific to antidiphtheritic serum.

Preventive Treatment of Typhoidal Peritonitis.

In cases of typhoid fever during the war peritoneal complications are particularly frequent because of the unusually exhausting conditions to which the men are subjected during their evacuation and also because of the defects in their feeding during the same period. As peritonitis in suffering soldiers is almost always fatal, whether operated on or not, M. Courtellement considers it of paramount importance to attempt to prevent its development. In his opinion a suitable treatment, undertaken at an opportune time—that is to say, during the period which he calls pre-peritonitic—offers very excellent chances of success. According to M. Courtellement, three symptoms at this period reveal peritonitic reaction. These are the distension of the abdomen, vomiting, and abdominal pains. As a rule one symptom only, rarely two, indicates the existence of the pre-peritonitic period. Of the three symptoms the more frequent is the distension of the abdomen. This ought to be taken into account each time that it becomes marked. The vomiting as soon as it is repeated without a plausible cause, in the form of true vomiting or of regurgitations, constitutes a strong indication of peritonitic reaction. As to the pains of the prepentonitic period, they habitually present themselves in the form of intestinal colic, at other times affecting the whole abdomen or of one region, and are spontaneous or at times revealed or exacerbated by the ingestion of liquid. When the peritonitic condition characterised by one of these symptoms has been recognised a special treatment should be commenced without delay; this varies according to whether we are dealing with a slight or a severe case. In slight cases it is sufficient to prescribe immobility on the back. On the abdomen damp tepid compresses may be applied entirely covering it, squeezed out to get rid of excessive liquid, or else an ice bag may be used covered with flannel. No milk to be given. In serious cases the treatment requires the same immobility of course, and prolonged applications of ice on the abdomen. Complete abstention from all drinks either of the nature of milk or water. The patient is only allowed to suck little fragments of ice if he shows a tendency to vomit, and subcutaneous injections of saline solution, the dose to be one litre per day, 500 c.c. being injected in the morning and 500 c.c. at night. This treatment may be continued on an average three days.

May [illegible]

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Appreciation of Medical Services in the Persian Gulf.

THE Commander-in-Chief has received the following telegram from the General Officer commanding the force at Basra: "I have received from all quarters glowing accounts of the conduct of medical officers, assistant surgeons, sub-assistant surgeons, and the army bearer personnel of the Shaiba force and of the line of communications. In the action they displayed great bravery, while throughout the strenuous and unremitting labour of the last six days and nights their devotion to duty has evoked universal praise. Including those of the enemy, over 1100 wounded have been attended to and evacuated to the general hospital at the base under conditions of unusual difficulty and strain on the medical personnel, who have nobly done their duty."

Irrigation in the Central Provinces.

The Central Provinces are beginning to benefit from the irrigation works undertaken of late years. As Sir William Meyer said in his speech in introducing the annual financial statement, the Mahanadi Canal has begun to furnish water for irrigation, this being the first canal system constructed in those provinces. Good progress has also been made on the Waiganga canal and the Tendula reservoir. As in 1915-16 18 lakhs are to be spent on the Mahanadi project and nearly 10 lakhs on the other, the rate of construction will be fully maintained. A few years hence the Central Provinces will have quite a large area under irrigation from canals as distinct from that served by tanks, which hitherto have been the only means of conserving water for the land.

Mysore Sub-Assistant Surgeons.

The Mysore Government is contemplating the opening of a new branch for sub-assistant surgeons in its service. It is understood that a number of sub-assistant surgeons are to be specially trained every year in malarial field work and the causation and prevention of malaria.

Deaths from Snakes and Wild Animals in Assam.

The number of persons killed by wild animals and snakes in Assam during the year 1914 is reported to have been 126 and 150 respectively, as compared with 102 and 167 in the preceding year. Tigers were mainly responsible for the increase in the number of persons killed by wild animals, the number of casualties due to these animals being 49, as against 33 in the previous year.

Sanitation in Assam.

A Sanitary Commissioner has now been approved for Assam. The province has hitherto had only a Deputy Sanitary Commissioner.

Military Hospital Nurses.

The Government of India has sanctioned the engagement temporarily of additional fully trained nurses for duty in military hospitals in India. Applications should be addressed to the Director of Medical Services in India, Army Headquarters, Simla.

May [illegible]

EUGENICS EDUCATION SOCIETY.—At an afternoon meeting to be held at the Grafton Galleries, Grafton-street, W., to-day, Friday, June 4th, at 5.15 P.M., Professor Elliot Smith, M.D., F.R.S., will discuss the Influence of Racial Admixture in Egypt. Major Leonard Darwin will preside.

to do Secondly, even good roads in France and Belgium are usually exposed, and when at all near the firing line are not safe for any transport during the day, and at night head lights may not be used On this account motors are highly untrustworthy at night near the advanced trenches, and to add to their difficulty the roads would probably have several shell holes Finally, where a large amount of transport passes to and fro at night the most careful chauffeurs or drivers will occasionally get their vehicles into a ditch, and it is a much easier matter to get a horse wagon out of a ditch than it is to get a motor

A procedure which was found very useful at Ypres was to send the horse ambulance wagons up as near to the regimental aid posts as the conditions would allow, and bring the patients back—about two miles—to a place where they would be transferred to the motor wagons, which would take them to the appointed Tent Division several miles back

Recently the Field Ambulances of the Second Division have been supplied with wheeled stretchers (the McCormack Brook pattern) These have proved to be of the greatest use in saving both time and labour in getting casualties unable to walk from the regimental aid posts to the wagon rendezvous when the distance to be traversed is quite impossible for any ambulance wagon The opinion about their utility is not unanimous, but the persons who dispute the point have not, one would imagine, ever acted as stretcher bearer for 1500 to 3000 yards If they had they would think otherwise

I previously mentioned that the billeting site of a Bearer Division will, as a matter of course, be utilised as a dressing station It is not suggested that the cases evacuated from the regimental aid posts should ever be taken in there, they are sent straight to the Tent Division However, many slightly wounded cases who are able to walk will be directed to the advanced dressing station from the aid posts and trenches, but it will come in still more useful as a place to which the medical officer in charge of the brigade of artillery can send his casualties And here it might be mentioned that during the first day or two of an engagement this medical officer may be quite at a loss to know where he can send his wounded, not being acquainted with the sites of the dressing stations

The officer in charge of a Bearer Division would materially assist the brigade medical officer were he to send an orderly to the nearest battery and indicate to them for the information of their medical officer where his dressing station is situated

Casualties must not be allowed to accumulate at the advanced dressing station owing to the danger of shell fire It is well for the officer in charge to bear in mind that rapidity of evacuation should be his aim rather than medical or surgical treatment, which can be so much better carried out in the Tent Division or hospital to which cases may be evacuated

A Point in Treatment

There is one type of case which perhaps may be made an exception to the rule just mentioned It is outside the scope of this article to touch on treatment But when one has had on many occasions cases brought into a dressing station which have bled profusely from a severe shell wound or are suffering from shock, one ventures to hope that an officer in charge of a Bearer Division will be supplied with the means of giving an intravenous saline injection The patient's condition is usually such that it is only too obvious that nothing can save him except an injection of normal saline solution I specially mention the intravenous method because a rectal injection would probably not be retained, or if it were, would not be absorbed sufficiently fast Delay is also the objection to the subcutaneous or intramuscular method

I am quite aware that this suggestion will be met with the objections that I am likely to cause an early and profuse reactionary hæmorrhage, which is exactly the condition to be avoided, that I cannot take proper aseptic precautions in the field and that I may possibly bring on pulmonary œdema Very well, if I am not prepared to take those risks and work on the principle that being forewarned is to a certain extent being forearmed I default I have seen more cases than one in which I had no doubt whatever that an intravenous injection of saline solution would have given more than a probability of saving life, and I am not the only person serving at the front who from experience holds the opinion

Before closing I wish to make it clear that in this article I do not, under any circumstances, mean to address myself to officers of some years standing who naturally have their own ideas as to how the Bearer Division of a Field Ambulance should be run, which ideas possibly differ from and are preferable to mine I have written in the hope rather that my experiences, differing as they do in some respects from one's preconceived ideas, may be of some little use or interest to those officers who, not having of necessity had an extensive military training and not having had any previous experience of actual warfare, may find themselves in the near future coming to the front with the new armies and placed in charge of the Bearer Division of a Field Ambulance

PARIS

(FROM OUR OWN CORRESPONDENT)

Early Treatment of Tetanus in Military Hospitals in Time of War

Dr Bacri has communicated an interesting paper to the Académie de Médecine, and has insisted on the great importance of early diagnosis of tetanus in wounded patients in the preliminary period of infection, while as yet the patient is not seriously poisoned and while serum injected at this period possesses really curative properties The following is the method which he has used in his hospital thanks to which he has had the satisfaction of discovering in time and curing two cases of tetanus which declared themselves in the wards This method was inspired by the preconceived idea that every wounded patient who enters a military hospital is perhaps infected with tetanus Every day, morning and evening, the patient should be made to open his mouth, the doctor taking note of the distance between the jaws and finding out the state of tension which is more or less painful in the angle of the jaw If in any doubt, he should explore the patellar reflex The testing of the maxillæ and of the patellar reflex barely occupies a minute The diagnosis arrived at, inject 40 c.c of antitetanic in town than in country, it was 68 per cent in London and 41 per cent in the county boroughs, but only 8 per cent. in the rural districts Urban conditions of life increase the risk of tubercle among males much more than among females, the excess of the London rate over that of the rural districts being 91 per cent for the former sex but only 33 per cent for the latter The adverse effect of town life is especially conspicuous at ages after the fifteenth year, at which age work away from home commonly begins In childhood this effect is not observed.

Tuberculous phthisis contributed 75 per cent to the total mortality from tuberculosis in the year under notice, the deaths corresponding to a rate of 1004 per million living at all ages, and to 7 3 per cent of the total mortality The local distribution of phthisis is similar to that of tuberculosis generally There is the same tendency to increase of mortality with urbanisation, which is strongly marked among males and less so among females, so that the excess of male over female mortality increases regularly from the rural districts to the metropolis

The period of maximum phthisis mortality occurs earlier in life in the rural districts than in the towns, and earlier among females than among males In the metropolis an excess of mortality is experienced by old men and also by old women Moreover, the excess of male over female mortality, as well as its increase with urbanisation, is there especially characteristic of old age

It will be seen by the tables that the excess of male mortality which is so remarkable in England does not exist in Wales, where the rates for both sexes are about equal In each of the last three years the north of England records a high mortality for both sexes in its great towns, but not elsewhere The position of the midlands generally is satisfactory for both sexes

Tuberculous meningitis caused less loss of life in 1913 than in any previous year Its death rate has been steadily declining for the last 60 years, and now stands at one third of its former amount Such a decline in a period of rapidly increasing urbanisation is the more remarkable because this affection is exceptionally associated with urban conditions of life That this association holds good for the younger ages only is shown by a table limited to ages under 15 years, within which period 89 per cent of the total deaths occur In 1911–13 the mortality in London at ages under 5 was more than double that of the rural districts generally and at ages 5–10 the excess was almost as great but at 10–15 the rates for London and the rural districts were practically equal

Abdominal tuberculosis, including tabes mesenterica has been decreasing rapidly as a cause of death for the last 30 years and now accounts for only one third of the loss of life formerly attributed to it

Malignant Disease

Unfortunately no check can as yet be discerned on the increase of cancer or malignant disease which has been experienced in this country for many past years On the contrary the loss of life from this cause was greater in 1913 than in any previous year on record The mortality among males was equal to 947 per million living and among females to 1155 per million as compared with rates of 913 and 1117 respectively in the year 1912 The cancer rates have been standardised for the country as a whole and for the aggregate urban districts as well as for the four geographical divisions dealt with throughout this report The tables show a constantly increasing mortality in proportion to urbanisation which is more serious in the case of males than of females In Dr Stevenson s judgment 'it is quite conceivable that differences of the dimensions shown may be due to the better facilities for diagnosis in the urban areas where a much larger proportion of the deaths occur in institutions in which post mortem examination is the rule than as in private practice the exception ' The considerable increase of mortality now recorded is very uniform being common to both sexes in every class of area. It is also widely spread over the different age periods the chief exceptions being in the case of women at very advanced ages The excess of female mortality over that of males is concentrated mainly on the ages 25–55 At other ages there is either practical equality or a male excess as at ages from 60 to 85 in the country generally The deaths from malignant disease in institutions in tables are shown separately from those in the home, the object being to compare the experience of hospitals, where presumably the details of the cause of death have been generally confirmed by necropsy, with the certification of other deaths from causes where such facilities are as a rule wanting

The increase of mortality from cancer of various organs differs In both sexes the most rapid rates of increase are furnished by cancer of the alimentary tract, especially the intestines and stomach Diseases of the female breast also claim a rapidly increasing number of victims, while mortality from uterine cancer is diminishing The relation of mortality to marital condition is discussed in the text It would appear that childbearing increases the risk of uterine and diminishes that of mammary cancer, it may therefore be expected that the present decrease of fertility will be accompanied by an increase of mammary rather than of uterine disease Notwithstanding the general increase the mortality from cancer of the liver remains stationary Secondary growths are mentioned with especial frequency in cases of breast cancer Deaths thus certified amount to 33 per cent. in the case of the breast, whereas in the case of most other important sites the proportion falls short of 10 per cent. The conditions observed as complicating death from cancer are summarised in the report Of those which do not appear dependent on the existence of a growth the most important are tuberculosis diabetes, diseases of the circulatory system, Bright s disease, and childbirth.

MEDICINE AND THE LAW

The Verdict "Guilty but Insane"

THE Court of Criminal Appeal, following its own ruling in R v Felstead, recently dismissed an appeal, or rather refused to hear it in the case of a man named Taylor indicted for unlawful wounding at Worcester quarter sessions Taylor had been for two years a certified lunatic in Powick Asylum, of which he was an inmate when the assault with which he was charged was committed When he was put up to plead he made rambling statements but "after some little pressure from his counsel," to quote from the *Times* report, he pleaded guilty Counsel for the prosecution, however, suggested that a plea of "Guilty" in such circumstances ought not to be accepted and urged that a plea of ' Not Guilty" should be entered, and the prisoner tried in order to obtain the verdict of the jury as to the state of his mind at the time of the offence This proposal was adopted the case was gone into, and a verdict of ' Guilty but insane" was returned The prisoner accordingly was ordered to be detained during His Majesty s pleasure a case being stated by the bench in order to allow a decision to be obtained whether in the circumstances described above the verdict mentioned could be returned In the Court of Criminal Appeal the preliminary point was taken, that in accordance with the decision in Felstead s case the verdict 'Guilty but insane" did not constitute a conviction, and that Taylor not having been convicted could not appeal Taylor s counsel, on the other hand, relied upon his having pleaded guilty, and declared that he had never withdrawn that plea He argued that being convicted on his own confession his client had the right to appeal The court upheld the preliminary point mentioned and decided that it had no jurisdiction to hear the appeal basing its decision on the fact that the case had been heard and the verdict recorded The Lord Chief Justice however, in delivering judgment expressed the opinion that through the law being as Felstead s case declared it to be, difficulties arose which were probably not foreseen when the Criminal Appeal Act 1907 was passed These difficulties, his lordship said could only be removed by the legislature which some day might see fit to amend the law The result in this case was that no decision was given as to the question which the appellant s counsel tried to raise that when once the prisoner had pleaded ' Guilty' the court had no right to enter a plea of 'Not Guilty and try the question of his sanity There may be a certain convenience in this course being adopted for it can hardly be right that a lunatic with dangerous propensities should be able by saying the word "guilty" to escape the means provided by the law for restraining him in the future. At the same time it is hardly satisfactory that in so important

ANNUAL REPORT FOR 1913 OF THE REGISTRAR-GENERAL

(*Concluded from p* 1143)

Analysis of Deaths in Institutions

An important addition to the reports of this series will be found in a detailed analysis of the deaths registered in institutions for the sick or infirm In previous years these deaths had been shown separately from those occurring at home, but the scope of classification has now been considerably extended. Thus, in the present report the *ages at death* are *shown in relation to the place of* death, whether hospital or workhouse, and in the two preceding reports the *causes of death* are indicated in the same relation The present tables reveal a great difference in the age distribution of deaths in the several classes of institution—the deaths in hospitals being mainly those of the young and in workhouses mainly those of the aged. A noteworthy feature in these tables is the relatively excessive proportion of institution deaths in the metropolis amounting to 46 5 per cent of all males and 40 9 per cent of all females, as against percentages of 23 5 and 18 8 respectively in the provinces generally Still more worthy of note are the figures respecting age At ages up to the sixty fifth year the male deaths in institutions average half the total deaths in the metropolis at those ages, whilst at age 5–15 such deaths constitute two thirds of the total The proportion of male deaths in institutions exceeds that of female deaths at every age group, but at ages between 5 and 45 half the deaths of *London females occur in institutions* In early infancy and extreme old age institution deaths are comparatively few, except in London, where they are never less than 30 per cent of the total

Causes of Death —General Diseases

Dr Stevenson prefaces his remarks on the causes of mortality by reaffirming the necessity of reference to the "Manual" issued by his department in 1912 *for the purpose* of explaining the newly adopted scheme of death tabulation, and of facilitating its application to the conditions of English statistics This scheme supersedes the method originally established by Dr Farr and followed in the central office ever since its inception 70 years ago Incidentally, the manual supplies information respecting the methods now pursued in the central office in the compilation of mortality returns, this is essential to thorough appreciation of their significance

From a public health view point the interest attaching to the statistics of infectious diseases has been greatly increased by the publication of authoritative returns showing the distribution of notifiable diseases throughout England and Wales In the present report the returns have been arranged to show, for the several classes of area in the four geographical divisions of the country, the "prevalence" of the notified cases of particular diseases in terms of estimated population, and also their "fatality," as expressed by the ratio of deaths to cases notified This information is, of course, supplementary to the returns of "mortality" as compared with the numbers living, which have appeared in previous years

Enteric Fever

In the year under review this disease was responsible for a mortality equal to 41 per 1 000 000 living in England and Wales, as compared with 44 per 1,000 000 in 1912 These are the lowest rates on record, in no year previous to 1907 had the rate been less than twice its present amount Very unequally distributed is the loss of life from enteric fever The usual association of excessive mortality with urban conditions was observed throughout the year Lancashire Northumberland, and Flintshire were the counties with the highest mortality and the county boroughs similarly placed were Wigan, Devonport and Kingston upon Hull Not one of these boroughs had experienced a mortality of less than 110 per million in either of the last three years Facts such as these indicate that the persistence of excessive enteric fever mortality in England is largely due to the backward sanitary position of a small number of areas The returns of notified enteric cases in the country generally show that in 1913 both the prevalence and the fatality were lower than in the previous year In the north, where the attacks in former years had been more numerous than elsewhere, and in Wales there was slightly increased prevalence, with some decline in the midlands and the south Fatality was highest in the north, the region of greatest prevalence The position of London was particularly favourable in regard both to prevalence and to fatality In recent years there has been a marked increase in the hospital treatment of enteric fever, and there is little doubt that by diminishing opportunities for spread of infection hospital isolation has been an important factor in limiting the prevalence of this disease The figures are not available for the year under notice, but those for previous years show that of the total deaths from enteric fever there occurred in hospitals 50 per cent in 1911 and 48 per cent in 1912.

Scarlet Fever

The mortality from this disease in England and Wales was at the rate of 57 per 1,000,000 living at all ages, and of 171 per 1 000,000 at ages under 15 years With the exception of the very low rates of the two preceding years these are the lowest on record The decline of scarlet fever mortality during the last half century is very remarkable Up to 1906 no year had experienced a mortality less than double that of 1911 The local distribution of mortality varies little from year to year In the last three years the rate has been twice as high in the great towns as in the rural districts The north of England has suffered a mortality which is double that of the south, which latter is below that of any other part of the country The notification returns indicate that the disease was more prevalent in 1913 than in either 1911 or 1912. This increase, however, was accompanied by a decrease in fatality, which was only 16 per 1000 cases, against 18 and 19 in the two preceding years In the north the fatality was higher than in the midlands or in the south. The extent to which scarlet fever was isolated in hospital cannot be given for 1913, but in the year immediately preceding about 65 per cent of the deaths occurred in hospital. In London the proportion was as high as 94 per cent, whilst in the rural districts it did not exceed 40 per cent

Diphtheria and Croup

Inasmuch as in 1911–13 not less than 97 per cent of the mortality from this cause occurred at ages under 15 years the statistics now given relate mainly to that period of life The distribution of diphtheria mortality throughout the country is given for each of the last three years, from which it appears that apart from a general tendency to increase of mortality with increase of urbanisation there are no striking differences to record. Although the fatality from diphtheria was higher in the north than in other areas the prevalence of the disease as indicated by notification was at its lowest in that region From this it does not follow that the disease was either severer or less satisfactorily treated there than elsewhere, for the number of notifications has recently been increased by cases of a milder type the nature of which can only be established by bacteriological examination While the practice of making such examinations has been more general in the south than in the north or in Wales this fact alone may account for the much higher prevalence and lower fatality in the former region About 80 per cent. of the London deaths from this cause occur in the hospitals of the Metropolitan Asylums Board It is therefore instructive to learn how low is the fatality of cases now treated there in comparison with that of the years preceding the introduction of antitoxin treatment Since 1890-93 the case fatality has fallen from 304 per 1000 admissions in that period to 65 per 1000 in 1913 About half the deaths from diphtheria and croup in England and Wales are registered in public institutions

Tuberculosis

In the year under notice tuberculous affections in the aggregate accounted for a mortality at the rate of 13 per million living which is less than that of any previous year, and is equal to 9 8 per cent of the mortality from all causes This satisfactory fall has occurred notwithstanding unfavourable changes in the age constitution of the population The standardised death rate of 1913 shows a reduction of 15 per cent. on the average of the quinquennium ended in 1910 The fall was shared equally by both sexes but the mortality of males exceeded that of females by about one-third The excess was grea

a case as one involving the question of a man's sanity neither the exercise of its discretion by the court nor the verdict of the jury should have been capable of being appealed against, and this not through the deliberate intention of the legislature but owing to an oversight

The London Insurance Committee and the Allotment of Insured Persons

The action of Mr H Bazett against the London Insurance Committee, based upon the failure of the latter to assign to medical men on the panel insured persons who had not selected their medical attendants, was tried by Mr Justice Darling and a special jury recently The plaintiff asked for a mandamus ordering the Insurance Committee to assign the persons referred to, as contemplated by the Insurance Act, and claimed damages for the Committee's failure to do so The defendants alleged that it was absolutely impossible for them to assign the insured persons who had not chosen medical men, the system of registration being so involved and the insured population of so fluctuating a character, the constant changes of address rendering it extremely difficult, if not impracticable, to keep abreast of the alterations It was stated by the clerk of the committee that at one time 300 clerks had been engaged upon the registers The same witness said that out of 1200 medical men interested only five had objected to the method adopted for distributing the surplus funds The jury intimated that they had made up their minds in favour of the defendants, but Mr Bazett persevered with his case a little longer Mr Justice Darling finally intimated that in his view the legal maxim applied, "*Lex non cogit ad impossibilia*," and that the defendants had done everything in their power to carry out the regulations The jury then found for the defendants Apparently those who framed an Act of Parliament have made the mistake of imposing an impossible task upon the bodies to whom the task of administration was to be entrusted and a way out of the difficulty has been found which must be accepted, although in the opinion of Mr Danckwerts, it was not legally justifiable Presumably it would not be impossible so to increase the clerical staff of even the London Committee as to enable the work to be done, but the question would naturally arise whether the result would be worth the cost involved.

THE NATIONAL INSURANCE ACT

Panel Patients during War

AT a meeting of the West Riding Insurance Committee recently the question of the provision of medical aid for panel patients whose selected practitioner had undertaken military service was raised by a member, Mr J W Waterhouse He suggested that where a member of the panel had gone to the front the insured persons affected should be entitled to medical benefit from any practitioner in the immediate neighbourhood, or at least should be allowed to make their choice, and be assigned accordingly Dr J Russell observed that the practice had been for the committee to send a post-card to the patient giving him the name of the medical man who would take him over, and it was stated that this practice had worked well Probably in many instances patients are satisfied to do as they are told, but the matter is not an easy one, and several considerations are involved On the one hand a medical man may have undertaken the work of a friend intending to safeguard his interests with regard to patients whether insured or not and from the point of view of the absent practitioner it would be right that his patients should all be attended by his selected substitute. There can however, in such a case be no compulsion except for insured patients and it may be questioned whether the e ought to be for them, when it is remembered that they originally selected a particular practitioner and that free choice of a medical dant is one of the points upon which the medical pro- on has all along insisted Let us hope that if any y arises it will not be of long duration and that at there will be no question as to securing the return insured to their original medical attendants when resume civil life At the recent general meeting of Camberwell Insurance Practitioners Association a olution was carried 'that insured persons who may wish to transfer from the lists of doctors on active service should not be accepted on their lists by other doctors under any circumstances" It was pointed out by Dr G B Batte that this implied that a medical man should refuse to treat as an insured person the patient of a colleague on the panel after the war was over It did not imply refusing to treat such patients during the war, they must only not be accepted permanently

Hearts of Oak Society and Insurance

At the annual meeting of the Hearts of Oak Benefit Society it was stated, with regard to State members, that so far as men were concerned the payments for sickness benefit had amounted to 92 and 91 per cent of the sums estimated for 1913 and 1914 respectively The sickness benefit for women had been slightly in excess of what had been expected, amounting to 106 per cent of the estimate in 1913 and 108 per cent for 1914 The number of members of the society before the passing of the Insurance Act 1911 who under it had become insured persons had been 176,000 and of these only 96,000 had reduced their contributions The Act had however, imposed great difficulties upon the society, and had accentuated the problem of over insurance.

Excessive Prescribing Difficulties of Investigation

The London Panel Committee, at a special meeting on June 1st decided, in view of the heavy expenditure of time and money involved in the investigation of representations by the Pharmaceutical Committee as to alleged excessive prescribing, to limit in future the amount of time spent upon this work The Pharmacy Subcommittee pointed out that representations had yet to be received in respect of the second part of 1914, and no useful purpose was served in discussing with practitioners prescriptions written more than a year ago It was highly desirable that every practitioner on the panel should be informed monthly of the average cost of his prescriptions If investigations into about 500 practitioners scripts were continued for a whole year, as at present, the funds of the committee would be swallowed up in dealing with this branch of its work. The committee decided to inform the Pharmaceutical Committee that it would deal with the most recent prescriptions submitted and that for the present the number of separate cases investigated must be limited to 50 in each three months. The committee also resolved to withdraw from the arrangement by which it shares with the Insurance Committee and the Pharmaceutical Committee the cost of the examination of prescriptions The reasons given were that no onus rested on the Panel Committee to contribute towards mere arithmetical checking, and that the work done under this arrangement did not save the time of the Panel Committee when investigating allegations of excessive prescribing

The London Panel Committee and the War

The London Panel Committee has appointed a special section to consider and report as to the steps which should be taken to enable practitioners on the panel to render the greatest possible assistance in connexion with the war Inquiry is to be made as to the manner in which the Panel Committee may most usefully coöperate with the British Medical Association in its efforts in the matter Dr C W Hogarth has resigned the chairmanship of the Panel Committee

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned has been granted a commission as temporary Surgeon in His Majesty's Fleet John Paxton (dated May 21st)

The seniority of temporary Surgeon Jack Rupert Law Willis has been antedated to August 22nd

The following appointments have been notified —Temporary Surgeons M O Raven to the hospital ship *China* and W L Coullie to the *Birmingham*

ARMY MEDICAL SERVICE

Surgeon General Sir David Bruce C.B , F R S is retained on the Active List under the provisions of Article 120 Royal Warrant for Pay and Promotion, and to be supernumerary (dated May 29th)

Captain Charles A Ballance M V O Royal Army Medical Corps Territorial Force, to be temporary Colonel (dated May 18th)

ROYAL ARMY MEDICAL CORPS

The undermentioned are granted the temporary rank of Major whilst serving with the Northumberland War Hospital —Hector Duncan Macphail (dated May 12th), Cuthbert Umfreville Laws (dated May 16th), and Charles D'Oyly Grange (dated May 17th)

The undermentioned are granted temporary honorary rank whilst serving with the British Red Cross Society in France —As Lieutenant-Colonel Edward Stewart (dated May 29th) As Lieutenant Edward Harman Hicks (dated May 29th)

Major Harold S Peeke Reserve of Officers, Royal Army Medical Corps, to be temporary Lieutenant Colonel whilst serving with the Liverpool Merchants' Mobile Hospital (dated March 24th)

Edwin Goodall to be temporary Lieutenant Colonel whilst employed at the Welsh Metropolitan War Hospital (dated May 1st)

The undermentioned are granted temporary rank whilst employed at the Lord Derby War Hospital —As Lieutenant Colonel Alexander Simpson (dated April 1st) As Major Frederick Millar Rodgers (dated May 24th) Alexander McLean Cato to be temporary Lieutenant (dated May 21st)

The undermentioned having ceased duty with the Queen Mary's Convalescent Home for British Officers, Nice, relinquish their commissions —Dated 30th April Temporary Major Samuel Machen and temporary Captains Henry S C Starkey and Frederick P Nunneley

Temporary Lieutenant John Sydney Rowlands to be temporary Captain whilst serving with the Welsh Hospital (dated May 28th) Rupert Farrant to be temporary Lieutenant (dated May 13th)

The appointment to a temporary Captaincy of John P Campbell late Captain 10th (Cyclist) Battalion, The Royal Scots (Lothian Regiment), Territorial Force, is antedated to April 1st, 1915)

The undermentioned to be temporary Lieutenants — Dated March 12th James Rashid Wortabet Dated March 21st Charles Montagu Harris Dated March 23rd Norman Edward Packer, Charles Owen Donovan John Thomson Anderson Robert Burnside Carter Eric Phillip Blashki John Lloyd Digby Norman McAlister Gregg, Eustace Townley Pinhey Norman Walford Broughton, Sydney William Gardiner Ratcliff, Clive Farrandge, and Arthur Wilmot Raymond Dated March 26th Harold John Penny, John Joseph O'Neill and Brian William Wibberley Dated April 4th Bruce Maitland Carruthers, Gordon Alick Renwick, John Roberts MacCulloch Charles Goldsborough Adams, Walter Francis Stewart Yeates, Charles Horsfall Armitage Charles Reginald Ralston Huxtable Francis James Fahy Hugh Alton Chandos Wall and Archibald Warden Graves Murray Dated April 6th Ernest Robertson Basil Walter Cohen, Norman Charles Talbot, Colin Hasler Martin, Alexander Hugh Melville Frederick Harold Moran Archibald Simpson Anderson, and Harold Whitfield Ward Dated April 7th Hugh Meyrick Meyrick-Jones and William Stuart Hawthorne Lewis Wilson Shelly (dated May 24th)

The undermentioned to be temporary Lieutenants whilst serving with the British Red Cross Hospital Netley Gordon Normanby Brandon (dated May 18th) and William Burt (dated May 23rd)

Temporary Lieutenant Isidore J Block relinquishes his commission (dated May 4th)

3rd Northern General Hospital Captain Arthur G Yates to be Major

1st Southern General Hospital Major James T J Morrison is restored to the establishment To be Lieutenants Herbert Charles Horace Bracey and Arthur Harry Newton Edward Musgrave Woodman (late temporary Lieutenant, Royal Army Medical Corps) to be Captain, whose services will be available on mobilisation

2nd Southern General Hospital Lieutenant James G. McLannahan, from 3rd South Midland Field Ambulance, to be Captain on the permanent personnel

Sanitary Service Alexander Gregor to be Captain, whose services will be available on mobilisation

1st London (City of London) Sanitary Company Lieutenant John H Baldwin to be temporary Captain To be Lieutenants Private John Golding, from the 28th (County of London) Battalion, The London Regiment (Artists Rifles), and Gilbert Norman Anderson

Lowland Divisional Sanitary Section Lieutenant Thomas J Mackie, from Attached to Units other than Medical Units, to be Lieutenant

Lowland Casualty Clearing Station Major George Robert Livingston, from Attached to Units other than Medical Units, to be Major To be Lieutenants Lieutenant Stuart Robertson, from the 1st Lowland Field Ambulance, Lieutenant Stephen Anderson MacPhee, from the 2nd Lowland Field Ambulance, Lieutenant Adam Rankine, from the 1st Lowland Field Ambulance, and William Cullen

West Riding Casualty Clearing Station Major Louis P Demetriadi from Attached to Units other than Medical Units, to be Lieutenant-Colonel (temporary)

2nd Home Counties Field Ambulance Major Antony A. Martin to be temporary Lieutenant-Colonel

West Riding Divisional Sanitary Section Captain Cuthbert B Moss Blundell, from list of Sanitary Officers available on mobilisation to be Captain

Northumbrian Casualty Clearing Station Major William A Wetwan to be temporary Lieutenant Colonel

North Midland Mounted Brigade Field Ambulance Arthur Avent (late Lieutenant of this Unit) to be Captain (temporary)

Yorkshire Mounted Brigade Field Ambulance Captain and Honorary Major Alfred Hugh Benson, Retired List (late Royal Army Medical Corps (Militia)) to be Captain (temporary) Joseph Charles Denvir to be Lieutenant

3rd North Midland Field Ambulance James Edwin Wilson to be Lieutenant

1st West Riding Field Ambulance Lieutenant Herbert B Pope to be temporary Captain

5th Northern General Hospital The undermentioned to be Captains, whose services will be available on mobilisation Everard Harrison Henry Mason Neville Ivens Spriggs, Ernest William Holyoak, and Frederick Valentine Milburn

Highland Casualty Clearing Station John Innes (late Captain, 2nd Highland Field Ambulance) to be Captain (temporary)

2nd East Anglian Field Ambulance Captain Dudley William Boswell to be temporary Major

3rd Home Counties Field Ambulance John Francis Molyneux to be Lieutenant

2nd West Lancashire Field Ambulance Captain Walter L. Hawksley to be temporary Major a case as one involving the question of a man's sanity neither the exercise of its discretion by the court nor the verdict of the jury should have been capable of being appealed against, and this not through the deliberate intention of the legislature but owing to an oversight

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At the annual meeting of the Hearts of Oak Benefit Society it was stated, with regard to State members, that so far as men were concerned the payments for sickness benefit had amounted to 92 and 91 per cent of the sums estimated for 1913 and 1914 respectively The sickness benefit for women had been slightly in excess of what had been expected, amounting to 106 per cent of the estimate in 1913 and 108 per cent for 1914 The number of members of the society before the passing of the Insurance Act 1911 who under it had become insured persons had been 176 000, and of these only 96,000 had reduced their contributions The Act had, however, imposed great difficulties upon the society, and had accentuated the problem of over insurance

Excessive Prescribing Difficulties of Investigation

The London Panel Committee, at a special meeting on June 1st, decided, in view of the heavy expenditure of time and money involved in the investigation of representations by the Pharmaceutical Committee as to alleged excessive prescribing, to limit in future the amount of time spent upon this work The Pharmacy Subcommittee pointed out that representations had yet to be received in respect of the second part of 1914, and no useful purpose was served in discussing with practitioners prescriptions written more than a year ago It was highly desirable that every practitioner on the panel should be informed monthly of the average cost of his prescriptions If investigations into about 500 practitioners scripts were continued for a whole year as at present, the funds of the committee would be swallowed up in dealing with this branch of its work. The committee decided to inform the Pharmaceutical Committee that it would deal with the most recent prescriptions submitted and that for the present the number of separate cases investigated must be limited to 50 in each three months The committee also resolved to withdraw from the arrangement by which it shares with the Insurance Committee and the Pharmaceutical Committee the cost of the examination of prescriptions The reasons given were that no onus rested on the Panel Committee to contribute towards mere arithmetical checking, and that the work done under this arrangement did not save the time of the Panel Committee when investigating allegations of excessive prescribing

The London Panel Committee and the War

The London Panel Committee has appointed a special section to consider and report as to the steps which should be taken to enable practitioners on the panel to render the greatest possible assistance in connexion with the war Inquiry is to be made as to the manner in which the Panel Committee may most usefully coöperate with the British Medical Association in its efforts in the matter Dr C W Hogarth has resigned the chairmanship of the Panel Committee

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned has been granted a commission as temporary Surgeon in His Majesty's Fleet John Paxton (dated May 21st)

The seniority of temporary Surgeon Jack Rupert Law Willis has been antedated to August 22nd

The following appointments have been notified —Temporary Surgeons W O Raven to the hospital ship *China* and W L Coullie to the *Birmingham*

ARMY MEDICAL SERVICE

Surgeon General Sir David Bruce C B F R S is retained on the Active List under the provisions of Article 120 Royal Warrant for Pay and Promotion and to be supernumerary (dated May 29th)

Captain Charles A Ballance M V O, Royal Army Medical Corps Territorial Force to be temporary Colonel (dated May 18th)

Correspondence.

"Audi alteram partem."

THE PULSUS ALTERNANS

To the Editor of THE LANCET

SIR,—Dr C O Hawthorne s interesting paper in THE LANCET of May 29th opens up a question that I have often asked myself When is a pulsus alternans not a pulsus alternans, so far as its now usually accepted gravity of prognosis goes? Dr Hawthorne, alluding to this, gives at the end of his paper the case of a young woman who has *not died* as she should have done, and his earlier remarks and the tracings given from sphygmograph and manometer seem to me to suggest the answer In thus showing that a pulsus alternans is of quite a common occurrence, he describes what surely must be the common experience of us all Everyone must be familiar with the fact that at the radial pulse at the wrist every heart beat need not have an equivalent value, and this variation may range from complete intermission down to a lessening of force that cannot be recognised by the finger One had almost said when we are dealing with a muscular organ such as the heart with the variety of minor details that energise it and detract from its nervous supplies, it could hardly be otherwise This in nowise detracts from the value of the observation that there is a pulsus alternans that has a grave significance, it does go to show that one may expect at times a pulsus alternans that has not such an ominous outlook And surely there must be many who have lived—well! to pre senility—who have met with this condition many a time, with *a* form but not *the* grave form of pulsus alternans I have also met occasionally with a sort of double pulsus alternans, two full beats followed by two small beats, that had no serious meaning

Then how are we to distinguish between the two? I may leave others to answer this question For myself I shall only venture to suggest that the serious form generally goes with signs of cardiac failure, whilst the alternation to which I am directing attention comes and goes—sometimes the rhythm may change two or three times in one examination—and maybe in quite young people who have no signs whatever of any cardiac distress It is clearly a neuromuscular eccentricity of action that has no serious meaning There are other points in Dr Hawthorne s paper quite well worth taking up, and chief of them, to my mind, is the comparative value of the sphygmograph and the manometer It has always seemed to me that the latter is a much less precise and reliable instrument than the sphygmograph which has so much yielded place to it There can be no doubt that the facts of the pressure gauge, if so I may call the manometer, require the most careful valuation before drawing inferences therefrom

I am, Sir, yours faithfully

May [illegible] JAMES F GOODHART

THE USE OF ATROPINE IN GASSED PATIENTS

To the Editor of THE LANCET

SIR—I have just been reading Dr Douglas Cow's article on this subject in THE LANCET of May 29th and am particularly interested in his experiment It had struck me that atropine might be of use, for I have taken it for acute bronchitis with the typical tightness across the chest and difficulty in breathing, and the mixture which used to give the greatest and quickest relief was one containing liq atrop sulph ♏ ix. (which must be fresh) ad ℥ vi, dose, ℥ss

As a student, when making chlorine gas, although we used draught cupboards, I inhaled the gas rather too freely, and I well remember the tightness across the chest and uncomfortably difficult breathing it produced The symptoms got worse after I had got home—about two hours after I should think If I had to face chlorine, besides a mask I would provide myself with some liq atrop sulph, and I would take one dose before the cloud was *on* me Dr Cow s article would make me more inclined than ever to try atropine

I am, Sir, yours faithfully,

IDA C TENGELY, M D Lond

Bishop s Stortford, May 29th 1915

THE MEDICAL DEFENCE UNION AND THE NATIONAL INSURANCE COMMISSIONERS

To the Editor of THE LANCET

SIR,—The letter written by Dr A E Larking in your issue of May 29th makes it clear to me that he has failed to understand the position which the Medical Defence Union has taken up in respect of the surcharging of panel practitioners The Union, by raising certain actions on behalf of members who are panel practitioners, is not attacking the National Insurance Acts or seeking to hamper the working of the Acts, but is merely endeavouring to protect its members against the effect of certain regulations of the Commissioners which the Union is advised are not in conformity with the Acts and are therefore *ultra vires*, and also to defend them against any action of the Insurance Committees which may appear to be arbitrary and wrongful The Union therefore desires to take the opinion of the court as to the regulations and the procedure of Insurance Committees in administering the Acts

We have already obtained a decision by the Commissioners in the Sheffield case, whereby the proceedings taken by the Panel Committee in surcharging were quashed at our instance

In raising test actions in the High Court we are merely seeking to confirm and to extend the scope of that decision of the Commissioners We are not seeking to destroy the Act, Parliament alone can either amend or annul it As long as the Act exists it is imperative that we should, on behalf of our members, see that it is carried out legally and impartially, and we shall continue this duty, I trust, as long as the Act or the Medical Defence Union lasts Dr Larking appears to consider that the administration of the Act is unassailable, well, that is his opinion, but it is not mine, which is based upon the record of past successes in the High Court and elsewhere If Dr Larking could only see and read my daily correspondence from panel practitioners he would realise that a rapid rise of discontent as to the working of the Act is setting in all over the country

I am, Sir, yours faithfully,

Trafalgar-square W C June 2nd 1915 A GEORGE BATEMAN

To the Editor of THE LANCET

SIR—With regard to the letter by Dr A G Bateman appearing in your issue of May 22nd it will be granted that for the moment conservation

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last Census, 8530 births and 5340 deaths were registered during the week ended Saturday, May 22nd The annual rate of mortality in these towns, which had steadily declined from 19·9 to 14 2 per 1000 in the six preceding weeks, rose in the week under notice to 15 4 per 1000 of their aggregate population, estimated at 18,136,180 persons at the middle of last year During the first seven weeks of the current quarter the mean annual death rate in these towns averaged 17 0, against a corresponding rate of 17 7 per 1000 in London The annual death rate in the week under review ranged from 7 9 in Wimbledon, 8 6 in Oxford, 8 8 in Edmonton and in Rhondda, 9 3 in East Ham, in Reading, and in Bolton, and 9 4 in Leyton, to 23 9 in Wigan, 25 1 in Dewsbury, 25 8 in Gateshead, 28·9 in Middlesbrough, and 29 9 in Walsall

The 5340 deaths from all causes were 386 in excess of the number in the previous week, and included 603 which were referred to the principal epidemic diseases, against numbers declining from 711 to 484 in the three preceding weeks Of these 603 deaths, 309 resulted from measles, 137 from whooping-cough, 70 from infantile diarrhœal diseases, 51 from diphtheria, 20 from scarlet fever, 15 from enteric fever, and 1 from small pox The mean annual death rate from these diseases was equal to 1 7, or 0 3 per 1000 more than in the previous week The deaths attributed to measles, which had been 392, 276, and 238 in the three preceding weeks, rose to 309 in the week under notice, and caused the highest annual death rates of 2 6 in St Helens, 2 7 in Wolverhampton, 3 5 in Gateshead, 4 0 in Barrow in Furness, 4 2 in Sheffield, 4 4 in Sunderland, 5 5 in Walsall, and 7 0 in Middlesbrough The deaths referred to whooping-cough, which had steadily declined from 167 to 105 in the six preceding weeks, rose to 137, and included 41 in London, 8 each in Wigan and Salford, 7 in Liverpool, 5 in Leeds, and 4 each in Bristol, Manchester, and Sheffield The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 73 67, and 57 in the three preceding weeks rose to 70, of which 15 were registered in London, 7 in Liverpool, 6 in Manchester, and 4 in Birmingham The deaths attributed to diphtheria, which had been 56, 51, and 48 in the three preceding weeks, rose to 51, and included 15 in London, and 3 each in Manchester and Sheffield The deaths referred to scarlet fever, which had been 34, 30, and 25 in the three preceding weeks, further fell to 20 of which 5 occurred in London and 2 each in Stoke on Trent and Manchester The fatal cases of enteric fever, which had been 12, 12, and 11 in the three preceding weeks, rose to 15, and included 4 in London and 2 in Leeds The death from small pox was registered in Bristol

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2377, 2384, and 2332 at the end of the three preceding weeks, had further declined to 2286 on Saturday May 22nd, 320 new cases were admitted during the week, against 316, 307, and 270 in the three preceding weeks These hospitals also contained on the aforementioned date 1123 cases of diphtheria, 158 of measles, 55 of enteric fever, 12 of whooping cough, and 1 of small pox The 1288 deaths from all causes in London were 33 in excess of the number in the previous week, and corresponded to an annual death rate of 14 9 per 1000 The deaths referred to diseases of the respiratory system, which had declined from 469 to 227 in the five preceding weeks, further fell to 212 in the week under notice, but were 24 in excess of the number recorded in the corresponding week of last year

Of the 5340 deaths from all causes in the 96 towns 235 resulted from different forms of violence and 380 were the subject of coroners' inquests, while 1546 occurred in public institutions The causes of 46, or 0·9 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Sheffield, Leeds, Bristol West Ham, Bradford, Hull, Newcastle-on Tyne, and in 68 other smaller towns Of the 46 uncertified causes of death, 9 were registered in Birmingham, 5 in Gillingham, 4 in Liverpool, and 3 each in Southport and Warrington

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns with an aggregate population estimated at 2 345,500 persons at the middle of this year, 1121 births and 724 deaths were registered during the week ended Saturday, May 22nd The annual rate of mortality in these towns, which had been 20 2, 18 1, and 17 9 per 1000 in the three preceding weeks, further declined to 16 1 per 1000 in the week under notice During the first seven weeks of the current quarter the mean annual death rate in these towns averaged 18 9, against a corresponding rate of 17·0 per 1000 in the large English towns Among the several towns the death rate in the week under review ranged from 4·9 in Clydebank, 8 9 in Kirkcaldy, and 11 4 in Aberdeen, to 18 6 in Ayr, 18 8 in Motherwell, and 19 1 in Perth

The 724 deaths from all causes were 83 fewer than the number in the previous week, and included 90 which were referred to the principal epidemic diseases, against numbers declining from 150 to 117 in the three preceding weeks Of these 90 deaths, 40 resulted from whooping-cough 35 from measles, 6 from scarlet fever, 5 from infantile diarrhœal diseases, 2 from diphtheria, and 1 from enteric fever, but not one from small pox The mean annual death rate from these diseases was equal to 2·0, against 1 7 per 1000 in the large English towns The deaths attributed to whooping cough, which had been 82, 65, and 45 in the three preceding weeks, further declined to 40 in the week under notice, and comprised 22 in Glasgow, 11 in Edinburgh, 4 in Dundee, 2 in Falkirk, and 1 in Motherwell The deaths referred to measles, which had increased from 19 to 49 in the five preceding weeks, fell to 36, of which 26 occurred in Glasgow, 4 in Aberdeen, 3 in Dundee, 2 in Falkirk and 1 in Perth The fatal cases of scarlet fever, which had been 11, 7, and 6 in the three preceding weeks, were again 6 in week under review, and comprised 5 in Glasgow and 1 in Aberdeen The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 9 15 and 9 in the three preceding weeks, further fell to 5, of which 2 were registered in Glasgow The fatal cases of diphtheria were recorded in Glasgow and Edinburgh, and that of enteric fever in Glasgow

The deaths referred to diseases of the respiratory system, which had been 153 118, and 121 in the three preceding weeks, fell to 117 in the week under notice, but were 10 in excess of the number recorded in the corresponding week of last year The deaths attributed to violence numbered 21, against 23 and 26 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland, with an aggregate population estimated at 1,212,380 persons at the middle of this year, 680 births and 425 deaths were registered during the week ended Saturday, May 22nd The annual rate of mortality in these towns, which had been 19 1, 19 9, and 18 8 per 1000 in the three preceding weeks, fell to 18 3 per 1000 in the week under notice During the first seven weeks of the current quarter the mean annual death rate in these towns averaged 20·6, against corresponding rates of 17 0 and 18 9 per 1000 in the English and Scotch towns respectively The death rate in the week under review was equal to 20 8 in Dublin (against 14·9 in London and 18·0 in Glasgow), 16 7 in Belfast 21 8 in Cork, 12 7 in Londonderry, 10 8 in Limerick and 30 4 in Waterford, while in the 21 smaller towns the mean rate was equal to 16 1 per 1000

The 425 deaths from all causes were 13 fewer than the number in the previous week, and included 24 which were referred to the principal epidemic diseases, against numbers declining from 41 to 27 in the four preceding weeks Of these 24 deaths, 9 resulted from measles, 5 from whooping-cough 4 each from scarlet fever and infantile diarrhœal diseases, and 2 from diphtheria, but not one from enteric fever or from small pox The mean annual death rate from these diseases was equal to 1·0, against corresponding rates of 1 7 and 2·0 per 1000 in the English and Scotch towns respectively The deaths attributed to measles, which had declined from 13 to 4 in the four preceding weeks rose to 9 in the week under notice, and comprised 4 each in Dublin and Belfast and 1 in Cork The deaths referred to whooping cough, which had been 9 9 and 10 in the three preceding weeks, fell to 5 and included 3 in Dublin The 4 fatal cases of scarlet fever of which 3 occurred in Waterford and 1 in Lisburn were 2 in excess of the average in the earlier weeks of the quarter The deaths of infants (under 2 years) attributed to diarrhœa and enteritis which had been 10, 9 and 8 in the three preceding weeks, further fell to 4 and were all registered in Dublin The fatal cases of diphtheria were recorded in Dublin and Kilkenny

The deaths referred to diseases of the respiratory system, which had been 84 76 and 82 in the three preceding weeks further rose to 93 in the week under notice Of the 425 deaths from all causes, 137, or 32 per cent occurred in public institutions, and 8 were attributed to different forms of violence The causes of 12 or 2 8 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the large English towns the proportion of uncertified causes did not exceed 0·9 per cent

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

SUBSCRIPTIONS OF THE WEEK.

WE call special attention to the generous and fruitful action of the Sunderland doctors who have paid into the Fund their fees for the examination of recruits Last week we acknowledged from 14 of these gentlemen a donation in the aggregate amounting to no less than £142 2s 6*d* This week from 16 gentlemen the Fund has received a cheque for close upon £170, making over £300 received from this one source Considering the numberless directions in which the work of medical men at the present moment is being increased in bulk and curtailed in emolument, the action of the Sunderland practitioners is a very open handed one

THE DISTRIBUTION OF THE FUND

On Friday, May 28th, the recent official reports of three séances of the Aide et Protection aux Medecins et Pharmaciens Belges Sinistrés reached us through the kind offices of Professor Jacobs This, it will be remembered, is the title of the committee formed in Belgium for ascertaining where the need is greatest among the Belgian doctors and pharmacists and for providing systematic relief The president is Dr Pechère, the secretaries M Delacre and M Laruelle, and the office is in Brussels, and it is upon this body, now strongly organised, that the British Fund is relying for distribution of its resources in Belgium [1] When a representative of the Aide et Protection aux Medecins et Pharmaciens Belges met the Central Committee of the British Fund late in March he explained the way in which the Belgian Committee were compiling information to guide them in their work, and it was then decided that a substantial sum of money should be despatched immediately to Belgium, through the medium of certain banks and with the help of Mr Herbert Hoover, the chairman of the National Relief Fund An acknowledgment of this money was received from Dr Pechère, but without details as to its distribution These are now briefly supplied through the reports of seances held on April 15th, 22nd, and 29th The physicians and pharmacists relieved include such cases as the following, which have been extracted from the fourth report of M Laruelle dealing with the medical men, and from the report of M Breugelmans dealing with pharmacists —

To Dr C—— of D——, it proposes to make a grant of 700 fr Dr C—— has had his house burnt with all its contents He was obliged to take refuge at C—— and afterwards at W—— D—— the population of which has been reduced to one half shelters now only a population which is deprived of resources not affording therefore any opportunity to practitioners to gain their livelihood

To Dr R—— of T—— a grant of 400 fr Our old colleague (aged 86 years) has seen his house with all its contents burnt He was obliged to take refuge at M—— He would accept the temporary aid of the Committee not being able at the present time to realise his resources

Madame D—— of T—— Husband killed three houses burnt with the pharmacy Took refuge with a servant in the dwelling of a cousin who had left for Nice before the war Had 2000 fr in ready cash when she departed from T—— Was obliged to live ten days at B—— with her husband suffering agonies Had to pay after the death of the latter the expenses of living, nursing and attention and the funeral expenses Was obliged to borrow from one of her parents at B——, to-day himself deprived of resources, the money which served to provide the food of M D—— and his servant in the borrowed dwelling which they occupy Life of privation Rarely eats meat Has only one outfit of mourning bought at the commencement of her widowhood Merits assistance which will be well bestowed The Committee to grant 700 fr

M P V M——, of T—— Now at M—— and at S—— alternatively The pharmacy and druggist's business completely burnt out Family responsibilities wife, five sons, and servant The man who has suffered this loss is 51 years old, has personal resources which the war has much encroached upon The Committee has decided to make a further inquiry to learn if the need for urgent intervention is corroborated

All the recommendations of M Laruelle and M Breugelmans were agreed to

The 50 cases of medical material, despatched last December by the Central British Committee, were found to have been of use to the medical men who were able to distribute them gratuitously to their poorer clients, they have been used exclusively in this way

There was discussion at the seance of April 15th, and again on April 22nd, as to the most expeditious way of allocating the relief, and it was decided to rely on the reports of the delegates At the séance of April 29th it was agreed to pay monthly subsidies to those who cannot support themselves, even if they have been relieved before

THE RESPONSIBILITY OF GREAT BRITAIN TOWARDS BELGIUM

A letter having reached the Central Committee from Dr Riddle Goffe, of New York, through which it was clear that the attitude of the British Government in respect of its monthly subsidies to the American Commission for Relief in Belgium was misunderstood in the United States, the questions raised by Dr Goffe were submitted to the British Foreign Office, from whom the following reply was received It has been decided to publish the reply of the Foreign Office, as from certain references to the situation in American newspapers and publications it is evident that there is still a complete misunderstanding of what occurred, and this might act to the prejudice of any funds being raised in the United States

Foreign Office, April 26th, 1915

SIR,—With reference to your letter of the 21st instant, enclosing a copy of a letter from Dr J Riddle Goffe regarding the question of Belgian relief I am directed by Secretary Sir E Grey to inform you that your correspondent appears to allude to the following facts

The work of the American Commission for Relief in Belgium consists of two departments—the Benevolent Department, which is concerned with the furnishing of foodstuffs to the destitute in Belgium and the Provisioning Department which is concerned with the purchase and sale of foodstuffs to the rest of the population who are still able to pay The first department has been financed out of private contributions except for a grant of £100 000 made by His Majesty's Government in October to start the work The second department has been financed by the Belgian Government

Last December the Commission asked His Majesty's Government to make a monthly contribution out of public funds to the Benevolent Department After prolonged negotiations His Majesty's Government decided that they would not be justified in doing so as it was found impossible to induce the German Government to abandon their extortionate levies of money on the Belgian population This department of the Commission's work is, therefore, still financed out of private contributions But your correspondent of energy is imperative against the Empire's foe, and litigation at home should not be encouraged. Tact and judgment must be welcomed in this crisis for the greatest benefit to the community at the least expense, for the avoidance of surcharge for extravagance in prescribing for insured persons, and for steering clear of other technicalities in connexion with the working of the Act

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[1] See THE LANCET, M[illegible] 13th, p [illegible], and April [illegible], p 83[illegible]

Is it possible to fix a Government estimate without a definite capitation grant for medicaments? The importance, however, of diet, regimen, pharmacology, and therapeutics, which form the staple practice of most practitioners, deserves a higher status in the curriculum, and such might with advantage be studied in the light of economy as well as efficiency and practicability Knowledge and experience would then counteract indulgence in fancy and expensive prescribing

I am, Sir, yours faithfully,

Gower street, W C, May 26th 1915 DENNIS VINRACE

To the Editor of THE LANCET

SIR,—With regard to the letter on this subject appearing in your issue of May 29th, as a non panel man I also strongly oppose using the funds of the Medical Defence Union for helping panel doctors out of the mire which they brought on themselves by signing the National Insurance pledge and then going back on their written word Rather would I see it used in attempting to punish those half a dozen doctors who at the beginning started the rout I thank heaven every day that I am no servant of any Insurance Committee, and that I have never gone back on my word

I am, Sir, yours faithfully,

Streatham, S W May 30th, 1915 E H WORTH

TREATMENT OF POST-INFLUENZAL COUGH BY BRITISH-MADE LYSOL

To the Editor of THE LANCET

SIR,—In company with thousands of others I had my yearly attack of influenza six weeks ago I remained in bed two days, then went to work again as usual, but felt quite limp for the next three weeks, at the end of which time I began to pick up, but never lost a troublesome cough It kept me awake at night, and in the morning I coughed until I had got rid of quantities of mucus of all consistencies Where it all came from I am at a loss to understand, it collected in the upper part of the trachea and larynx I had no chest symptoms

I had on my table a bottle of British made lysol sent as a sample I was only interested in it because it was stated that used as an ointment, 10 per cent, it cured the worst cases of scabies, and I am getting it tried for mange and other skin troubles in dogs, so far with favourable results Two days ago I was smelling at the bottle for some reason or other when it struck me that it might be good for my cough I put about 4 oz of boiling water into a small jug and poured on it about a drachm of the lysol and then inhaled the fumes for about five minutes They made my nose and throat tingle a little but had no other unpleasant effect I coughed a bit afterwards, then my cough stopped and has given me very little trouble since I slept quite comfortably that night and coughed about twice the next morning instead of 30 or 40 times I slept all the next night without waking and did not cough the next morning (May 16th) On that day I tried myself pretty high At 5 o'clock I paraded with about 200 other special constables at Marlborough street police station, 99 of us were marched to Oxford Circus station, from there we went by train to Bow, marched from the railway station to the police station, were mustered with others in the station yard, and for the next four hours were in the streets in pouring rain and puddles galore under foot, or in the station in rooms reeking of wet clothing, with "draughts to the right of us, draughts to the left of us, draughts in front of us,' and it may be added "draughts behind us" At 11 o clock we were dismissed and returned to Marlborough street by the same route I got to bed at 12 45 and slept soundly till 7 The following day I had no cough

There may have been other causes in operation—for one thing the weather got much milder and the wind went out of the north east—but I was inclined to believe that inhalation of lysol cured my cough, and I was convinced of it after trying it again A night later I was coughing again, and I feel I must sound a note of caution here I fancy it may have a stupefying effect I used the remedy in an ordinary spirit boiler, and as soon as a good cloud of steam began to rise put my nose and mouth well into it, and as near the boiling fluid as possible, and breathed deeply In about two minutes I got drowsy and was very near dipping the end of my nose into the hot liquid, which would no doubt have proved an excellent restorative There may be a source of fallacy here, because it was my bed time, and I had been in the streets for the greater part of the two preceding nights, and could have slept standing up against a wall Another thing, I am not sure that lysol used in too strong solution or inhaled for too long at a time may not be irritating to the respiratory mucous membrane, for on the last occasion I experienced something of the sensation which all of us who can remember when there were no other lucifer matches than the old fashioned sulphur matches have felt if we tried to light a pipe or perform any such operation near the nose and mouth without waiting till the brimstone had burnt off

I have given my experience for what it is worth, and hope it may be of use to others I would suggest that the solution I used was too strong, it is somewhere between 1–60 and 1–30 very likely more, and I expect 1–100 is plenty strong enough I did not measure the lysol, I have measured the whole mixture I used and it is 4 oz

I am, Sir, yours faithfully,

CHARLES HIGGENS, F R C S Eng

Brook street W May 2[illegible]th 1915.

PS —The inhalation might be tried in whooping-cough

PRESENTATIONS TO MEDICAL MEN —At a meeting of the members of the Totterdown and Imperial Divisions of the City of Bristol Corps St John Ambulance Brigade held on May 21st, the Deputy Commissioner (Mr J S Griffiths M R C S, L R C P Lond) on behalf of the divisions presented Mr Joseph John Scammell Lucas J P, M D Lond, M R C S L R C P with a framed illuminated address and a walking stick "as a small appreciation of his services to the class and in the divisions for many years" —The members of the Brighton Division of the St John Ambulance Association have just presented Mr J Amherst Orlebar M B B C Cantab with a silver cigarette box "as a token of their appreciation and esteem" Mr Orlebar is leaving England on active service

THE SOUTH AFRICAN AMBULANCE HOSPITAL AT CANNES

We have received from M Rene Juta, the Secretary of this hospital, an account of the first and only South African unit in Europe, which is also probably the largest British hospital working for the French Service de Santé It comprises 3 surgeons, 9 sisters, 10 nurses, 6 dressers, 1 accountant, 1 secretary, 4 motor drivers It has 200 beds and 3 motor ambulances, all equipped and subscribed for in South Africa by private and public funds for work in Europe, in spite of the fact that the Union has recently had rebellion on its hands and is carrying on its own arduous campaign in German South West Africa. The ambulance was accepted by the French Service de Santé, and its personnel were asked to equip and organise a base hospital at the Beau Rivage, Cannes The hospital has been commended by the French Government and is admirably equipped The wounded come almost direct from the trenches of Verdun and the Argonne

There are two committees, one in Cape Town with the Chief Justice as chairman, the other in London with Lord Gladstone as chairman, Lord Islington, honorary treasurer, and Mr Wilson Fox (of the Chartered Company) as secretary There is also a ladies committee in London, of which Mrs Lewis Harcourt is President A bacteriological laboratory and X ray apparatus and outfit have been given to the hospital by the London committee In addition the hospital has a dental surgery under a fully qualified dental surgeon At the time of writing 193 patients have been admitted with 2 deaths while 61 patients have been sent home healed

The South African Ambulance Hospital at Cannes

CANADIAN MEDICAL MEN AND THE WAR

One of our Canadian correspondents writes "Medical men in Canada who are eager and anxious to go to the front read from time to time in the columns of THE LANCET of the 'dearth of medical officers' and of the dearth of medical men in the home country They wonder how it is, when they have long since proffered their services, that it seems impossible to secure a commission, although many of them have taken emergency training to qualify them in some measure for usefulness Up to April 1st, it has been stated, Canada had some 300 medical men in England or in France, either with the armies, in hospital service, or with the navy Recently the University of Toronto General Hospital has gone abroad with some 40 to 50 medical men, McGill University Montreal has sent a similar or larger number Queen's University, Kingston, and Laval University, Montreal and Quebec, have sent, or are sending their hospitals abroad Lately Vancouver has offered to equip a hospital of some 1040 beds, Peterboro, Ont, one of 200 beds Lambton County, Ontario, one of 200 beds The Ontario Medical Council, through one of its members, Dr Edmund E King, Toronto, has selected some 50 or 60 medical men for the War Office Thirty men have volunteered for service in Serbia. With all this splendid offering from the medical profession in Canada there are said to be hundreds on the waiting lists who are urgently desirous of work in any medical capacity The provincial medical councils of Canada could yet supply several hundred men.

does not appear to be aware that out of the total private contributions in money and kind received by the Commission up to the date of their last report (April 17th), while the United States has with great generosity subscribed about £980,000, the British Empire has subscribed about £700,000, and this in addition to the military burdens borne by the Empire, the very large sums subscribed to the maintenance of Belgian refugees and also the credits placed by His Majesty's Government at the disposal of the Belgian Government, out of which that Government is providing for the work of the Commission's Provisioning Department

As regards the non interference by the German authorities with the Commission's imports, it must be pointed out that those authorities are thereby acting in their own interests, since the Commission is relieving them of a clear responsibility which they have refused to assume

Apart altogether from the assistance consistently given in various ways by His Majesty's Government to the Commission, of which it is rather for the Commission itself than for His Majesty's Government to speak, Sir E Grey feels it to be only just to private persons in this country and the British Dominions who have so largely subscribed to this work and are probably about to subscribe still more largely, that these facts should be made clear, and he has no objection to a copy of this letter being communicated to Dr Goffe should you desire to do so

I am, Sir, yours, &c ,

EYRE A CROWE

To Dr S Squire Sprigge, THE LANCET Offices, W C

THE WEEK'S SUBSCRIPTIONS

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, are as follows —

	£	s	d
Southern Branch B M.A (per Dr Jas Green Hon Sec) (seventh donation—total £62 5s 6d)—			
Dr J P Watkins	1	1	0
Sheffield and District Branch of Fund (per Dr A. E Naish (Hon Sec.) (second donation —total £350)	100	0	0
Knowle Bristol Doctors at (per Dr H F Davis)	3	10	6
North of England Branch of Fund (per Dr James Don and Mr A. S Perceval Hon Secs.) (twelfth donation—total £636 7s)—			
Dr S Vernon Robinson	1	1	0
Further fees for examination of recruits by members of Sunderland Division during 1914—			
Dr McPherson	14	12	6
Dr G E Welford	2	2	6
Dr G B Morgan jun	2	17	6
Dr J O Hamilton	8	2	6
Dr G Murray	7	17	6
Dr W K. Russell	10	7	6
Dr J B Morton	20	2	6
Dr W Hunter	16	15	0
Dr R Stobo	12	0	0
Dr J Martin	6	17	6
Dr J Smith	7	12	6
Dr J A Ross	9	10	0
Dr W H Maling	16	10	0
Dr R H. Dix	5	7	6
Dr W Hay	18	10	0
Dr S McNaughton	9	7	6
Dr O A. Rayne	3	3	0
North East London Pharmacists Association collected by (per Mr W A. Scott)—			
Mr T F Tabor	1	15	0
Chemists Assistants Association (per Mr L Thompson)	5	0	0
Formulæ" (per Mr A. Chapman)	0	10	0
Mr A. Chapman	0	13	11
Australasian Pharmaceutical Conference (per the Agent General)—			
Victoria	50	0	0
South Australia.	34	0	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A. Des Vœux, at 14, Buckingham gate, London, S W , and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd

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THE NATIONAL PEOPLE'S PALACES ASSOCIATION — This association, the object of which is to extend to the working classes in industrial districts the comfort and brightness offered by tea and coffee houses and general cafés, has now been registered under the Industrial and Provident Societies Acts for the supply of non alcoholic refreshments at popular prices in armament works and at "palaces" to be established in suitable localities Mr Lloyd George has indicated his approval of the association's aims, while Mr Bonar Law and Mr Steel Maitland are associated with the enterprise Full information may be obtained upon application to the secretary of the National People's Palaces Association 1 Albemarle street Piccadilly, London, W

The War.

THE CASUALTY LIST

THE following names of medical officers appea in the casualty lists published since our las issue —

Killed Surgeon Frederick W Quirk R N (on the *Princess Irene*)

Died of wounds Captain J C Matheson, 5th Australian Medical Corps

Wounded Lieutenant C M Smith (attached 8th Royal Scots, T F), Lieutenant J P Mitchell, Captain L C Hayes (also gas poisoning), Captain E U Russell, Captain T O Thompson (attached 18th Hussars), Lieutenant G D Maclean, all of R A M C , Major H C de Legh (attached 4th Yorks Regiment), Captain H B Cunningham, Captain W E F Tinley (attached R F A), Captain J Murdoch, all of R A M C , T F Captain L W Jeffries, 4th Australian Field Ambulance, Surgeon E G Schlesinger, Surgeon W J McCracken, both R N

Captain Stephen Field, R A M C , who was announced in our issue of May 22nd as having been killed in action, died at the Prisoners Camp, Wittenberg, Saxony, which is one of the camps reported as infected with typhus fever

DEATHS AMONG THE SONS OF MEDICAL MEN

The following names must be added to the sons of medical men who have fallen in the war Lieutenant G G Hodgson, elder son of Dr G Hodgson, of Chertsey, Lieutenant C G Harper eldest son of Dr J Harper, of Rosary gardens, London, S W , Lieutenant J E B Miller, only son of Dr J E Miller, of Londonderry, Lieutenant N C MacLehose, younger son of Dr N M MacLehose, of Harley street, London, W , and Lieutenant R W H. Empson, elder son of Dr J Empson, of Milborne Port, Somerset

THE HONOURS LIST

The list of honours published on the birthday of King George has close reference to the war, most of the recipients being, as might have been expected, engaged in one way or another in leading the national energies in the great struggle Medicine is but sparsely represented among these leaders, for enormously valuable to the cause as medicine is, in personnel its numbers are small, the fact that but few medical names appear in the list indicates that in every branch of military activity special services have to be recognised

We congratulate the following —Surgeon General T M Corker is appointed C B Dr A W G Bagshawe, director of the Tropical Diseases Bureau is appointed C M G —the value to our army of the organised study of tropical diseases has been very great, Major E J O'Neill (New Zealand Medical Corps) and Captain A G Butler (Australian Army Medical Corps) receive the D S O , Lieutenant Colonel C C S Barry, I M S , is appointed C I E Lady Lukis, the wife of the Director General of the Indian Medical Service, and Lieutenant Colonel T F Pedley (Rangoon Port Defence Volunteers) receive the Kaisar i Hind medal, and Dr J E A Ferguson is appointed I S O

We note elsewhere the knighthoods bestowed upon Sir James Mackenzie and Sir Frederick Needham, as being civilian honours.

greatly helped to increase the comforts for the soldiers But there is more money yet to come in, for the receipts from the colonies and distant places are not yet to hand, so that the tourists of France have rendered yeoman service for our common cause

The war has not, however, compelled the Touring Club entirely to neglect the interests of the tourists The upkeep of roads, which was a part of its business has proved of great service for military purposes, as well as for the comfort and safety of tourists Further, the club has begun a campaign to spread the knowledge as to where and how, without traversing the enemy s lines, advantages such as were formerly enjoyed at Homburg, Wiesbaden, Marienbad, Karlsbad, and similar places, can now be obtained. An extensive correspondence also, including many letters from England, consisting of inquiries about the French health resorts has been conducted. It is quite certain that no English families will go this summer to either German or Austrian baths or spas With the exception of those situated in the Vosges and the Ardennes the resorts of France generally are available. The Touring Club urges that this affords an excellent opportunity for setting forth the superiority as regards politeness and attention that France can offer such visitors

BELGIAN RED CROSS WAR EXHIBITION, 1915 —A war exhibition to assist the funds of the Belgian Red Cross Anglo-Belgian Committee of which the Queen of the Belgians is patroness, is announced to be open from June to October at the Prince s Skating Club, Knightsbridge, S W A 13 700 sq ft mural panoramic representation of Belgium will portray the beauties of Brussels, Antwerp, Bruges, Ghent, Liege, Namur and the Valley of the Meuse, including Dinant Louvain, Malines, Ypres, and Visé The exhibition includes seven sections forming a comprehensive war exhibition Section 1 Trophies of war from the more important battle grounds Section 2 Armament and ammunition in the making Section 3 Red Cross work, hospital and nursing Section 4 Science and industry as applied to war, including the latest scientific instruments used in connexion with war Section 5 Food and hygiene Foodstuffs of every description for War Office requirements, for invalids, wounded, and convalescents also hygienic preparations and apparatus Section 6 Equipment, showing every equipment necessity of officers and men, nursing equipment for hospital and field service, working exhibits lectures, and demonstrations Section 7 Maritime and aerial section, comprising the latest inventions in naval and aerial warfare. Season tickets are being issued at £1 1s each, carrying the privilege of admitting a different friend at each visit Assistance of every kind will be welcomed by the honorary organising secretary War Exhibition London Chamber of Commerce, 97, Cannon street, London E.C

EDINBURGH UNIVERSITY OFFICERS TRAINING CORPS MEDICAL UNIT —On May 29th the cadets of the medical unit of Edinburgh University Officers Training Corps were inspected by Major Gray R A.M.C at Kingston Grange where the unit had fitted up a field ambulance After a careful inspection of the field hospital arrangements and the cadets in various manœuvres the inspecting officer addressed them and expressed his satisfaction with what he had seen Speaking of the value of such a unit he said some people thought there was no good having the Officers Training Corps during war, but there was no greater possible mistake, as the essential qualification for Royal Army Medical Corps officers apart from the medical one was military training Had there been no such Officers Training Corps the Army Medical Corps at the outbreak of war would have been in difficulties Some who had previous training rather grumbled at having to train recruits at home yet they had done more useful work than going straight out and they would get their chance now Students felt that they were being blamed for hanging back [illegible] joining a combatant unit Nothing was more foolish Combatant officers could be trained in a few [illegible] for example at Sandhurst in three—but it took five years to train a Royal Army Medical Corps officer and if the war lasted a long period there would be a shortage [illegible] It was their duty to stick to their studies taking the necessary military training in such a unit as this, [illegible] they should join the Royal Army Medical Corps

WOUNDED ALLIES RELIEF COMMITTEE —As Dr R Fleming Jones, whose appointment we recorded in THE LANCET of May 8th, has been prevented from going to Serbia the Wounded Allies Relief Committee has appointed instead Colonel Joseph A Hearne who has for many years been associated with the Government Medical Service of Queensland

The committee has also appointed as medical head of its typhus hospital unit (200 beds) about to proceed to Montenegro, Dr Gerard Carré, formerly medical officer to the Uganda Relief Expedition, and senior medical officer to the Fashoda Expedition The medical staff will also include Dr Isabel Ormiston, Dr C B Slater, and Dr Lillias Hamilton Miss Elkington is matron and there are 14 nurses and one male nurse attendant Another matron with five nurses will follow later

SCOTTISH COMMAND MEDICAL SERVICES —Colonel J D Mackintosh, Assistant Director of Medical Services 2/1st Lowland Division, in addition to other duties, has been appointed to supervise the administration and organisation of all military, war, and Territorial general hospitals in the Glasgow area Major H A Leebody, from Officer Commanding 2/3rd Lowland Field Ambulance, to be Deputy Assistant Director of Medical Services, Scottish Command, dated March 5th, 1915.

NEW MILITARY HOSPITALS —The military authorities are taking over for a military hospital the Western District Hospital Possil road, Glasgow, which is a modern and well equipped institution with accommodation for 250 —The Lanarkshire Red Cross Society, through its President, the Duchess of Hamilton, has been authorised by the War Office to take over for a hospital the new school buildings at Gateside, Cambuslang —The Devonport Workhouse has been taken over by the War Office and will be converted into a military hospital for wounded soldiers The infirmary, which contains 150 beds, will be used immediately, and in about three weeks it is expected that the workhouse will be fitted up for the accommodation of about 400 additional patients

RURAL MEDICAL RELIEF IN SERBIA —Owing to the heavy death rate from typhus fever among the Serbian medical profession and the absorption of the remainder in military and fever hospitals in towns, the rural population is entirely deprived of medical aid Mrs St Clair Stobart describes in the *Morning Post* of May 25th how in an effort to aid them a hospital tent was planted on the road between Kragujevatz and Belgrade, with a notice in Serbian that medicine and advice would be given gratis to those who attended and brought their own bottles The success was instantaneous, and over 500 patients are reported as having been treated during the first week, having trudged from their villages even so far as 50 miles away The authorities have now given permission for a series of these roadside dispensaries along the main road, administered from the Women s Tent Hospital, to be established, each such unit to consist of a woman doctor, two nurses an interpreter, a chauffeur, and a handyman The staff will live in tents and attend to their own sanitation, which will have an educative effect also on the peasantry The expenses of outfit and three months maintenance are about £1000 for each unit, and it is desired to start six units as early as possible Mrs Stobart says "From the humane point of view alone it is inconceivable that money could be better spent than upon these brave and patient peasants who are suffering from a foe against whom they have no weapons of defence Villages are being decimated whole families blotted out, and horrors unspeakable are being endured by these peasants without complaint because they take it as their share of the sacrifices which have to be made by the whole nation in the cause of Freedom But it is a heavy price to pay, and it is impossible to watch it being paid without attempting to lessen even to a small degree the horrible toll of suffering " Donations marked for the Stobart Dispensaries will be gladly received by the treasurer of the Serbian Relief Fund, 55, Berners street. London, W

DR FABIAN WARE and DR OSWALD KELLY, chief medical officers of mobile units of the British Red Cross serving with the French Army have been mentioned in French Army orders for conspicuous devotion to duty

ITALY AND THE WAR "THE PLEBISCITE OF THE PROFESSIONS."

From the Alps to Etna, every seat of learning and source of professional qualification (writes an Italian correspondent) has demonstrated, by word and deed, its whole-hearted sympathy with the Salandra-Sonnino administration in the policy which has placed the Third Italy by the side of the Triple Entente in the war against the Central Powers. Of the 21 universities which Italy numbers there is not one which has not declared its solidarity with the movement now in progress—mainly on the Venetian frontier and on the Adriatic seaboard—to complete the country's territorial integrity and to make meaningless the phrase "Italia Irredenta" (unredeemed Italy) and the agitation it has since 1866 inspired and justified. The last few weeks have witnessed what the leading Italian journals call "Il Plebiscito dei Professori"—a veritable plebiscite of the academic and professional interest throughout the kingdom—a "demonstration" which has reinforced, with signal unanimity and power, the various other interests, agricultural, industrial, and commercial, in baffling the Germano-Austrian diplomacy and in sending Italy, by the rupture of the ill-starred Triple Alliance, to the support of England, France, and Russia, in their antagonism to the policy whose watchword is "Deutschland über Alles."

Every Senatus Academicus has, collectively, subscribed to the manifesto organised to aid and abet the Government in its programme of intervention, and the names of the professoriate, published in full, have been for days past a feature in the leading journals. Conspicuous among these appear the signatures of the medical faculty in every school, metropolitan and provincial, and not a few of the signatories, when of the required age, have volunteered to serve at the front not only in ambulance work but, if need be, in the fighting line itself. There could not be a more significant proof of the patriotic spirit thus evoked than the correspondence that has passed between the organisers of the manifesto and such veterans in clinical and consultant practice as the leading members of the faculty at Naples and Rome, at Pisa and Bologna, and of these it may suffice to quote the letter of the illustrious pathologist of the last-named school, Professor Augusto Murri, addressed to Colonel Bernardi, director of the "Servizi Sanitari" of the local army corps.

My Honoured Colleague,—I address myself to you, in this confidential strain, to assure you with perfect frankness, that all of us of the Clinica Medica feel it our duty to coöperate, in whatever way seems best, in the defence of Italy if she should be called upon to intervene in this war. While all my assistants are already under statutory obligation so to intervene, I have only one such call, and that is my conscience. Be it the privilege or the misfortune attaching to age, be it what you will, I must needs obey the command of conscience, and, therefore, to you my honoured colleague—to you who direct the sanitary service of our army corps—I say that, if I am not wholly without use in the service alluded to, you may count upon me to undertake, with implicit acquiescence, any duty whatever you may impose upon me—not in the higher sphere to which your kindly appreciation might tempt you to call me, but in any other, however humble. For me, as for many others, the dignity of the post is not to be measured by the nature of the work assigned to it but by the love of our dear country, which is now claiming only that respect for her rights hitherto denied her by an unscrupulous oppressor."

This characteristic letter was addressed, as long ago as March 10th, to Colonel Bernardi, since deceased, and has been made available for publication by the courtesy of his widow. Time would fail me to quote, and the space at your disposal to publish, the volunteered undertakings of clinical teachers and consultants, inspired by equal patriotism and couched in similar language to that of the celebrated pathologist of Bologna, "the Mother of Universities." One remark, however, may be made, and it is this, that a movement so animated and so organised as that of the "Plebiscite of Italy's Professors" in this crisis of their country's destiny may not indeed command success, but must assuredly deserve it.

THE TOURING CLUB OF FRANCE AND THE WAR.—The approach of what used to be the holiday season prompts the inquiry, What has become of the touring clubs? Foremost among these, by reason of its influence, the number of its members, and the excellent service it has rendered, not least conspicuously in imposing better sanitary conditions in hotels, is the Touring Club of France. When war broke out this club had under its inspection all over Europe hotels at which members were certain of cleanliness, moderate charges, and easy redress for any legitimate grievance on reference to the club. But the war has changed all this, for many of the hotels are now converted into hospitals. So vast an organisation, however, could not remain idle, making no use of the magnificent premises secured by it for its headquarters—viz., the mansion in the Avenue de la Grande Armée once inhabited by the Humbert family, where the safe that was supposed to contain the fabulous fortune of the mythical Crawford family was kept. At this time last year this building was the centre for organising touring and exploring expeditions in all directions. Now the tourists are for the most part fighting at the front, so the Touring Club has been converted into an organisation for contributing to the health and convenience of those in the fighting line.

With the sanction and help of the Minister of War it has created a committee, known as l'Œuvre du Soldat au Front, to help soldiers at the front. Its object is to supply the soldier with necessary things which he does not obtain from the Ordnance Department. The magnificent drawing rooms of Madame Humbert's mansion are now converted into workshops, and the Touring Club of France has succeeded in turning out no fewer than 2500 parcels a day, each containing from 25 to 30 articles. These comprise things useful in maintaining the cleanliness and the warmth of the soldier, and thus conducing to his health, things which, nevertheless, the war administration does not provide. For instance, there is a watertight hood that protects the back of the neck like a sou'wester. There are also warm socks, woollen mittens, towels, soap, combs, hair and tooth brushes, grease for the feet, an ampoule of iodine, thread, buttons, safety pins, and a very ingenious over-shoe. This last can be made easily with any little bit of carpet or rug. It slips over the shoe to keep the feet warm while sleeping or standing still in the trenches. Then there is a powder or an ointment that is very successful in keeping away vermin. The other objects are of the nature of comforts, or even luxuries, that bear no direct relation to the question of health preservation, such as mirrors, flint tinder boxes, candles, tobacco pouches, cigarette papers, postcards, pencils, bootlaces, jam, books, and such like.

The subscriptions paid by tourists who no longer go out touring were obviously insufficient to provide enough parcels of this description, consequently the Touring Club conceived the ingenious idea of organising throughout France the "Day of the 75." Millions of postcards, medals, and little flags were prepared recalling the great service rendered by the famous gun. These little trinkets, none of them the size of half a crown, weighed en bloc nearly 20 tons. They were sold for a penny and upwards and brought in no less than 5,200,000 francs. What this means may be judged by the fact that a million francs in silver 50-centime pieces weigh five tons and in 10-centime copper pieces a hundred tons. Special arrangements had to be made with the banks to deal with the huge amount of small coin thus paid for mementoes of the 75 gun. The £208,000 which an army of 50,000 ladies realised by selling 22,000,000 mementoes have

That in contravention of Section 10 of the Midwives Act, 1902, a midwife practised as a midwife in 1915 without having notified the local supervising authority of her intention to do so Not always attending patients for a period of ten days following labour, as required by Rule E 11, not keeping a register of cases as required by Rule E 23, when attending patients the midwife did not wear a clean dress of washable material, as required by Rule E 1, and that in cases where the advice of a registered medical practitioner had been sought she neglected to notify the local supervising authority thereof, as required by Rule E 21 (1) —An application from the examiners of the Manchester Centre asking the Board to arrange for examinations to be held six times a year alternately at Manchester and Liverpool was granted. The Board decided that the Brighton Hospital for Women should be reinstated upon the list of institutions at which pupils may be trained on the annual approval by the Board of their lecturing staff and training midwife Letters were considered from the medical officer of health of Sheffield and from the county medical officer of health of Lancashire inquiring whether a rupture of the perineum is to be considered "serious" within the meaning of Rule E 20 (3) in every case where stitching is required. The Board decided that any case of a ruptured perineum which required stitching was a case of "serious rupture" within the meaning of the rule

THE TYRONE MEDICAL COMMITTEE —At a meeting of medical men, held in Dungannon Dr E C Thompson (Omagh), President of Tyrone Medical Committee in the chair, it was decided to write to those Tyrone doctors who had accepted positions as "half time certifiers" under the Insurance Act, requesting them to fulfil their pledges to the Tyrone Medical Committee and resign their positions, and stating that in case of refusal, upon the first occasion on which an offender visited the patient of another medical practitioner an application would be made to his College to have his licence as a practitioner cancelled It was also decided that the medical officers of the various Poor law unions should press for four weeks' vacation each year and that the locum tenens be paid £4 4s per week and each medical practitioner was requested not to accept less It having been mentioned that Dr F C Thompson surgeon to the Tyrone County Infirmary, Omagh had been removed from the position as medical adviser for co Tyrone under the Employers Liability Act, which he had held since 1896, and another doctor appointed, it was decided to ask for an explanation from those in authority why Dr Thompson without notice or explanation had been removed from the post

MIDDLESEX HOSPITAL —Presiding over the quarterly meeting of the Court of Governors of the Middlesex Hospital on May 27th, Sir Henry Morris referred to the valuable results which were expected from the electrocardiograph department of the hospital The report stated that since the beginning of the war 301 soldiers of the Expeditionary Force had been treated in the hospital, while at the branch institution at Clacton on Sea 1432 wounded soldiers had been treated

THE MONTESSORI SYSTEM —Speaking at a meeting of the Montessori Society held at University College on May 22nd, Mr C W Kimmins D Sc Chief Inspector of Education to the London County Council said that children who had been educated under the Montessori system were about a year in advance of others who had received ordinary methods of instruction The children were more resourceful and easily overcame the difficulties of unseen work. Dr Kimmins warned his audience against introducing new methods without adequate preparation

THE ROYAL SOCIETY —The meetings of the Royal Society previously announced for June 10th and 24th will not be held

THE death is announced of Mr J P Martin, [illegible] F R C S Irel, the medical officer of No 1 West [illegible] Mr Martin who was greatly endeared to the [illegible] of the Great Mersey street district, where he had a wide circle of friends and was a generous supporter of Liverpool charities

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, such information for gratuitous publication.*

BAKER, LILY F R C S Irel M B Ch B Irel., has been appointed a temporary Demonstrator in Obstetrics and recognised Teacher in Ophthalmology Laryngology, and Otology at the Bristol University

BARNES HELEN PATRICIA M B, B S Lond has been appointed Resident Obstetric Officer and Ophthalmic House Surgeon at the Bristol Royal Infirmary

BEVERS E C M.B B Ch Oxon F R C S Eng & Edin has been appointed Surgeon to the Radcliffe Infirmary and County Hospital, Oxford

BIGGART A S L M.B Ch B Edin has been appointed Medical Officer to the Hartlepools Sanitary Authority

CHITTY HUBERT M B M S Lond F R C S Eng L R C P Lond, has been reappointed Assistant Curator of the Pathological Museum Bristol University

CROSSE, REGINALD EDWARD M R C S, L R.C P Lond has been appointed one of the Medical Referees under the Workmen s Compensation Act 1906 for County Court Circuit No 47 to be attached more particularly to the Greenwich and Woolwich County Courts

FORTESCUE BRICKDALE, J M M D Ch B Oxon has been reappointed Director of the Public Health Laboratory at the Bristol University

JAMIESON THOMAS MITCHELL, L.R C P & S Edin L F.P S Glasg, has been appointed Medical Officer for the Western District by the Plymouth Board of Guardians

JONES W BLACK M D B S Lond D P H has been appointed Medical Officer of Health for the Combined Rural Districts of Builth and Colwyn and for the Urban District of Builth also Medical Officer and Public Vaccinator for the Lower District of the Builth Union.

MOORE J P M B B S R U I has been appointed Medical Officer of the Camolin Dispensary District of the Gorey Union.

MORRIS LEONARD N M B B Ch Bristol has been reappointed Assistant Curator of the Pathological Museum, Bristol University

NIXON JOHN A. M.B B C Cantab F R C P Lond has been reappointed Deputy Dean of the Faculty of Medicine at Bristol University

PEDLOW T B M B B S R U I has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Lurgan District of the county of Armagh.

RYAN PERCEVAL CECIL HARDINGE M D B Ch Dub, has been appointed Deputy Medical Officer for the Fourth District of the Chipping Sodbury (Gloucestershire) Union

SAYEED A. L M B Ch.B Edin has been appointed Assistant Medical Officer at the St Mary s Infirmary Highgate hill N

SHED A. B M.B Ch B Edin D.P H.'St. And has been appointed Assistant County Medical Officer to the Hants County Council

SKEEN JAMES H M B C M Aberd has been appointed Medical Superintendent of Fife and Kinross Asylum at Springfield

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

BARNSLEY COUNTY BOROUGH.—Assistant Tuberculosis Officer and Resident Medical Officer at Mount Vernon Sanatorium. Salary £300 per annum with board and residence

BATH WINSLEY SANATORIUM FOR CONSUMPTION —Assistant Resident Medical Officer Salary £150 per annum with board residence, and laundry

BETHNAL GREEN INFIRMARY Waterloo-road N E —Assistant Medical Officer Salary at rate of £200 per annum with apartments board, and washing

BIRKENHEAD BOROUGH HOSPITAL.—Female Senior and Junior House Surgeons Salary £160 and £150 per annum respectively with board and laundry

BIRMINGHAM CORPORATION CITY HOSPITAL, Lodge road —Temporary Female Assistant Resident Medical Officer Salary £[illegible]50 per annum with board residence and washing

BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer unmarried Salary £250 per annum with apartments attendance, &c.

BIRMINGHAM ROMSLEY HILL SANATORIUM FOR CONSUMPTIVES —Assistant Resident Medical Officer unmarried Salary £250 per annum, with board apartments and laundry

BOLTON INFIRMARY AND DISPENSARY —Third House Surgeon. Salary £170 per annum with apartments board and attendance

BRADFORD EDUCATION COMMITTEE.—Assistant School Dentist Salary £2[illegible]0 per annum.

BRISTOL, BISHOP'S KNOLL HOSPITAL (2ND SOUTHERN GENERAL HOSPITAL) Stoke Bishop —Surgeon in Residence Salary £[illegible]0 per annum with board lodging and laundry

BRISTOL GENERAL HOSPITAL.—House Surgeon and Second House Physician both for six months Salary at rate of £150 per annum, with board residence &c

BRISTOL ROYAL INFIRMARY —Throat Nose and Ear House Surgeon for six months Salary at rate of £120 per annum with board, apartments and laundry

BURY INFIRMARY —Senior and Junior House Surgeons Salary £175 and £150 per annum respectively, with board, residence and washing

BUXTON, DERBYSHIRE DEVONSHIRE HOSPITAL.—Assistant House Physician for six months Salary £1[illegible]0 per annum with apartments, board and laundry

SCOTTISH WOMEN'S FIRST AID CORPS —The annual meeting of the Scottish Women's First Aid Corps was held in the Synod Hall, Edinburgh on May 28th, Mrs Maxtone Graham, the corps commandant, presiding Miss M E Macmillan, honorary secretary, read the annual report, which stated that the corps was started six years ago in order to train women to be in readiness to render help to the wounded in the event of war The scheme was justified, said the report, by the large number of competent trained women who were ready to serve when the war broke out Since April, 1914, 219 new members had joined, and the corps now numbered 356, and, in addition, about 300 non members had taken advantage of their classes A house lent by Mr Frank Deas in Magdala place had been equipped and furnished by members of the corps as a special corps hospital It was now occupied by wounded soldiers, was recognised by the Scottish Command, and received the capitation grant Mrs Graham referred to the progress made by the corps during the year, and remarked that their hospital was a kind of visible outcome of what they had been doing The honour of the corps was in the hands of the members, who must do everything they could to make the hospital a success They had been getting soldier patients from the City Hospital and from the Deaconess Hospital, and she was sure that so long as they kept the hospital open it would never be empty They got the capitation grant from the Government, but that was not sufficient to keep the hospital going, and they would require to raise more funds

KITCHENER'S INDIAN HOSPITAL —Tents to accommodate 500 more beds are being put up to augment the accommodation of this hospital, which was fully described in THE LANCET of April 3rd The staff consists of 37 officers of the Indian Medical Service, mostly from three Indian general hospitals, and some had to give up lucrative appointments to serve in Kitchener's Hospital There are also 15 Anglo Indian assistant surgeons, 30 native sub-assistant surgeons 150 sepoy ward orderlies, 100 native followers, and 75 British orderlies of the R A M C

COLLABORATION IN OPERATIVE SURGERY —A medical correspondent, signing himself "Observer," writes that he was recently an eye witness of operations at the Royal Military Hospital, Devonport, illustrating the possibility of collaboration in surgical operations The operations, he says, were for the radical cure of bilateral inguinal herniæ by Bassini's method Two operators took part, one on either side The initial incisions were simultaneous Both operations, though varied in technique, proceeded *pari passu*, and the last skin suture in each was inserted simultaneously to a second The only point for discussion (that of dressings or no dressings) was harmoniously compromised, and the patient is doing well, the period of anæsthesia and the shock of operation being both reduced by half Such an illustration speaks highly for surgical collaboration Here skill met skill, not as "Greek meets Greek," but as allies in a hallowed cause No small credit, too is due to the sister who supplied both operators synchronously and speedily with their varied armamentarium

ALLEGED ROBBERIES OF THE WOUNDED BY MEDICAL ORDERLIES —There has been not a little direct accusation levelled in various newspapers against medical orderlies of petty thieving practised on the wounded during transport One very specific instance in the *Times* of May 28th has drawn forth from Colonel P Broome Giles, of the City of London Branch of the Red Cross Society a very trenchant and just reply After referring to the difficulties that lead to defective packing of kits upon ambulances illustrated by a singular instance, he calls attention to the *prima facie* unlikelihood of the charge from the general position and character of those engaged in the transport work, and concludes "If your correspondent will furnish me with (1) the date, (2) the hour, (3) the hospital the officer was taken to I can verify from the duty roll those she implicates, and will give her every facility to make an exhaustive inquiry, after which she can either publicly substantiate her accusation or apologise" That many articles are lost during transport is highly probable, and it is difficult to conceive how it could be otherwise when all attendant circumstances are taken into consideration, so that it is quite gratuitous to propound as the only explanation a highly improbable system of thieving

INCORPORATED SOLDIERS' AND SAILORS' HELP SOCIETY —This society held its annual meeting on May 26th when the secretary, Major Tudor Craig, said that over 23,000 beds had been presented to convalescent homes by the members of the society since the war began The Princess Christian Home at Brookwood was also to be turned into a convalescent home, and the accommodation at the Naval Hospital had been increased to 128 beds Princess Christian said that the necessary funds had been offered by a friend through the Queen and herself, and she thought that the extension would remain permanently at the hospital The secretary continued that a fund in memory of Lord Roberts had been instituted to enable the partially disabled to be dealt with The Cordwainers' Company would give disabled men 42 weeks' training in cobbling, the society making them meanwhile an allowance The National Fund had helped with a grant of £35,000

A MILITARY CHAMBER OF HORRORS —The Royal United Service Institution have expressed approval of a suggestion of Dr Raymond Crawfurd that a "chamber of horrors" should be established in the museum of the institution for the display of a collection of objects testifying to the commission of atrocities in warfare, such as German military proclamations, letters and diaries ordering or recording atrocities, the Botha correspondence on the infection and poisoning of wells, German gas apparatus, incendiary pastilles, and the like The War Office is considering the matter

SIR GEORGE NEWMAN, principal medical officer of the Board of Education, has been appointed on the Central Control Board (Liquor Traffic) created by the Government to deal with the drink problem in relation to munitions transport, and camp areas The address of the Board is 76, Strand, London, W C

Medical News.

UNIVERSITY OF LONDON —At the third M B, B S Examination for internal and external students, held recently, the following candidates were successful —

Lilian Annie Clark and *Dora Challis Colebrook (honours) London (Royal Free Hospital) School of Medicine for Women †Clement Cooke St Bartholomew's Hospital (honours) Herbert Davies University College Hospital Robert Hood Fleming B Sc Middlesex Hospital Norah Hamill and Mary Emmeline Joll London (Royal Free Hospital) School of Medicine for Women William Edward Kingdon University College Hospital Olive Gertrude Mary Langmead London (Royal Free Hospital) School of Medicine for Women Stylianos George Papadopoulos St Bartholomew's Hospital George Henry Roberts St Thomas's Hospital Gabriel Francis Rodrigues University College Hospital Farid Hencin Abdel Sayed St Mary's Hospital Hilda Mary Scarborough London (Royal Free Hospital) School of Medicine for Women John Frank Herbert Stallman Guy's Hospital and Katharine Ada Waring London (Royal Free Hospital) School of Medicine for Women

* Distinguished in Midwifery and Diseases of Women.

† Distinguished in Medicine

CENTRAL MIDWIVES BOARD —Special meetings of the Central Midwives Board were held at Caxton House, Westminster, on May 26th and 27th Sir Francis H Champneys being in the chair A number of midwives were struck off the roll the following charges amongst others having been brought forward Not being scrupulously clean in every way as required by Rule E 1, that when attending patients the midwife did not take with her the appliances or antiseptics required by Rule E 2 and consequently was unable to comply with the provisions of Rules E 3 and 7, not taking and recording the pulse and temperature of patients as required by Rule E 13, the midwife employing an uncertified person to visit the patient as her substitute in contravention of Section 1 (4) of the Midwives Act 1902 Neglecting without reasonable cause to attend a patient on the day of the confinement in spite of repeated messages, and not arriving until after the delivery had taken place, that notwithstanding instruction by the inspector of midwives the midwife did not make use of a clinical thermometer nor did she take the pulse of her patients, and consequently did not comply with Rule E 13

Notes, Short Comments, and Answers to Correspondents.

MEDICAL FEES, ETC., IN THE SIXTEENTH AND SEVENTEENTH CENTURIES

AMONGST the historical documents belonging to the Duke of Rutland preserved at Belvoir Castle are a number of household account books of various dates ranging from the year 1522 to the year 1700. These are of much interest as illustrating the stately housekeeping of a wealthy noble family in the sixteenth and seventeenth centuries. The accounts throw light on local and family history, social customs, the manner of living, food, drink, the history of prices, trade, amusements, costume, and innumerable other subjects. Entries of payments for tobacco and pipes, the price of the former sometimes running very high, show how esteemed the custom of smoking was among the nobility. The accounts also indicate that in 1670 tea was regarded as a necessary part of the Earl of Rutland's equipment for a journey in England. On May 6th of that year, for instance, we find a charge of 8*d.* "for a box of tin to keepe his Lordshipp tea in coole for his journey," and on Nov. 20th of the same year there is the entry "for ½ a pound of tea for his Lordshipp, 10*s.*" Subjoined are a few examples of payments recorded to physicians and apothecaries and other items of expenditure of direct or remote medical interest:—

1528.—Payde, be my Lorde's comaundement, to Doctor Freman, fysicion, xl*s.*

1530.—Item to Doctor Freman, fusician, xx*s.*—To Doctor Freman, fusician, for his paynes with my Lorde Ros, xx*s.* Item, to Doctor Bartlott, by my Lorde's commaundement, vij*s.* vj*d.*—Item to Peerson the poticary for divers restoretyffes, vij*s.* iiij*d.*

1532.—Item geven in rewarde to the myddewiff and norys at the christenynge of Master Hervie's childe, xx*s.*

1533.—Item in reward, the xij day of July, to Roger Smyth, poticarye, for his payne takyn with my Lord in his fevir, vij*li.* xiij*s.* iiij*d.*; to him for such stuff as he spent abowt my Lord in the tyme of his sekenesse, xxxij*s.* x*d.*—Item in reward at the same tyme to Doctor Bartlet, xxx*s.*—Item in reward to Doctor Freman the same tyme, xiij*s.* iiij*d.*—Item to a woman phicisian at Bingeham in the Vale, iij*s.* vj*d.*—Item to Roger Smyth, poticary, for my doughter Anne, iij*s.* iiij*d.*

1536.—Item to Doctor Clement for lokyng to my Lorde Roos when he was seke at Endfyld, xxx*s.*—Item to the same doctor at another tyme at Yorke Place, xx*s.*

1537.—Item in reward to Master John the poticary for ij glasses of oyle of almons and for a medicen for my Lorde's childern for the wormes at ij tymes, xx*s.* x*d.*

1540.—Paide in reward to Doctor Bill commyng to my Lorde at Halywel, xx*s.*—Item payd to Doctor Edwardes for his reward beyng with my Lord Roos at Croydon in his sikenesse, and for his costes goyng to Cambrige for ix days at vj*s.* viij*d.* the day, iij*li.*

1541.—Item the xxviijth day of February to Mr. Leveret the phisicion for that he came to my Lady then and taried at Belvoier iij days, x*s.*—Item gyven in rewarde to Mr. Edwardes, phisicion of Newarke, for his comyng to Maistres Margaret Paston when she was seke, x*s.*—Item, gyven in reward to Mr. Leverett for mynystryng medecyns to my Lord Roos when he was seke, x*s.*, and for the like mynystryng to Maistres Margerie Paston in her sekenes, xxi*s.* vj*d.*—Item, payd for a pynte of aquawite, xiij*d.*

154[illegible].—Gevyn to Doctor Augustyne at dyverse tymes (over and beside iiij*li.* x*s.* in the price of a gowne of damask), [illegible]—Gevyn to Doctor Buttes, xxij*s.* vj*d.*—Gevyn to Doctor Nicholas at dyverse tymes [illegible]—Gevyn to Doctor Cromer at dyverse tymes over and beside [illegible] of damask) for a gowne [illegible]—Gevyn to Doctor Bill at ij tymes, xl*s.*—Gevyn to Mr. [illegible] surgian, at dyverse tymes (over and [illegible]—Paid to Antony Digby for [illegible] when [illegible]

[illegible] Account of the executors of the will of Thomas [illegible] Earl of Rutland [illegible] funeral expenses [illegible] the charges [illegible] the [illegible] of the [illegible] the plummer for [illegible] in lead [illegible] after [illegible]

1551.—Item to Doctour Wotton for his counsaile in phisik to my Lord, xx*s.*—Item to Goldring the potecary for marmalad and other thinges, xx*s.*

1554.—Item to Docter Hyll, xx*s.*—Item to Docter Wooton, the same daie, xx*s.*—Item to Holland the surgion, the same daie, iij*s.* iiij*d.*

1555.—Item in reward to John Rolpotey, my Lord's surgoin, by his commaund, xl*s.*—Item by my Lorde's commaund, to the straunger that ys his surgion, x*s.*

1558.—Item to Doctor Peter and Doctor Hil at iij several times for their coming to my Lady, xxvj*s.* viij*d.*

1559.—Item paid for cariage of Bukston's water sent to my Lord of Penbrok, iiij*s.* iiij*d.*

1590.—Item geven at the christenyng of Mr. Bassete's daughter, to mydwief and nurse, xx*s.*

1594.—Paid to Mr. Docter Hunton and Mr. Harrye Webster for commynge to Belvoyre to her Ladyship, xxx*s.*—Paid to George Sandwith, barber, for commynge to Belvoyre ij severall tymes to tryme his Lordship, v*s.*

1598.—Item for two bezer stones, vj*li.*

1599.—Item geven to Doctour Marbeck for the waters and phesicall thinges sent towardes Ireland, and for his paynes in providing them, xl*i.*—Item geven to Mr. Goodrous, her Majeste's sergeant chirurgian, whom she sent to my Lord, vl*i.*—Item geven to Mr. Thorne, chirurgian, vj*li.* xiij*s.* iiij*d.*—Item to Mr. Doctour Marbeck for his half yeares annytie due at Our Lady Day, iij*li.* vj*s.* viij*d.* Item paied to the apothecary for phisick for Capten Whitlock, xxvj*s.*, and geven to Doctour Marbeck for his paynes about the Capten in his sicknes, by his Lordship's commandment, vl*i.*

1600.—Item in rewarde to Doctour Marbeck for certen waters and other thinges which he bought and provided for my Lordes use in his jorney into Holland, and for his paynes, xl*i.*

1604.—Paid to Mr. Docter Hunton in rewarde commyng to my Lady, iij*li.*, and to John Lucas his potticarie, xl*s.*—Paid to Mr. Docter Mumforde for commyng from London to mynister phissicke to mye Ladye, xvl*i.*

1605.—Item, to Mr. Perk for letting his Lordship's blood, xxx*s.*

1606.—Item, to Sir Walter Raleighe's man that brought a water for my Lord for the collicque, xx*s.*, for half an oz. of muske to make plaister, xxx*s.*, a pounde of tobacco sent to Belvoyre, xl*s.*, tobacco pipes, v*s.*

1607.—Given to Mr. Rigesley, of Newarke, phisision, being sent for to come to Henry Lynforde, by my Lord his comaundiment, xxx*s.*—Given to Mr. Alton of Nottingham, phisision, as in rewarde for attending of my Lady and mistris at Belvoer, vl*i.*

1609.—Item paied to Mr. Doctour Percywalle apothecary, for viij oz. of elixar of saltt, iij*li.* iiij*s.*, water distilled, a quart vj*s.*, pylles ij*s.* vj*d.*

1611.—Item for a plaster for the gowte from Mr. Cranmer for my Lord, x*s.*

1612.—Item to Mr. Frederick and Mr. Guillian, chirurgians, for their attendance upon my Lord Roger, Earl of Rutland, at Cambridge from the tyme of Mr. Guillian's comyng to Cambridge and for the incision made, 3*li.*, and for embalmyng the corps, xx*li.*

1614.—Paid Fredrick the surgeon, for imbalming the corps of Sir Olliver Manners, 30*li.*—Delyvered to Mr. Waters of Stamffoord when hee was sent for to my Lord Roosse beeinge not well, iij*li.*—Paied the same date unto John Hilton his pothecarie's man for apothecarie stuffe, viij*s.* iiij*d.*—Delyverd to Mr. Doctor Ridgley of Newark, for ten daies beeinge at Belvoire with my Lorde Roose, x*l.*

1615.—To Docter Ridgley, for beeing at Garradon with my Lorde Roosse when he was not well, payd to him for vj daies in goulde, vj*li.* xij*s.*

161[illegible].—Paid to Docter Anthony for a dram of the essence of gold, 6*li.*

16[illegible], August 11th.—Item paid to Sir Daniell Delyne for two gree stones whose virtue is good to cure the stone in the bladder or kidneyes, for which I Earl of Rutland have paid 3*li.* 5*s.* and am to have a twelve moneths tryall, and if I do not like them I shall have 40*s.* for them againe.

16[illegible].—Paid to my honourable Ladye's hands for Docter Preelian a tyme for his care of Lord Roose, 50*li.*—Paid Mr. Turner that pretends to cure my Lord, 9*li.* 5*s.*

16[illegible].—Paid Mr. Price, Doctor Bacon's apothecary's bill for Lord Roos, 4*li.* 5[illegible]

16[illegible].—Paid to Docter Harwood when hee came to my Lord 12 dayes, 12*li.*; given to his man that came with him, 5[illegible]—Paid to Docter Denton for 3 dayes attending my Lord. John [illegible] Earl of Rutland died Sep. 29th, 1679. [illegible] 3*li.* paid to Docter Harwood for 10 dayes attending my Lord, 10*li.*—Paid to Doctor [illegible] for 10 dayes attending my Lord, 10*li.*—Paid to Mr. [illegible] and Mr. Wood, apothecary, [illegible] bill, for embalming my Lord and [illegible]

CAMBRIDGE ADDENBROOKE'S HOSPITAL.—Honorary Assistant Surgeon for Ear Nose and Throat Department Also Honorary Assistant Surgeon for Ophthalmic Department

CANTERBURY MENTAL HOSPITAL.—Locum Tenent Assistant Medical Officer for six weeks Salary £6 6s per week with board lodging washing and attendance

CARLISLE NON PROVIDENT DISPENSARY.—Resident Medical Officer Salary £200 per annum with apartments (not board)

CITY OF LONDON LYING IN HOSPITAL, City road E C.—Resident Medical Officer Salary £5 5s per week with board lodging and washing

COVENTRY AND WARWICKSHIRE HOSPITAL.—House Surgeon Salary as arranged

DARLINGTON COUNTY BOROUGH INSURANCE COMMITTEE.—Two Medical Practitioners

EDINBURGH, ROYAL ARMY MEDICAL CORPS DEPOT Easter road Barracks.—3RD LOWLAND FIELD AMBULANCE Commissions

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark S E.—House Physician for five months Salary at rate of £75 per annum with board residence and washing

FOLKESTONE ROYAL VICTORIA HOSPITAL.—House Surgeon. Salary as agreed with board, residence and laundry

GENERAL LYING-IN HOSPITAL, York road S E.—Resident Medical Officer for three months Salary £50 per annum with board

GLASGOW ANDERSON COLLEGE OF MEDICINE, Dumbarton road.—Chair of Anatomy

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL.—Resident Medical Officer for six months Salary at rate of £200 per annum, with board, residence, and laundry

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton.—House Physician for six months Salary 30 guineas Also Assistant Resident Medical Officer Salary £100 per annum, with board and residence

MACCLESFIELD GENERAL INFIRMARY.—Resident Medical Officer Salary £150 per annum with board and residence

MANCHESTER CORPORATION, BAGULEY SANATORIUM.—Superintendent Salary £400 per annum, with house coal, light, and washing

MANCHESTER COUNTY ASYLUM, Prestwich.—Locum Tenens Salary 6 guineas per week

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, Bowdon Cheshire.—Resident Medical Officer for In patient Department Salary £100 per annum, with board, apartments washing &c

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN Park place, Cheetham Hill road.—House Surgeon. Salary £120 per annum with apartments and board

METROPOLITAN EAR NOSE AND THROAT HOSPITAL Fitzroy square, W.—House Surgeon Salary £150 per annum Also Honorary Anæsthetist.

MIDDLESEX HOSPITAL W.—Officer in-Charge of Electrocardiograph Department Salary £50 per annum

MONTENEGRO.—Assistant Doctor for Unit of 200 beds Salary according to experience, and expenses

NORTHAMPTON COUNTY BOROUGH.—Temporary Clinical Tuberculosis Officer Salary £350 per annum

NORTHUMBERLAND COUNTY.—Assistant School Medical Inspector Salary £300 per annum

NORTHUMBERLAND COUNTY COUNCIL.—Temporary Clinical Tuberculosis Medical Officer Salary 7 guineas a week

NOTTINGHAM CHILDREN'S HOSPITAL.—Female House Surgeon Salary at rate of £150 per annum with apartments board and washing

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician and Assistant House Physician Salary at rate of £300 and £250 per annum respectively with board residence and laundry

PLYMOUTH SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon Salary as arranged with board residence and washing

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer Salary £250 per annum with board apartments attendance, and washing

PORTSMOUTH ROYAL HOSPITAL.—House Surgeon for six months Salary £150 per annum with board &c

ST MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plaistow E.—Assistant Resident Medical Officer Salary at rate £90 per annum with board residence and laundry

SALISBURY GENERAL INFIRMARY.—House Surgeon and Assistant House Surgeon unmarried Salary £150 and £100 per annum respectively with apartments board lodging and washing

SHEFFIELD JESSOP HOSPITAL FOR WOMEN (GYNÆCOLOGICAL AND MATERNITY DEPARTMENTS).—Female Junior House Surgeon unmarried Salary £80 per annum with board residence and laundry

SHEFFIELD ROYAL INFIRMARY.—House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

SHEFFIELD, WHARNCLIFFE WAR HOSPITAL Middlewood road.—Resident Medical Officers

SINGAPORE STRAITS SETTLEMENTS.—Resident Medical Superintendent for Infectious Diseases Hospital Salary 4200 dollars for first 4500 dollars for second and 4900 dollars for third year with free quarters

SOUTHAMPTON, PARISH INFIRMARY Shirley Warren.—Resident Assistant Medical Officer Salary £250 per annum with apartments rations washing and attendance

SOUTHWARK UNION INFIRMARY East Dulwich grove S E.—Assistant Medical Superintendent Salary at rate of £250 per annum with board apartments and washing

STOCKPORT INFIRMARY.—Senior House Surgeon Salary £200 per annum with board washing and residence

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician Salary £125 per annum with board apartments and washing

TINGWALL, WHITENESS AND WEISDALE PARISH.—Medical Officer and Public Vaccinator Salary £ 5 per annum

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon Liberal salary with board residence &c

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Isle of Wight.—Assistant Resident Medical Officer

WAKEFIELD COUNTY BOROUGH INSURANCE COMMITTEE.—Two Medical Practitioners

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon and Anæsthetist Salary £150 per annum with board residence and laundry

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon unmarried Salary £150 and £120 per annum respectively with residence board and laundry

WESTERN GENERAL DISPENSARY Marylebone-road N W.—Honorary Ophthalmic Surgeon

WEST HAM AND EASTERN GENERAL HOSPITAL.—Resident Medical Officer Salary £160 per annum Also House Physicians Salary £120 and £100 per annum with board residence and washing

WIGAN ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon Salary £150 per annum with board apartments and washing

WILLESDEN ISOLATION HOSPITAL.—Temporary Resident Medical Officer Salary £5 6s per week with board and lodging

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer and House Surgeon for six months Salary at rate of £150 per annum with board rooms and laundry

WORCESTER GENERAL INFIRMARY.—Resident Medical Officer Salary £150 per annum with board residence and washing

WREXHAM INFIRMARY.—Resident House Surgeon. Salary £125 per annum with board lodging and washing

THE Chief Inspector of Factories Home Office London S W gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Leigh in the county of Lancaster and at Alford in the county of Lincoln

Births, Marriages, and Deaths.

BIRTHS

BLACK.—On May 29th at Tullymore Park, Newcastle Co Down, the wife of Major Barclay Black R A M C of a daughter

CLARKE.—On May 26th at Prince's gate the wife of Lieutenant K B Clarke R A M C of a daughter

GINNER.—On May 4th, at Southport to Dr and Mrs Wightman Ginner of Cannes and Contrexeville a daughter

TRAVERS.—On May 30th at Phillimore-gardens, W, the wife of Ernest Travers M D Lond of a son

WRIGHT.—On May 26th at Nithsdale House Boston Lincs, the wife of W E Merle Wright F R C S Edin of a daughter

MARRIAGES

FISHER—STENHOUSE.—On June 1st at St Giles's Cathedral Edinburgh Edward F Fisher M B F R C S Surgeon Royal Navy to Nancy elder daughter of Mr and Mrs Stenhouse

ORLEBAR—BORRER.—On June 1st at the Chapel Royal Savoy Jeffery Alexander Amherst Orlebar Lieutenant R A M C to Margaret Frances Hamlyn only daughter of William Borrer of Pakyns Manor Sussex

ROSS—DANIEL.—On May 25th at Portishead Parish Church Andrew T Ross M D F R C S Lieutenant R A M C to Kathleen youngest daughter of Major J F R Daniel V D of Fircliff Portishead

DEATHS

GUINNESS.—On May 25th at Mount Hermon, Sydenham Hill, H Grattan Guinness M D aged 53 years

HAY.—On May 26th at Edinburgh Surgeon General George William Robertson Hay I M S (retired)

N B.—A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

BOOKS, ETC., RECEIVED

ARNOLD EDWARD London
A Manual of Gynæcology for Students and Practitioners By Samuel J Cameron Assistant to Regius Professor of Midwifery, University of Glasgow Price 18s net

BRITISH OPTICAL ASSOCIATION Clifford's Inn London E C
British Optical Association Year Book By J H Sutcliffe F B O A. Price 5

CHURCHILL J AND A, London
Principles of Human Physiology By Ernest H Starling M D Lond F R C P F R S Jodrell Professor of Physiology in University College Second edition Price 21s net

MILFORD HUMPHREY London New York Melbourne and Bombay
Heredity and Environment in the Development of Man By Prof Edwin Grant Conklin (Princeton University) Norman W Harris Lectures 1914 Price 8s 6d net
A Hausa Phrase Book with Medical and Scientific Vocabularies. By Allan C Parsons W A M S Price 7s 6d net

PANINI OFFICE Allahabad
The Dietetic Treatment of Diabetes By B D Basu Major I M S, retired Fifth edition, revised and enlarged Price Rs 1-8

PHARMACEUTICAL PRESS London
Pharmaceutical Pocket Book for Practitioners and Students Edited by J Humphrey Ph C F J I Fifth edition Price 1s 6d net

PUTNAM'S G P SONS London and New York
Field Hospital and Flying Column Being the Journal of an English Nursing Sister in Belgium and Russia. By Violetta Thurstan Price 2s 6d net
In Hoc Vince The Story of the Red Cross Flag By Florence Barclay

RIDER, WILLIAM AND SON London
Nerve Control: The Cure of Nervousness and Stage-fright By H. Ernest Hunt Price 1s net

WATTS AND CO London
Morale Fondée sur les Lois de la Nature By M Dethombert

and alterative. Dr. J. Coplin Stinson has written as follows in the *New York Medical Journal* concerning the plant: "Echinacea ... is a mildly stimulating non toxic, antiseptic, an antizymotic alterative, anodyne restorative and aphrodisiac. It has been used internally in malarial disease, typhoid and other fevers, syphilis, diseases of the stomach, diphtheria, septic poisoning, anæmia, erysipelas, cancer, snake and other bites and impotence; locally in diseases of the teeth, gums and throat, wounds, ulcers, sloughing, snake and other bites, hæmorrhoids, cancer, boils, carbuncles, urethritis, elytritis, different forms of erythema, erysipelas and impotence." The remainder of the article is devoted to extolling its aphrodisiac virtues as a local application.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES

SOUTH WEST LONDON MEDICAL SOCIETY, Bolingbroke Hospital, Wandsworth Common, S.W.

WEDNESDAY.—9 P.M. Bolingbroke Lecture:—Sir W. Arbuthnot Lane.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

NORTH EAST LONDON POST GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M. Surgical Out-patients (Mr. E. Gillespie). 2.30 P.M. Medical Out-patients (Dr. T. R. Whipham); Gynæcological Out-patients (Dr. Banister). 3 P.M. Medical In-patients (Dr. R. M. Leslie).

TUESDAY.—2.30 P.M. Surgical Operations (Mr. Carson). Clinics:—Medical Out-patients (Dr. A. G. Auld); Surgical Out-patients (Mr. Howell Evans); Nose, Throat, and Ear Out-patients (Mr. H. D. Gillies); Radiography (Dr. Metcalfe). 3.30 P.M., Medical In-patients (Dr. A. J. Whiting). 4.30 P.M. Special Lecture:—Mr. T. H. C. Benians: Pathological Data in Cerebro-spinal Fever and their Bearing on Diagnosis, Prognosis, and Treatment.

WEDNESDAY.—Clinics:—2.30 P.M. Throat Operations (Mr. Gillies); Children Out-patients (Dr. T. R. Whipham); Eye Out-patients (Mr. R. P. Brooks); Skin Out-patients. 5.30 P.M. Eye Operations (Mr. R. P. Brooks).

THURSDAY.—2.30 P.M. Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patients (Dr. A. J. Whiting); Surgical Out-patients (Mr. Carson); Radiography (Dr. Metcalfe). 3 P.M. Medical In-patients (Dr. R. M. Leslie).

FRIDAY.—2.30 P.M. Surgical Operations (Mr. Howell Evans). Clinics:—Medical Out-patients (Dr. A. G. Auld); Surgical Out-patients (Mr. E. Gillespie); Eye Out-patients (Mr. R. P. Brooks).

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M. Special Demonstration of Selected Cases.

THURSDAY.—5.15 P.M. Clinical Lecture.

ROYAL SANITARY INSTITUTE, Civil Court, Guildhall, Bristol.

FRIDAY.—11 A.M., Provincial Sessional Meeting. Discussion on the Co-ordination of Military and Civil Sanitary Services in War-time (opened by Lieut.-Col. D. S. Davies, R.A.M.C. (T.F.), and Mr. L. S. Mackenzie). The following are expected to take part in the discussion:—Mr. W. Harpur, Dr. W. G. Savage, Dr. W. H. Symons, Mr. J. Tubb-Thomas, and Mr. C. Wintle. 2.30 P.M., By motor-charabanc to Saltford to inspect the Bath New Sewage Works, and to Twerton to inspect the Pumping Station (conducted by Mr. W. H. Radford).

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

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METEOROLOGICAL READINGS.

(*Taken daily at 8.30 a.m. by Steward's Instruments.*)

THE LANCET Office, June 2nd, 1915.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 27	30·110	N.E.	...	114	[illegible]	49	50	56	Fine
28	30·080	N.E.		94	60	[illegible]	45	50	Cloudy
29	29·804	S.W.	...	125	55	47	[illegible]	53	Cloudy
30	29·930	N.E.	...	109	[illegible]	42	[illegible]	49	Cloudy
31	[illegible]	N.E.	...	110	63	[illegible]	45	52	Fine
June 1	30·080	S.W.	...	89	[illegible]	[illegible]	[illegible]	54	Fine
„ 2	30·070	N.E.	...	105	72	50	53	59	Fine

The following magazines, journals, &c., have been received:—Journal of Tropical Medicine and Hygiene, Medical Chronicle, Review of Neurology and Psychiatry, Canadian Practitioner and Review, Annales de Médecine, Revista Medica del Uruguay, Archives of Internal Medicine, American Medicine, British Journal of Dermatology, Calcutta Medical Journal, American Journal of Obstetrics, Royal Prince Alfred Hospital Gazette, Quarterly Journal of Microscopical Science, [illegible] Interstate Medical Journal, Bulletin of the Johns Hopkins Hospital, British Review, Revue d'Hygiène, Revue de Chirurgie, [illegible] Hygiene, La Clinica Ostetrica, Journal of the Royal Sanitary Institute, Therapeutic Gazette, Journal of State Medicine, [illegible] Medical Journal of South Africa, &c.

A NURSE'S EXPERIENCES

THE *St Mary's Hospital Gazette* for May contains a very interesting and instructive account of the German conduct towards British Red Cross nurses and doctors in Belgium, which deserves a wide circulation, for it should act as a strong incentive to recruiting among men of manliness and chivalry Nurse Hilda Speak, after briefly describing the operations of the English ambulances in Brussels, tells how for a month after the coming of the Germans to the city they attended on English wounded prisoners there —

"One day a German officer ordered all there to be locked up in a waiting room, saying that they were acting as spies They were thoroughly searched and kept there for thirty six hours, until the American Consul interfered A few days after an order was issued to the effect that all the English nurses and doctors were to go out of Brussels or they would be taken as spies" As there was no possible chance of our getting out of Brussels without help, the Germans were asked to find some means of seeing us away After considering for some days we were told to be ready to leave on October 6th At last we got into the train In each compartment there were German soldiers There were three other nurses in my compartment and two soldiers of the roughest and most objectionable type They smoked and ate continuously until we reached Cologne, and would insist on having the windows closed The carriages were the worst I have ever seen—hard wood seats and backs and very, very dirty There were also soldiers riding on the top of the carriage It took twenty-eight hours to reach Cologne, in ordinary times it takes four hours The train crawled, and we seemed to stop every few minutes During the journey through Belgian territory we noticed the awful devastation all along the line, many towns and villages containing only a roofless lot of ruins Louvain appeared to be practically wiped out Imagination can never picture the terrible ruin done to Belgium At Stolberg, a small station just before Cologne we were very roughly told to get out of the train There I saw a young German officer take two of our doctors by the shoulder and throw them across the platform At this point I was more alarmed than I had been since entering Brussels Our luggage was all turned out on the platform and the soldiers searched it All knives and forks were taken, surgical instruments, and even a nurse's fountain pen After looking through our papers and a great deal of consultation, we were told to get into the train again by the soldiers, and we started for Cologne I think if some of our young men in England had witnessed the treatment of the British Red Cross at this station it would help them to make up their minds as to where their duty to their country lies There were twenty doctors, they could not retaliate, their only thought and care being for the hundred and twenty four nurses who were in their charge in the country of the enemy At Cologne we got our first meal, and were treated quite reasonably We still had a guard with us, and arrived at Münster at 7 A M on Oct 8th, where we were evidently expected, and given breakfast at the station It appeared to be a camp station there were a great many soldiers round about They gave us basins of coffee, sausage and bread We washed our hands and faces under a pump, and felt much better for the food and wash After an hour's wait we entered the train again We continued the journey, and that night had no light in the carriages We arrived at Hamburg at 1 A.M on Oct 9th, but were not well treated there We left the train for ten minutes, guarded by soldiers each side to a refreshment room, but we were waited on very badly, the food being practically thrown at us After travelling four days and three nights we arrived on the Danish frontier, and there we stopped for the German guard to leave the train No one except those who have experienced it can imagine our feelings as we left the Germans behind and knew we were prisoners no longer Then our destination was Copenhagen, where we were kindly received by the British Consul there The people were exceedingly kind to us '

A significant sidelight upon the estimate by outsiders of the moral issues of the war is given by Miss Speak in the following grimly dour verse addressed "To the British Surgeons and Nurses Passing Copenhagen on Their Way from Belgium," which in English greeted them from the columns of a Danish newspaper on their arrival in Denmark —

Silent we bid you welcome,
In silence you answered our greeting—
Because our lips must be closed
And your teeth set against the gale
Our mouths are mute,
Our minds are open—
We shall greet you farewell in silence
Sowers of good will
On fields where hate is sown,
Fare ye well!

LEFT HANDED SOLDIERS

AN inquest has been held in London on a left handed soldier who committed suicide, and there seems to have been a feeling that his left handedness may have had considerable influence in depressing the man, for in reply to the question put to an officer in the man's battalion as to whether his left handedness would make him awkward, the officer replied, "We have several who are like that, but we train them in time, and we also teach them to shoot from the left shoulder Among the reasons assigned for left-handedness (excluding traumatic origin) have been heredity, left or right breast-feeding or carrying, mimicry of other children, functional nervous disease, and idiopathic epilepsy Other reasons have been suggested but the etiology is uncertain The rate of percentage of left-handedness in this country is usually accepted as between 2 and 5 per cent Among 17,000 school children examined in Berlin 5 15 per cent of the boys and 2·98 per cent of the girls were found to be left handed Left-handed Hebrews appear to have possessed as a rule more than ordinary skill in warfare, for in one army of 26,700 men, of the "chosen men of the army, 700 were left-handed, and the context suggests that these were all the inhabitants of one town—Gibeah Moreover, "every one could sling stones at an hair breadth and not miss" (Judges xx 16)

WHAT IS A CONSULTANT?

To the Editor of THE LANCET

SIR,—I am grateful to Dr A. Charpentier for his letter in your issue of May 22nd A consultant is sent for to, say, the Langham Hotel by an urgent message Remembering it may be a case of life and death, would he go? He goes, and finds a case of acute tonsillitis, the patient having just arrived from Yorkshire The sick man says to the doctor "I wish you to attend me until I am well, and I will, of course, pay you £3 3s a visit" What is the duty of the consultant? I am, Sir, yours faithfully,

May 25th, 1915, ENQUIRER

ICE

THE hot weather will doubtless cause an increased demand for ice, especially for the wounded It has long been a reproach to this country that the only man known usually to keep ice in hot weather is the fishmonger, whose sanitary environment is not always of the highest standard The initial cost of an ice safe is prohibitive to many, but practically its cost is soon saved in the value of food preserved and utilised which would otherwise have been lost It has also been suggested that the milkman might carry ice for sale on his rounds Ice production is a huge industry in the United States The American Ice Company with the Knickerbocker Ice Company claim to be the largest manufacturers of ice in the world, and in 1911 there were 2004 ice manufacturing establishments in the United States with a capital of 118 million dollars Their products were valued at 43 million dollars in 1909 as against 24 million dollars in 1904, and the number of employees was 19,041 This did not include the ice manufactured in breweries, meat, provision, and cold storage warehouses and other industries that produce it for their own use If in America ice is used too indiscriminately, in this country its use is too much neglected, and there is room for expansion on the right lines

THE HOUSE FLY

Dr A Mearns Fraser, the medical officer of health of Portsmouth, has issued for his health authority a useful two page leaflet explaining the dangers caused by the house-fly and how these dangers may be prevented In the last paragraph Dr Fraser says ' It has been stated that in a certain lunatic asylum one of the tests applied to find out if a patient is sufficiently recovered to be discharged, is to give him a broom and put him in a room If he proceeds placidly with a water tap turned full on to sweep up the water without turning off the tap his standard of intelligence is not deemed to be high enough The individual who endeavours to get rid of the fly danger by killing individual flies, and at the same time allows their breeding places to remain unheeded is intellectually not far removed "

Mr J H E Winston, Wills librarian, Guy's Hospital, continues the interesting and useful series of "Bibliographies of Guy's Men," with Nos 4, 5, and 6, containing the bibliographies of the published writings respectively of Dr P H Pye Smith (1856-Sir H G Howse (1869-1904), 1910), and Mr Thomas Bryant (1856-1902) The preceding bibliographies, some of which have been noticed in our columns, are those of Sir Samuel Wilks, Mr James Henry Targett, and Sir W Arbuthnot Lane

T M A—According to "The Modern Materia Medica" published by the *Druggists' Circular*, New York "Echafolta" is an eclectic preparation of the plant *Echinacea angustifolia*, intended as an internal antiseptic

Hunterian Lecture

ON

SOME CONGENITAL LESIONS OF THE SMALL INTESTINE

THEIR ORIGIN AND CLINICAL BEARINGS.

Delivered before the Royal College of Surgeons of England on March 1st, 1915.

BY J. HOWELL EVANS, M.A., M.B., M.CH. OXON., F.R.C.S. ENG.,
HUNTERIAN PROFESSOR; SURGEON TO THE PRINCE OF WALES'S GENERAL HOSPITAL, TOTTENHAM, N., ETC.

MR. PRESIDENT AND GENTLEMEN,—Malformation is the term applied to any disturbance of the anatomical structure of the body which originates during intra-uterine life. From very early times such deviations from the normal have been studied. Teratology is no new science. Accurate observations by Caspar and Friedrich Wolff, later endorsed and promulgated by Meckel, revolutionised the accepted significance of anomalies and malformations; many deviations in higher types may be regarded as the normal condition of lower forms. Nevertheless, antenatal pathology is to the majority of medical men an unknown land; to the student of embryology no more fascinating subject could be presented than the field of congenital lesions of the small intestine. To me antenatal pathology has been a subject of ever-deepening interest, because it is a subject of tremendous importance for the future of the race and the individual.

Antenatal pathology being concerned with all the morbid processes which act upon the organism before birth and with the effects which they produce, may be considered from three points: 1. Fœtal pathology. 2. Embryonic pathology, teratology. There is good reason to believe that morbid agencies acting on the embryo produce not diseases but malformations. When the malformed embryo becomes a fœtus it carries its malformation with it. 3. Germinal pathology. The lines along which the future growth is to take place are nearly all fixed during the embryonic period—i.e., the first six weeks of intra-uterine life. Since the chief physiology of the embryo is organogenesis, or formation of parts and organs, so the chief effect of pathological processes in this embryonic or formative period is the malformation of its parts and organs.

CONSTRICTIONS, OCCLUSIONS, AND KINKS.

Several hypotheses have been put forward in explanation of atresiæ and stenoses of the small intestine—viz.: (1) Intra-uterine peritonitis; (2) ulceration, ulcerative contraction; (3) pressure from tumours; (4) pressure from amniotic bands; (5) embolism or thrombosis of the superior mesenteric vessels; (6) inguinal hernia, volvulus, intussusception; (7) traction of the omphalomesenteric duct; (8) enlarged valvulæ conniventes; and (9) non-liquefaction and non-disappearance of the epithelium-occlusion and ingrowth of the mesenchyme.

One reason why the majority of these hypotheses give the impression that they are mere suppositions is probably to be found in the clinical factor which has played so great a part in the discussion of the etiology of congenital intestinal atresia, and which is found to-day overpowering the surgery of intestinal bands and kinks. It is inconceivable how peritonitis can give rise to formations of the anatomical structure as shown in these conditions, etc. It is the distinguishing characteristic of all these malformations that the parts of the intestinal wall in relation with the peritoneum are unchanged, and that only the innermost layer is the seat of a pathological process.

During the nineteenth century another hypothesis in which fœtal volvulus is considered to be the common etiological cause appeared extensively in the literature of the subject. As in clinical matters innumerable the effect has been taken for the cause, so that any associated volvulus should be looked upon as secondary to the atresia and not the cause of it. Such a causation as fœtal intussusception, suggested by Chiari and advocated by Braun, presupposes intra-uterine mechanical occurrences different from those known to occur in extra-uterine life. Vascular irregularities of the intestine or vascular lesions arising from infections or intoxications, transmitted via the placenta, which have been favourably viewed as causes, are hardly likely to produce localised epithelial defects.

Credit is due to Bland-Sutton for drawing attention to the occurrence of malformations at the seat of embryological events. This view offers a feasible explanation of "peri-Vaterian diverticula" and of ileal constrictions or even occlusions within the zone of Meckel's diverticulum due to superinvolution of the omphalomesenteric duct, but not of those malformations close to the ileo-cæcal valve nor of multiple stenoses, nor yet of stenoses situated high up in the intestine.

The first to study the etiology of congenital atresia of the small intestine was Meckel; his views approach more closely to those now accepted than all the hypotheses of the past hundred years. Meckel introduced a normal theory of evolution as the basis of teratology, showing that several malformations are due to the arrested development of early embryonic stages; and he pronounced in principle the important law promulgated in later years by Haeckel as the "principle of biogenesis."

It is a curious fact that nearly one hundred years had elapsed before fresh researchers sought to take up the path so enthusiastically finger-posted by Meckel in order to solve the question of the etiology of congenital atresia of the intestine, and this is all the more astonishing when we consider how unscientific and inferior to Meckel's standard the hypotheses have been which have since prevailed. Few pathologists have worked at the etiology of atresia and kinks as falling within the evolutionary theory, and no one had filled up a gap in our knowledge of the development of the intestine until the further investigation and application by Forssner of the discovery made by Tandler.

The earliest stages only became the subject of exact investigation when Tandler commenced his work on the earliest development of the duodenum in 1900. Tandler's hypothesis, which has a totally different basis from any of the aforementioned views, may now be considered.

The Epithelium-Occlusion Theory.

Having found that a temporary epithelium-occlusion completely obliterating the lumen is a normal occurrence in the duodenum, Tandler concluded that sometimes this embryonic atresia may persist and be found as a congenital occlusion or stenosis. In 1907 Forssner found that in early embryos the lumen of the duodenum was completely obliterated in places. This normal epithelium-occlusion of the duodenum disappears by a process

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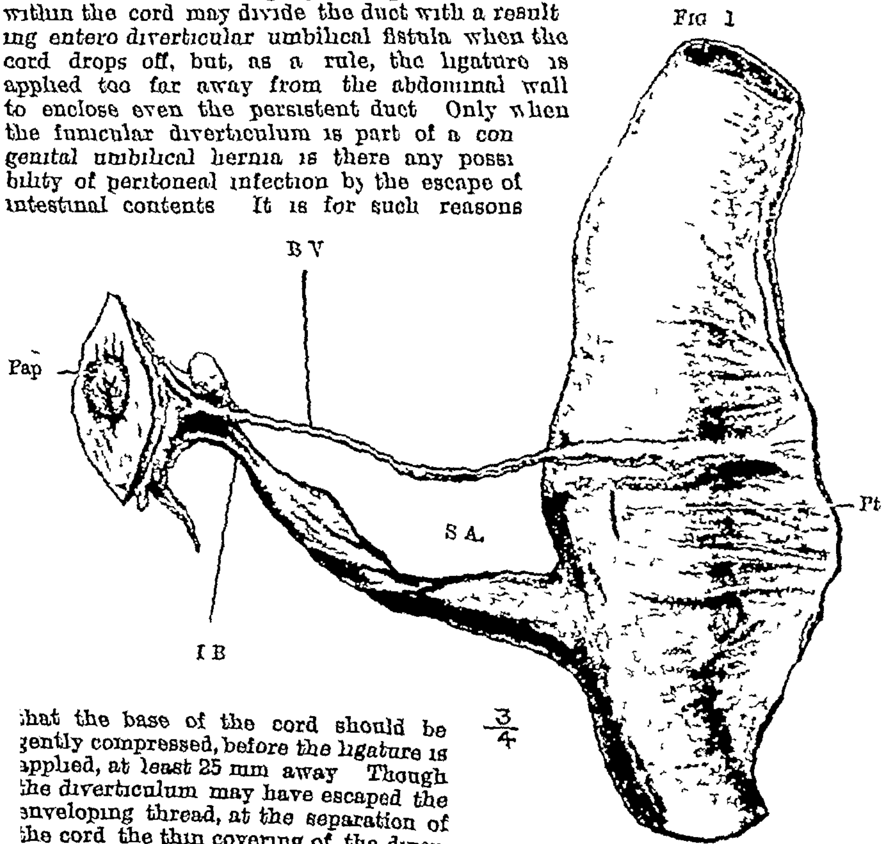
Series 3, cases of hernia accompanying inversion and prolapse of the mucous membrane, and Series 4, cases of fistula which have caused *symptoms* of strangulation

If the omphalomesenteric canal is not obliterated, but continues to develop in its independent manner, it gradually takes on the more complete structure of the small intestine with which it genetically agrees, when the development of this duct attains its maximum it even penetrates into the umbilical cord It can therefore occur that the ligature of the accoucheur enveloping the persistent duct within the cord may divide the duct with a resulting *entero diverticular* umbilical fistula when the cord drops off, but, as a rule, the ligature is applied too far away from the abdominal wall to enclose even the persistent duct Only when the funicular diverticulum is part of a con*genital* umbilical hernia is there any possibility of peritoneal infection by the escape of intestinal contents It is for such reasons that the base of the cord should be gently compressed, before the ligature is applied, at least 25 mm away Though the diverticulum may have escaped the enveloping thread, at the separation of the cord the thin covering of the diverticulum will yield under the influence of the least straining or crying of the child.

FIG 1



Meckel's diverticulum fixed at umbilicus *The* dotted lines indicate the strangulated gangrenous portion Pap. Papilloma at the *navel the* urachus is seen below B V, Band; *vestigial* remains *of* omphalomesenteric vessels I B., Impervious band of attachment. S.A., Strangulating arch Pt., Point *of* puncture

Occasionally small round *papillomata*, like raspberries, are seen in the umbilical pit, by an imprudent use of the *knife*, scissors, or caustic the *small* opening, probably invisible to the naked eye, becomes *widened and* the undoubted fistulous track is established

Inversion and prolapse of the diverticular mucous *membrane* can occur spontaneously *directly after the* separation of the *cord or at a* later period, in which case the determining *cause* is not infrequently a *violent* attack *of coughing*, when there unexpectedly appears a tumour of varying size and shape with a fine opening, from which ooze a little mucus and intestinal matters The *umbilical* projection behaves like the *intussuscepted portion* of an intestinal *intussusception* When the diverticulum is short *and wide, under the* influence of increased pressure *produced* within the abdominal cavity, the juxta-diverticular loop of intestine is projected as through the opening of an artificial anus It even occurs as a *double* evagination, *the* point of separation of the *superior and* inferior ends presenting itself as a spur between the two loops The projected intestine becomes œdematous, whereas the contiguous serous surfaces become *adherent, so that* reduction to remove the impending complete intestinal obstruction is difficult

DIVERTICULA

The *term* "*intestinal* diverticulum" may be applied to any lateral evagination of the digestive tract Since the researches of Meckel the name "true diverticulum" is applied to such as result from an embryonic evolutionary disorder, we shall need to *differentiate this from* another pathological production, the "false diverticulum"

True *diverticula are* characterised by their constant situation in (*a*) the duodenum and (*b*) the lower portion of the ileum They consist anatomically of the three regular *coats of the* intestine with vessels which run in a mesentery The duodenum is the seat of many *developmental* irregularities, such as transverse septa and longitudinal folds, it is likewise the *situation* where *several important* "embryological events" are crowded together The embryology of the liver *and* pancreas *demands close* study—e g, the manner in which *the* primary hepatic diverticulum or median cul de *sac of the* entodermal tube extends as a winged crescentic *mass*, throwing out extensions and early exhibiting a rounded subdivision (the future gall bladder *and* cystic duct), whereas in the angle between it and the duodenum the ventral pancreas has already appeared Simultaneously or possibly earlier the dorsal pancreas arises at a *superior* level *Even* a paired ventral pancreas has been found in many vertebrates and reported in the human embryo, the presence of a pancreas in the duodenal wall—a cyst and consequent *pouch*—may be due to this double occurrence In the *duodenal* loop congenital diverticula, invari*ably* single, are *occasionally* found, and the presence *of* pancreatic tissue in their walls points *forcibly to* their origin as connected *with* the dorsal or ventral pancreatic *rudiments It* seems well *proven that* diverticula *of the* second and third parts of the duodenum are congenital in origin, whereas in the first part three varieties *of* wide mouth diverticulum, (1) congenital, (2) *acquired* of the duodenal vestibule, and (3) ulcer diverticulum of disintegration, leading to a condition which presents the appearance of vacuolation as seen in Gruyere cheese Forssner's opinion is that this epithelium occlusion may take place throughout the small intestine Further, when followed by an ingrowth of mesenchyme this will account for duplications, for single or multiple occlusions in those segments of the small intestine which enter neither into the duodenum nor the segment of Meckel The lumen of the duodenum is finally formed by the fusion of the vacuoles, which were discovered and described independently by Kiebel and by Lewis and Thyng Further, Tandler considered the cause of the occlusion was due to the resistance exerted upon the expanding epithelium by the surrounding mesenchyme

The actual frequency of any internal congenital lesion cannot be computed at present because of the want of that "systematic examination of the stillborn" which has been advocated by Bland Sutton

The embryonic epithelium occlusion develops into a complete atresia by the mesenchyme growing into this epithelium before its disintegration has commenced, thereby making the simple epithelial septum a more permanent structure The iris like membrane may well originate in a similar manner because the connective tissue is incomplete or so weak that at one spot it yields to the pressure of accumulated material in the proximal segment, crescentic membranes may have a similar origin By subsequent changes a thick obstruction may be attenuated so as to form a membrane or a stenosis may be converted into a valve

[By a series of diagrams it was shown how the various primary types of atresia may be brought about after the mesenchyme ingrowth has taken place]

EMBRYONIC FACTORS IN REGARD TO THE SMALL INTESTINE

As we are considering lesions of embryonic origin it would be well, if time permitted, to detail the chronology of embryonic factors in connexion with the small intestine Certain points, however, cannot be omitted

The blastodermic vesicle, having been formed, is divided into two secondary cavities (1) Intra-embryonic, the future intestinal canal, and (2) extra embryonic, the umbilical vesicle At first these cavities communicate by a wide gap which is converted into a short canal of small calibre—the vitelline duct With the growth of the allantois the umbilical vesicle, owing to its diminished function, atrophies and becomes a mere vestige, whereas its attachment, broad at first, becomes reduced to a slender stalk Such are the conditions present at the end of the first month A little later the future umbilical cord consists of (1) The amnion, which forms a covering containing (2) the vitelline group—(*a*) umbilical vesicle, (*b*) vitelline duct, and (*c*) omphalomesenteric vessels, and (3) the allantoic group—(*a*) allantoic pedicle, and (*b*) umbilical vessels It is between the third and sixth week of intra uterine life that the vitelline vesicle attains its greatest size. From the fourth month there ordinarily remains no trace of the primary communication between the intestinal canal and the vitelline sac

A portion of the intestine normally projects like a hernia into the umbilical cord As the liver grows and crowds upon the rapidly elongating intestine the intestine must escape, and the cœlomic space within the cord receives this "hernia funiculi umbilicalis physiologica." In this umbilical hernia, according to Mall, there are six primary coils which are as definite in the adult intestine as the convolutions are in the brain It will probably be found that many of the kinks of the adult intestine are originally associated with these primary coils

MECKEL'S DIVERTICULUM

The diverticulum ilei, better known as the *diverticulum* of Meckel, is always single, having its situation upon the ileum, within a metre or so of the ileo cæcal valve In structure it corresponds to the ileum Its calibre is generally equal to, occasionally smaller, but rarely larger than the calibre of the intestine above its point of origin Though the diverticulum is usually found along the free border of the ileum, lateral and intramesenteric variations occur The blood supply is conducted along a special mesentery or mesodiverticulum ending in a small mass of fat or rarely in accessory pancreatic tissue The implantation upon the ileum may be at a right angle or at an acute angle Its shape may be cylindrical, conical, or rarely branched, whereas in length it varies from a nipple like projection of less than an inch to eight inches or even more

VESTIGIAL REMAINS OF THE VITELLINE DUCT OR OF ITS VASCULAR BUNDLE

To J F Meckel of immortal fame belongs the credit of having recognised that the "diverticulum ilei" and its rarer congenital umbilical fistula are the remains of the embryonic omphalomesenteric duct, and that the bands which pass from the diverticulum or diverticular zone to the umbilicus are the *persistent—patent or occluded—omphalomesenteric* vessels Dareste believed that if a sufficiently careful examination were made some slight trace of these vessels would always be found in the form of small filaments

In animals, like the cat, which are born with a membrane over their eyes, these filaments are commonly found and are associated with the normal narrowing which occurs near the cæcum Traces of these vessels are most frequently found in the pig, in which animal there is a corresponding greater frequency in the occurrence of the diverticulum of Meckel Sometimes a considerable part of the persistent omphalomesenteric artery is found coursing beyond the gut and its diverticulum to the umbilicus In 1883, it is of interest to note, Allen pointed out that remnants of both the omphalomesenteric artery and vein are normally found in the new born of the cat, dog, and guinea pig, in a strand of tissue which generally reaches the navel, these filaments or bands are always covered by peritoneum Much has been written about the various bands and their inflammatory origin, but no inflammatory band is accompanied by vessels of congenital origin, neither is such a band found to be associated with a definite mesodiverticulum (See Fig 1)

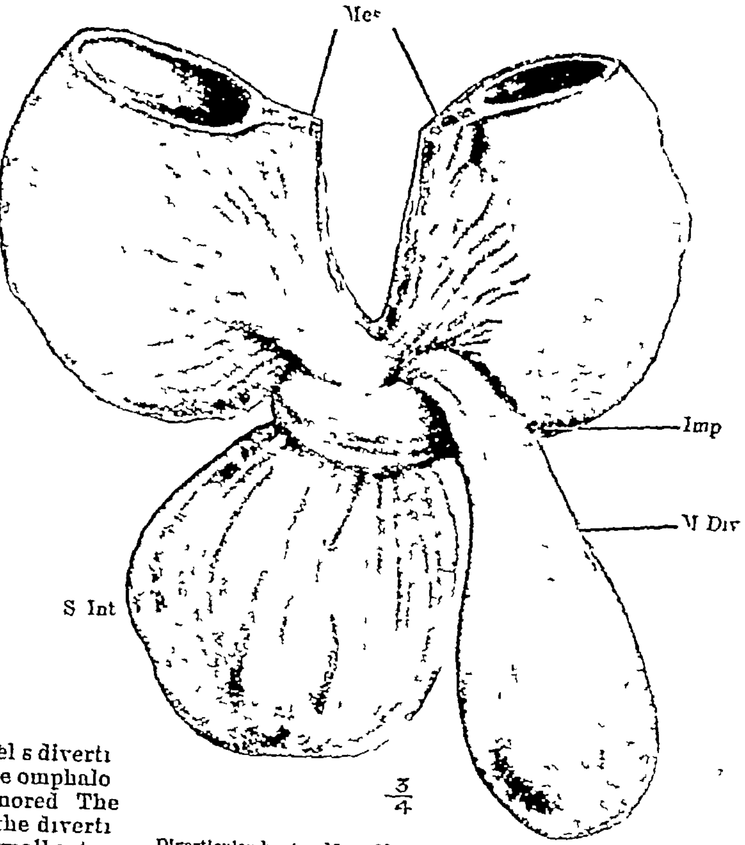
Apart from the interest arising out of the evolutionary point there is the immense practical importance attached to these bands because they are found in children otherwise normal and well fitted to live and propagate, yet these malformations or anomalies may threaten or even destroy life by secondary occurrences

FISTULÆ OF PERSISTENT OMPHALOMESENTERIC DUCT

Varieties of fistulæ of the persistent omphalomesenteric duct may be distinguished—namely, Series 1, simple cases, Series 2, cases with inversion and prolapse of the mucous membrane, itself between this and the intestine from which it arises, and lastly becomes dilated into an ampulla (See Fig 3) Treves among others considers the terminal ampulla secondary, but its primary occurrence has been proven, and to Parise this is the indispensable requirement to hinder the slipping of the knot, so that the loop can only be disengaged by puncture of the diverticular ampulla

In (*b*), the second variety of diverticular knot, two loops are found to be taken into its embrace—the one immediately above, and the other immediately below the origin of the diverticulum Of these two loops one is indispensable, presenting the characteristics of the loop comprised in the simple diverticular knot, and is analogous to that of the simple knot called by Parise the "nodal loop" The presence of the secondary or accessory loop is understood by appreciating that the diverticulum had executed a complete rotation upon its axis before gripping the nodal loop This Parise called the "rotatory loop"

FIG 3

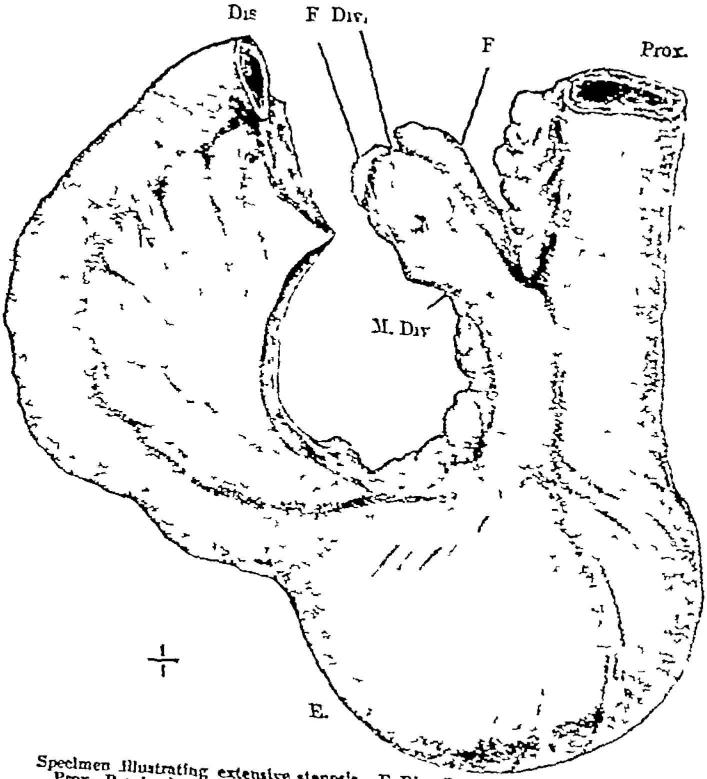


Diverticular knot Mes Mesentery Imp. Implantation of Meckel's diverticulum M Div Meckel's diverticulum with ampullary dilatation S Int Strangulated intestine

DIVERTICULITIS

Diverticulitis or inflammation of Meckel's diverticulum—the post embryonic remains of the omphalo mesenteric duct—ought no longer to be ignored The structures which enter into the wall of the diverticulum being identical with those of the small intestine and its evagination comparable to the appendix vermiformis, any analogy, becomes admissible, if established between the pathology peculiar to these two appendices—appendix ilei, appendix cæci

FIG 4



Specimen illustrating extensive stenosis. F Div False diverticula. F Fat Prox. Proximal end of intestine with hypertrophied wall. Dis. Distal end of intestine with narrow lumen. M Div Meckel's diverticulum E Enterocyst

The frequent occurrence, at the distal end of a true diverticulum, of false diverticula (see Fig 4) whose walls are incomplete explains the ease with which a perforation may be produced and the rapid extension to the peritoneum of a diverticular infection Similar anatomical dispositions, an analogous structure and a direct communication with the intestinal tract allow of inflammation in the appendix ilei in the same way as in the appendix cæci Concretions or foreign bodies may provoke congestion of the mucous membrane and even produce erosion or obstruct the intestinal ostium, these may all in their turn be adjuvants, but the *sole* determining cause of diverticulitis is *infection* The clinical features from the transformation of the diverticulum into a closed cavity in which is produced a focus of infection, with subsequent septic intoxication, or from the invasion of the diverticular wall proceeding to not only a peridiverticulitis but even to a widespread peritonitis, are comparable to those of an appendicular infection The widely open ileal ostium, even if it renders a closed cavity more difficult, allows of the free access of parasites

In the jejunum no "embryological events" complicate the simple tubular structure Accordingly the majority of jejunal diverticula are false or acquired diverticula Nevertheless, as the epithelial lining *precedes* the development of the mesenchyme, so an embryonic irregularity of the epithelium may lead to a protrusion which never becomes covered by muscle tissue and consequently, by a progressive increase in size concomitant with the growth of the individual, this finally attains to a considerable size, when it is wrongly *labelled* "acquired" Observations applicable to the jejunum are likewise applicable to the ileum, in connexion with which the wider subject of Meckel's diverticulum will be considered.

CONDITIONS DUE TO PERSISTENT OMPHALOMESENTERIC DUCT

Of all the conditions which arise *from the persistence* of the omphalomesenteric duct or vascular *bundle* the most frequent is undoubtedly intestinal obstruction This complication, which is *one of the* gravest, has long been known Internal strangulation associated with a diverticular fistula has for its causation bands or loops to which I shall presently make further reference

Intussusception of Meckel's diverticulum, when the diverticulum is fixed and patent at the umbilicus, is very rare Nevertheless, even an instance of a *retrograde diverticular intussusception*—i e, in which the distal end of the intestine became invaginated—has been placed on record Also the diverticulum when free becomes inverted and, acting as a polypus, causes an intussusception, or the invagination of the intestine is produced in the proximity of a diverticulum without its walls being turned in

Volvulus of the diverticulum of Meckel belongs to the category of curious pathological and rare occurrences There are only four cases in literature, to which may be added the case now illustrated by means of the epidiascope

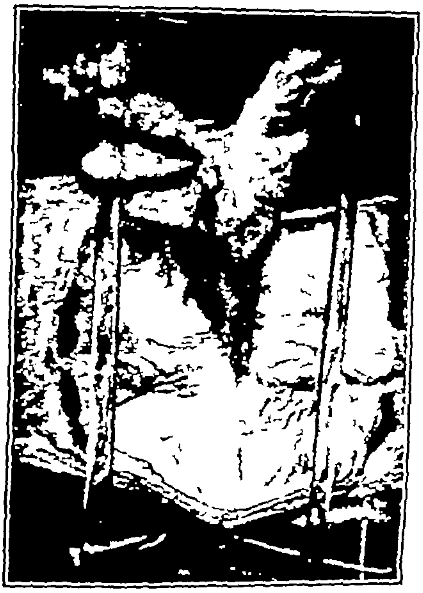
Hernia of the diverticulum of Meckel may be found at birth firstly, as the only content of the hernial sac—in this exceptional occurrence its interest, as previously stated, is in connexion with the entero umbilical fistula which may arise therefrom, or, secondly, associated with other portions of the intestine, when we have a *matter of omphalocele*—only observed after death or where life is impossible, and accordingly of no practical importance The occurrence, *later* in life, of a hernia containing a diverticulum of Meckel is more frequent and of greater practical interest The diverticulum when free is essentially mobile, and, being connected with the lower part of the ileum, is liable to become herniated In 1700 and 1701 Littre and Mery communicated to the Academy of Sciences cases of diverticular hernia, which have since been denominated "*hernia of Littre*," and are most frequently met with in the hernial regions of the right side, though found from time to time in inguinal, scrotal, *or* femoral herniæ of the left side

DIVERTICULAR STRANGULATION

The diverticulum, being an integral part of the small intestine, is subject to the same affections, such as enteritis, ulceration, perforation, abscess, and peritonitis, but the particular condition is obstruction by a diverticular knot, by congenital or inflammatory bands leading to a compression Diverticular strangulations therefore fall into two large classes (1) When the diverticulum is fixed, and (2) when the diverticulum is free

The diverticulum may be *fixed to the* mesentery, to the small intestine, to the cæcum and vermiform appendix, *possibly* to other viscera or the abdominal wall, but the immediate consideration deals with the diverticulum congenitally attached to the umbilicus directly or indirectly by bands which contain the vestigial remains of the omphalomesenteric vascular bundle The production of strangulation *may depend upon* progressive constriction, upon a diverticular ring engaging one or more intestinal loops and acting like a true hernial orifice, upon a diverticular band attached to the umbilicus, or upon free filamentous prolongations *A twist is produced* towards the middle of the cord and forms a ring in the most relaxed part, a loop of intestine becomes engaged in the opening, and the collar now stretched will *straighten out again* and embrace it more tightly At other times the *intestinal loop will entwine itself around the diverticular* filament by a twisting *movement* on its own axis

FIG 2.



A view of the peritoneal surface of the anterior abdominal wall showing a diverticulum of Meckel herniated at the umbilicus (Specimen in Museo Dupuytren Paris)

Strangulation by Diverticular Knots

Two conditions need to be considered in connexion with strangulation by knots when the diverticulum is free in the abdominal cavity (1) The diverticulum remains free up to the occurrence of strangulation, and (2) the diverticulum contracts secondary adhesions to neighbouring organs To become a cause *of strangulation it* is necessary that the diverticulum be *of* such a length as to allow it to encircle the intestine and find its distal *extremity snared between* its point of origin and the strangulated loop, while its free end must be sufficiently dilated not to slip readily from the grip which has been made upon it

Occlusion by diverticular knots constitutes one of the most remarkable phenomena in abdominal pathology Parise s (1851) description of two varieties of diverticular knots has become classical (*a*) The knot with a single loop, and (*b*) the kno with a double loop

As to (*a*), the diverticulum grasps the loop immediately above *or* below, turns around its pedicle, passes below its own point of origin, placing gangrene that the mere presence of the B aerogenes capsulatus is not the important factor in a wound, but it is the presence of this organism in tissues which are under considerable increase of tension that is of such extreme importance, and experience gained during this investigation tends to confirm this view Our cases have been selected so as to afford examples of the varieties of injuries, and to compare the bacteriological findings of the comparatively slight superficial lesions with the deep and severe wounds of bone and soft parts The most important group of bacteria from many aspects is the anaerobic family, among which the bacillus of tetanus and the B aerogenes capsulatus are the most important members

It is the relation of these anaerobic bacteria to the diseases to which they give rise that is of greatest importance to the surgeon It is for that reason that we have considered separately the survival of the anaerobic group of bacteria in the tissues to which we shall refer in some detail No account will be given of the technique employed, but in every instance a complete detailed examination was made It will suffice to emphasise the value of the liquid egg and veal medium of Besredka, for it is impossible to over estimate the advantages this medium offers both for the cultivation of the aerobes and anaerobes, in fact, without it we should have failed on many occasions to detect the anaerobic bacteria in the infected tissues

Pathogenic Anaerobes

No	Length of history	Other bacteria present.	Anaerobe
1	3 days	B coli	B tetani
2	14 ,	Staph albus	,
3	9 ,	B coli Diphtheroid bacillus	"
4	13 "	Staphylococcus Unclassified bacillus	"
5	11 "	Streptococcus B coli Staphylococcus Diphtheroid bacillus	"
6	49 "	B coli	"
7	7 ,	,	"
8	65 "	B proteus	,
9	6	Streptococcus Staph. aureus	B tetani and B aerogenes capsulatus.
10	28 "	Streptococcus Staphylococcus Unclassified bacillus.	,
11	11 "	Staph. aureus Diphtheroid bacillus.	,
12	2 ,	None	B aerogenes capsulatus
13	5 "	Staph. aureus B proteus	
14	8	Staph. albus Unclassified bacillus	
15	9	Staph. albus	
16	11 ,	Staphylococcus.	"
17	22	Staph aureus	
18	6 ,	Staph. albus	
19	5 "	B coli	
20	26 ,	Streptococcus Staphylococcus Diphtheroid bacillus.	
21	14	Staph. aureus Unclassified bacillus.	

Wounds in which pathogenic anaerobes were found —Twenty one wounds in all yielded cultures either of B tetani or of B aerogenes capsulatus, or of both. The majority of these wounds entailed considerable damage to the tissues, but they were of all varieties, ranging from a trivial skin wound to a severe and extensive compound fracture of a long bone—in fact, there was no special feature of clinical interest to suggest the importance of the bacteriological findings

The table shows that with a single exception every wound was infected with aerobic bacteria in association with the anaerobes The exceptional case was that of a superficial shrapnel wound in the neighbourhood of the knee joint, the joint cavity was infected, although the synovial membrane was intact From the pus which was evacuated from the interior of the joint a pure culture of B aerogenes capsulatus was obtained, and here it was evidently behaving as a simple pyogenic bacterium The after history of this case gave nothing to suggest to those in charge that they had been dealing with suppuration produced by the common organism of gas gangrene Guinea pigs inoculated with a culture of this organism died within 24 hours from a rapidly spreading gangrene of the tissues

In every other case we have found either a staphylococcus, B coli, or B proteus in the wound The frequency with which B coli appears with B tetani suggests that its presence may be particularly favourable for the survival of this anaerobe Of the 11 patients in whose wounds the bacillus of tetanus was found nine had been treated prophylactically with tetanus antitoxin at an early date, and at no time did any one of these exhibit any symptoms of tetanus Two had not received any prophylactic injection, and of these one developed the disease[2] and the other did not The last mentioned case serves to demonstrate that a wound may become infected with B tetani without tetanus resulting, and that quite apart from the question of antitoxin There is, however, no reason to doubt that the prophylactic injection of antitoxin has been the means of saving the majority of these patients from the most serious disease arising from wound infection

It is therefore of considerable importance to realise that a wounded man may be acting as a carrier of these dangerous bacilli for at least *two months* after the date of the wound, and probably for a much longer period, without any reason on clinical grounds to suggest that these bacteria are present in the tissues

Whatever the nature of the wound, whether it be slight or severe, without a careful bacteriological investigation it is impossible to be sure there are no tetanus spores lurking in its depths B aerogenes capsulatus was found on 13 occasions Although its presence was not confined to any single type of lesion, yet we gradually learned to suspect certain varieties of wounds of harbouring it Deep wounds with considerable damage to soft parts or bone, with a profuse and perhaps offensive discharge, are the most liable to yield cultures of this organism It seems certain that some special conditions must be present in order that B aerogenes capsulatus may give rise to gas gangrene, and that in the majority of infected wounds it is either rapidly eliminated or it settles down to a purely pyogenic or even saprophytic life One would naturally expect to find an organism of this nature more frequently in recent than in old wounds, and on the whole we have found this to be so Nevertheless, the table shows that the bacillus is able to survive at least four weeks from the date of the infection.

The facts here presented concerning these two potentially virulent and highly resistant spore bearing organisms make it undoubtedly very advisable that special precautions should be taken and foreign bodies which play a certain part in the etiology of diverticulitis. The various pathological affections—e g, tubercle and typhoid—which attack the ileum can extend to the diverticulum. The part played by mechanical circulatory troubles which are so often observed must not be neglected.

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[2] Wounded at Ypres on Nov 16th, and received antitoxin at onset of tetanus on Nov 28th with good result

Diverticulitis presents no distinguishing clinical characteristic to guide the surgeon. As diverticulitis is little known, and as the phenomena it provokes are produced by other lesions, there is no wonder that the condition is invariably taken for other lesions until operation reveals or necropsy evidences the true condition. "As many cases of diverticulitis as come before us, so many errors of diagnosis made" is a remark which stigmatises our very imperfect ability to unerring diagnosis of intra abdominal lesions.

[*A series of diagrams, drawings, and specimens were shown illustrating the chief points in connexion with the production of diverticulitis, peridiverticular abscess, diverticular pyo stercoral fistulæ, &c*]

CYSTS OF VITELLINE ORIGIN

Cysts which are of vitelline origin may be classified according to their situation (1) Intramesenteric or retroperitoneal, (2) diverticular, (*a*) enterocyst of Gfeller, (*b*) enterocyst of Roth, and (*c*) enterocyst of free diverticulum, (3) umbilical, (*a*) retroparietal or properitoneal, (*b*) intraparietal or intramuscular, and (*c*) proparietal or subcutaneous, (4) funicular, and (5) terminal.

Beyond the hernial sac in the new born, and yet within the dependent portion of the umbilical cord, small cysts have been found containing viscid fluid and proved to be distended unobliterated vitelline portions, to these I have applied the name of "funicular cysts." If a systematic examination of the cord and placenta of all still born was instituted I doubt not but that many a funicular cyst as well as many a terminal cyst—i.e, of the remains of the yolk sac—would be revealed.

Umbilical cysts of vitelline origin comprise those varieties which are in close relation with the anterior abdominal wall. These cysts are very rare, not more than ten instances which have been authentically proven as having a definite vitelline origin have been recorded. These cysts represent the persistence of the distal portion of the omphalomesenteric duct with any filament or band which may connect its posterior wall to the small intestine or mesentery. The open cysts, in all probability, result from the necrosis of the extreme end of the diverticular remains.

In connexion with enterocystomata it is very interesting to observe that in birds after the yolk sac has been drawn into the body cavity its stalk remains in connexion with the intestine, forming an appendix like a small cæcum. This often persists throughout life in the Nidifugæ, and occasionally as in the Ratitæ retains some degenerated yolk but does not remain in communication with the ileum. In the Nidicolæ or Altrices it is generally absorbed before maturity. Though in the newly hatched chick the yolk sac should atrophy completely it may form a cyst of considerable size, as is well illustrated by a specimen from an emu—in the Museum of this College—in which the pedicle is twisted. Some free diverticula show evidence of a progressive constriction which may ultimately lead to a retention cyst, but this variety is more liable to become the seat of a diverticulitis, as is also the case when the intestinal orifice is almost closed by a circular valve of reduplicated mucous membrane.

Intramesenteric cysts—cysts the origin of which is correctly ascribed to the vitelline duct—may be found attached to the intestine, to the distal border of the mesentery, or lying within the mesentery. The cyst wall includes all the usual layers of the intestinal wall. Little had been mentioned about the vitelline origin of these cysts until Dowel in 1900 reviewed the subject. Terrier and Lecène have collected 18 instances of juxta intestinal cysts, which they regard as derived from the remains of the omphalomesenteric duct. Some intramesenteric cysts may be the outcome of other diverticula of the small intestine. Again, cysts in the mesentery may have originated behind the peritoneum and migrating forward between the layers of the mesentery come into contact with the intestine.

ON THE BACTERIAL FLORA OF WOUNDS PRODUCED DURING THE PRESENT WAR[1]

BY LEONARD S DUDGEON, F R C P LOND,

A. D GARDNER, M A, D M OXON, F.R C S ENG,

AND

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(*From the Department of Pathology, St Thomas's Hospital*)

IT is merely our intention in this communication to refer to the bacterial flora of wounds of various kinds produced during the present war. We have selected some hundred cases from our series of observations on superficial and deep injuries of the bones and soft parts produced by shell, shrapnel, and bullets. It is improbable that a selection of a larger number of cases would prove of greater value, as the bacterial flora falls into two important groups which are fully represented here. We merely recite these results with the hope that they may serve to emphasise the importance of certain bacteria in the varieties of infected wounds which surgeons and others in charge of such cases have to deal with. We have avoided any reference to treatment, as this is a question which is very much under discussion and largely depends on the bacteria which are present in the infected tissues.

We may mention at the outset that as the work was done in this country we have no records which actually refer to the type of bacteria found *directly* after injury. It would seem most probable, however, that the bacteriology of a recent wound is merely the bacteriology of manure implanted in damaged tissues. The fact which appears to be of greatest interest is the close similarity of the bacterial flora of these wounds to the infection of the tissues such as occurs among civilians in any large hospital. There is the closest similarity between the bacteriology of severe injuries of the soft parts produced by shrapnel and injuries in civil life infected with horse dung.

In severe traumatism met with in this way there is usually infection of the damaged tissues with the B aerogenes capsulatus streptococci, and coliform bacilli. If the patient dies from a rapid infection it is generally caused by the gas gangrene bacillus, if he survives streptococci often take chief command of the infection. This is the bacteriological history of many of these shrapnel wounds. It has appeared to us from previous experience of gas and utter darkness owing to the abundance of surgical dressings, while in addition aerobic bacteria which are usually present utilise the remainder of the oxygen The number of wounded in hospitals and institutions of various kinds at the present time is sufficient reason that every possible advantage that bacteriology offers should be taken so as to avoid the spread of infection from patient to patient, or even in the same patient, quite apart from the actual treatment of wounds by various measures

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[1] The clinical material was derived from St. Thomas's Hospital, the 2nd London General Hospital and from private sources. A grant has been made from the National Research Committee towards the expenses of the investigation on wound infection.

THE NAVAL MEDICAL COMMITTEE AND WOUNDS IN WAR A CRITICISM[1]

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THE committee consisting of Sir W Watson Cheyne, Bart, Fleet Surgeon P W Bassett Smith, C B, R N, and Mr Arthur Edmunds, M S Lond, F.R C S Eng, after experiments carried out on dead material, guinea pigs, and one man, have issued "borsal" and cresol paste to the navy and the army with the expressed hope that the wounds for a certain period will be treated in the manner suggested in their instructions The committee, realising the grave responsibility they have assumed in advocating the general use of borsal, appeal to the profession to examine carefully the method and results before passing judgment In response to this appeal, having seen the results of the treatment in just twice the amount of clinical material at the disposal of the committee, I propose to offer some criticisms on the suggested method

Sir W Watson Cheyne had not then been to the front as he tells us, and said that he had no opportunity of testing borsal because "there have been no naval wounded for several weeks, and dockyard and ship accidents have been much fewer than they were" He quotes in all four cases, but one only by the combined borsal and cresol method, and I think it is worth while going over these, as it is really from the results obtained that the committee have advised the issue of the "borsal powder and cresol paste," which, I believe, is now carried on every ship and is being issued to the army

CASE A.—One was a compound wound of the interphalangeal joint of the thumb It was a machinery accident with much soiling of the wound A 20 per cent carbolic acid paste was at once squeezed into the wound from a paint tube, and from time to time some more was applied on the surface The interesting point of this case was that although the skin had never been cleaned up or the wound cleaned out, and although practically the entire terminal phalanx was dead yet for ten days there was no local or general disturbance and no fever, no pain swelling, or suppuration On the tenth day the surgeon cleaned it out and applied ordinary dressings Two days later sepsis appeared with suppuration up the tendon sheath, just what ought to have been present ten days earlier

The argument is that there was no suppuration until the tenth day, the infection being kept down by the application of 20 per cent carbolic paste Clinically, one knows that machinery accidents very often do not go septic The sepsis appearing in the tendon sheaths on the tenth day rather suggests that the drainage had been obstructed by the paste, and the tissues were therefore finally attacked The result of the treatment was death of the phalanx and suppurative tenosynovitis

CASE B —Another case was an accidental pistol wound of the buttock with fairly large entrance and exit openings Carbolic acid paste (20 per cent) was freely introduced and no inflammation occurred along the track of the wound, and ultimately there was only a small granulating sore at one of the openings, which healed in a few days

The primary union of clean bullet wounds treated on ordinary surgical lines is proverbial

CASE C —A third case was a bad scalp wound with denuded bone which was filled up with a 20 per cent carbolic acid paste Here, also, there was no disturbance, and after ten days the small sore which remained was dressed with weak boracic ointment

That there should have been any sore at the end of ten days is surprising, considering how well scalp wounds heal when treated on general surgical lines A machinery accident, an accidental pistol wound, and a scalp wound treated at once are in no way comparable to the bulk of the wounds met with in the field

CASE D —On the skin cresol is rather more irritating than carbolic acid As to the action of the paste in wounds we have had only one really test case, that of a man who shot himself in the face and head, the bullet entered just in front of the mastoid process, and ran upwards and forwards and came out at the inner side of the forehead near the middle line In its course it broke up the upper jaw and the malar bone, passed through the eyeball, tearing it to tatters, and smashed up the lower and anterior walls of the frontal sinus The fracture of the frontal bone extended into the nose, where also the dura mater was torn, but there were no cerebral symptoms at first The remains of the eyeball were removed and also one small, quite loose fragment of bone from the supra orbital region The 20 per cent cresol paste was then freely introduced into the whole track and cavity of the wound The patient lived four days and died of his intracranial injuries, but during that time there was no inflammation or sloughing or suppuration from the wounds, they were quite aseptic, and no bacteria could be found in pieces of blood clot examined on the second and third days On the second day a cultivation was made from the end of the drainage tube where it projected beyond the wound and only six colonies of cocci were obtained Naturally one would have expected some growth from that part, and it is surprising that it was so little The patient developed symptoms of meningitis and died on the fourth day On post-mortem examination suppurative meningitis was found, but there was no suppuration anywhere in the external wound where the paste had been introduced, indeed although it communicated with the tear in the dura mater, the blood clot was lying in it without any decomposition

This case was seen and treated by members of the committee It approximates to the cases less heavily soiled with dirt and filth seen at the front, and yet what result is obtained? The external wound is clean, and suppurative meningitis occurs I do not for a moment suggest that cases treated by other means do not develop suppurative meningitis, but surely such a case, which remains clean on the surface and septic in the deep and less accessible parts, is not one on which to base a line of treatment contrary to all modern experience and teaching Further, the treatment in the cases reviewed has not been so successful as to warrant the broadcast issue of borsal powder and cresol paste *with instructions*

Clinically, the idea that the paste will penetrate to any depth along a bullet wound through muscles is unsound It is much more likely to drive on ahead any organisms which are at the entrance and which, pent up in a cavity deep in the tissues, will produce a severe suppurative process If the in the sterilising of surgical instruments which have been used in operating upon wounds Occasions occur when instruments are merely ' introduced " to the boiling water, but our bacteriological findings are sufficient evidence of the danger that may arise, more especially with the massing together of wounded which must take place owing to the present circumstances In one instance a culture of the B aerogenes capsulatus was obtained from a suppurating wound, but the bacteriological findings were not taken into account The limb was amputated, but death occurred from rapidly spreading gas gangrene within 30 hours

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[1] Published in the Journal of the Royal Naval Medical Service

The bacillus coli and unclassified coliform bacilli —In 11 cases a true colon bacillus was isolated from the tissues and gave the recognised tests for this group of bacteria, while in 15 instances coliform bacilli were cultivated Full cultural tests were applied in every instance, but the results were too varied to assist us in classifying these bacteria In many instances these coliform bacilli were tested on guinea pigs or mice by subcutaneous and intraperitoneal inoculation, but no fatal result ensued Now as to the importance of these bacteria in the tissues Although the B coli is capable of exciting a rapidly spreading infection of the peritoneum, yet a similar infection of the connective tissue is uncommon Experience teaches us that a rapidly spreading infection of the tissues which resents active interference is generally a streptococcal infection in spite of the presence of the bacillus coli or a coliform bacillus in the discharge, but owing to the difficulty in isolating streptococci under such circumstances the presence of these bacteria may not always be recognised We have no record of an actively spreading infection of the tissues or severe irritable wound from which colon bacilli or coliform bacilli have been obtained in pure culture, but always in association with streptococci, which corresponds with infective lesions of a similar type met with in ordinary practice

It may be of interest to mention that the B coli and coliform bacilli were cultivated from lesions widely different clinically, such as a surface granulating wound of the hand with little discharge, and a foul suppurating and deep tissue infection with copious exudate In two instances out of the total of 26 a colon bacilli was present in pure culture, and in each case the discharge was slight in amount and the temperature was normal

B proteus and B pyocyaneus —True proteus bacilli were isolated from 5 cases and an atypical proteus bacillus from 2 These cases were all examples of chronic tissue infection with sinus formation and abundance of purulent discharge The B pyocyaneus was found in 4 cases, all essentially chronic, with copious discharge from deep wounds, exactly the type of lesion this organism produces among civilians

Streptococci —Streptococci were cultivated from 41 of this 100 cases, and in all but a few instances the strain was isolated and put to a considerable number of tests They were found with about equal frequency in recent wounds (1–2 weeks) and in wounds of longer standing (3–10 weeks) Some 30 strains were grown in the customary series of sugar containing media in order to test their powers of fermentation, and, if possible, to group them according to some commonly used system of nomenclature, such as that of Gordon But these tests were found to be of no assistance either towards classification or towards estimation of the virulence of the cocci Numerous strains were also tested for hæmolysis and for pathogenicity to mice In the hæmolytic test we made use mainly of a fluid medium consisting of citrated broth to which a little fresh sterile human blood had been added Occasionally a blood agar slope or plate was primarily employed, but if this test proved negative it was always repeated with the fluid medium, which contained human red cells and plasma, since this method was found to be more reliable

Of 19 strains thus investigated 16 were hæmolytic and 3 were not Nine of the hæmolytic strains were injected intraperitoneally into mice, with the result that 7 were pathogenic and 2 harmless Of the 3 non hæmolytic strains, 2 were tested upon mice, with one positive and one negative result The strain which failed to hæmolyse, but was pathogenic to the mouse, was isolated from a brain lesion due to shrapnel The patient was operated upon and developed diffuse meningitis shortly after the operation, a streptococcus (presumably the same strain) was grown from the cerebro spinal fluid, and now proved to be both hæmolytic and pathogenic to mice

Thus, on the whole, the power of hæmolysing human blood tends to run parallel with that of causing acute disease in the mouse But neither of these phenomena appears to throw much light upon the question of actual virulence to the human being It is quite common to find strongly hæmolytic streptococci in trivial healing wounds which are giving rise to no appreciable constitutional disturbance Therefore one may conclude that a hæmolytic streptococcus although highly virulent may be held in check in the tissues from which it was cultivated

These wound streptococci often appear to possess only a low degree of virulence, yet it is well to remember that they are capable of undergoing a sudden great increase of virulence if the barriers of protection which the body has set up be broken down by an over zealous operator or even by quite insignificant manipulation

The diphtheroid group —Diphtheroid bacilli were met with on 15 occasions, but clinically the sources from which the bacilli were cultivated were various. Some were granulating wounds, others were deep sinuses—in fact, no special type of wound in particular These bacilli could not be credited as the direct cause of the infection, although indirectly they may play an important part In some instances they grew more abundantly anaerobically than in an atmosphere of oxygen, and examples were met with of an orange growth on agar similar to the staphylococcus aureus Morphological characters were variable, but the most striking type presented the well known zebra markings

Staphylococci —The orange and white staphylococci were cultivated from wounds on numerous occasions, but no further reference need be made to these bacteria on the present occasion

The striking feature of these results is the persistence of the dangerous anaerobes in the tissues for as long as 65 days from the date of the original injury It is true that in most cases neither tetanus nor gas gangrene developed, but in one instance a rapidly fatal infection from the bacillus aerogenes capsulatus occurred after an operation

From a bacteriological aspect it is surprising that the anaerobes do not flourish to a greater extent than even our records show, as every requisite for anaerobic life is present There is in a deep wound dead tissue, sufficient moisture, Both cases quoted are a type of bullet wound which generally gives little trouble and seldom requires this amount of surgical interference

Sir W Watson Cheyne, in a letter on May 22nd in the *British Medical Journal*, writes that "The question of the exact method of dealing with wounds in man was left for further study, and our recommendations were merely tentative and open to alteration as experience indicated" However, the committee were so satisfied with the result of treatment in Case D that the Navy and the Army have been served with the powder and paste He says that the whole aim of the research was to find a means to delay the growth of bacteria The substance, cresol paste, did do this on non living tissue, such as blood clot, and to a less extent on animals In its application to the wounds in war the committee recommend practically closing up the septic wounds with this substance, and from the success achieved when cresol was used by the committee, I cannot see their justification in transgressing one of the golden rules of surgery with regard to the drainage of wounds

The committee assumed that the wound would be opened up, the pastes which had been introduced removed, and the wound thoroughly disinfected and drainage provided, &c The actual cleansing of these wounds after the use of borsal is no easy matter A great deal of hot water has to be used before the last trace of the black greasy pus can be removed

Mr Arthur Edmunds, who has been associated with the committee in their work, has gone to the Dardanelles He is evidently armed with the paste, and may proceed to treat the wounds on the lines indicated in the paper His previous experience has been that of the committee I hope he will be guided by the conditions found in the field rather than on the assumptions of the laboratory

THE DIVERSITY OF OPINION CONCERNING THE DIAGNOSIS OF TUBERCULOSIS,

WITH SPECIAL REFERENCE TO THE EXAMINATION OF CONTACTS

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Now that tuberculosis schemes are coming into operation, all matters concerning *diagnosis* are of exceptional importance from the point of view of preventive as well as of clinical medicine The personal element will always enter largely into the diagnosis of difficult cases, but a certain standard concerning *fundamentals should* certainly be adopted in order to render statistics comparable and permit of correct deductions from statements presented in reports

The report of the medical officer of the Local Government Board points out remarkable variations in the proportion of notifications to deaths in the returns from individual administrative counties This may be due merely to failure to notify or to the vexed question of diagnosis Dr Newsholme is driven to the consideration of death rates for his statistics, as he considers that notification of new cases cannot be used as a trustworthy index of the relative prevalence of tuberculosis in different areas

The reports of the medical officer of the Board of Education illustrate the same lack of uniformity in the consideration of this disease on the part of school medical officers One of the most remarkable instances of what might be termed the lack of a common basis of diagnosis is given in the 1910 report as follows "In Worcestershire, for instance, owing to the fact that one of the assistant medical officers diagnosed pulmonary tuberculosis in about 15 per cent of the children examined, the percentage of cases discovered is 4 18 On the other hand, in Hertfordshire, out of a total of 12 772 children examined, one case of tuberculosis only was discovered" It is, in fact, the diagnosis in children that presents the greatest problem owing to the character of the infection and the tendency to appearance and disappearance of physical signs

The remarkable prevalence of tuberculosis in children is an established fact Dr C Riviere's figures from THE LANCET[1] are of particular interest as they refer to children who died from some acute disease (e g, diphtheria) which was not tuberculosis

	Councilman	*Baginsky*	*Heller*	Hamburgher	Ganghofer
Number of necropsies	220	806	714	150	972
Number tuberculous	35	144	140	32	252
Percentage tuberculous	16	18	20	21	25·9

Newsholme,[2] in the section referring to inaccurate diagnosis in children, quotes striking figures from Coates and Landouzy on the question of the prevalence of tuberculosis in children, and also in relation to *deaths*, states that "in children the *term* broncho pneumonia not infrequently *conceals acute* tuberculosis, especially when the 'broncho pneumonia' occurs after imperfect recovery from such diseases as whooping cough and measles" This is particularly important as referring to deaths, there is apparently always less reluctance to consider a case with a bad prognosis, tuberculous In fact, it is to be feared that a recovery is often taken as proof in itself that the case in question was not tuberculous

It is evident that in the examination of *contacts* two very important factors bearing on diagnosis are, generally speaking, *constant*—i.e, family history and exposure to infection. The examination of *contacts* should therefore show less striking differences in the percentages of positive *diagnosis* than any other systematic series of examinations, allowing, of course, for the smallness of the numbers Dispensary reports from all over the *country* show some considerably different results in this respect, but it will be sufficient for purposes of illustration to quote from some metropolitan reports

	Contacts.	Found tuberculous	Percentage
Paddington and Kensington	929	103	11
Wandsworth	541	54	9
Fulham	663	115	17
Woolwich	666	233	35
Lambeth	305	46	15
Bermondsey	221	65	29
Poplar	663	76	11
Hampstead	204	48	23

At Greenwich a total *of* 622 contacts were examined by three medical officers Contacts were found tuberculous at the rate of 10 per cent, 5 per cent, and 18 per cent respectively committee could see some of the wounds, torn and ragged inside, plastered with dirt and pieces of cloth, they would, I hope, shrink in horror from the idea of sealing up this glorious cultivation medium with a greasy plug

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[1] THE LANCET vol i. 1910 pp 156 155.

[2] The Prevention of Tuberculosis.

Dr Willenborg, of the Pasteur Institute in Paris, visited me during April at the Belgian field hospital He has a roving commission from the French Government to investigate gas gangrene He told me that the outstanding fact he had learnt which was of value in the treatment of shell wounds and the prevention of gas gangrene was the necessity for thorough cleansing and laying open of the wound—in fact, adequate drainage

The committee's experiments on guinea pigs were invariably fatal if there had been any delay in the application of the paste, and in the field, under modern conditions, there must be many hours' delay before treatment To quote again from the paper —

> Assuming that radiation takes place *in all directions from the centre*, naturally the further away from that centre the more dilute will be the antiseptic substance

This assumption is made from experiments with inert substances It does not consider the living tissue or the serum and the various currents and counter currents produced by the breaking down of cells during the process of repair Again

> As a matter of fact, the soiling of wounds with earth is not likely to extend to any great depth, and the borsal, powdered over a wound, especially if it is well open and the bleeding has stopped, will probably overtake the severe infection, while the septic organisms carried on further will be dealt with by the cresol.

The soiling of wounds with earth is found to extend to a very great depth indeed During the winter the uniforms were caked in mud, and large pieces of cloth were driven into the tissues by bullets and portions of high explosive shell In the summer it will be found that the fabric is infiltrated with the dust of battle

> At any rate, the growth of organisms will be inhibited over a large area, till the patient reaches the dressing station, where the wound can be opened up and more thoroughly attended to

This may be true in wounds of the saucer type To make such a statement about deep lacerated wounds with a narrow opening shows unfamiliarity with the conditions existing The natural out pouring of serum from the lacerated surface will increase the tension deep in the wound, as the cork of borsal effectually prevents drainage This bottling procedure is carefully insisted upon in the instructions issued.

The inhibition of growth on the surface of the wound does not matter in the least if, in the end, the depths of the wound are still infected If members of the committee have tried to inject thoroughly a sinus of some standing with bismuth paste they will know how difficult it is, even in expert hands, and this thorough medication of the wound with borsal or cresol paste must perforce be left to the men in the fighting line if it is to be done at once If it is to be carried out some hours later, when the infection has got a good hold, I cannot follow the surgery which advocates plugging up the main drain

To quote further —

> When the patient arrives at the advanced dressing station the treatment depends on circumstances 1. If a large number of wounded have to be attended to patients who have been treated in the above manner can wait unless a good many hours have elapsed since the injury In that case the orderlies should inject a little more paste into the wounds and powder them and apply a fresh antiseptic dressing while the patient waits his turn

The presence of pus, cellulitis, or gas gangrene is not considered The orderly would, in all probability, not recognise the conditions and simply increase the tension deep in the wound He would report the case as being dressed, and, from the clearing hospital or dressing station, the man would be sent down to the base, incubating organisms in a carefully plugged living test-tube

> 2. If it is a large or complicated wound—e g , a compound fracture—it will be well in the first instance to clean and disinfect the skin, preferably with 1-20 carbolic lotion, then wash out the wound with peroxide of hydrogen and 1-20 carbolic lotion, remove pieces of clothing or accessible pieces of shell, snip away any tags of tissue and arrest bleeding The wound being dried and held open, it can now be powdered with borsal and some cresol paste left in various parts of the wound If it is widely open it may be well to put a few interrupted sutures in to bring the edges somewhat together and prevent the escape of the antiseptic and finally apply antiseptic dressings

The first part of the instructions it might be possible to carry out in a clearing hospital Certainly, in their entirety, they are impossible in the trenches and in the dressing stations behind the firing line The second part is simply a résumé of the cleansing of any wound, and as it is obviously meant for qualified men its inclusion seems to be unnecessary The stitching up of the wound at the end of 24-48 hours, which is commonly the time before the above treatment could be employed, is contrary to all experience gained during this and other wars Whenever this has been done, almost without exception, the results have been disastrous

> 3 If it is not a large wound, if the clot seems solid and it has been well powdered and plenty of paste introduced into it in the first instance, it is quite possible that sepsis may not occur, and if that seems likely all that need be done would be to squeeze a little fresh paste and dust some more borsal powder over the surface and the skin around and apply a fresh antiseptic dressing These wounds will probably not require further dressing till they arrive at the Base Hospital

If the clot seems solid and not septic, surely it is nature's dressing and should not be disturbed, it is the first process in primary union If it is disturbed and the surface organisms squeezed into it, it becomes infected, as it is not claimed that borsal destroys the organisms but simply inhibits their growth. The use of the words "quite possible" in the first sentence and "probably" in the second, show that the surmise is entirely theoretical The issue of the paste, therefore, is an experiment on a large scale based on evidence which is unsound from the bacteriological, pathological, and surgical point of view

Finally, I quote two cases which are now in Guy's Hospital in the Officers' Section.

CASE 1 *Bullet wound through thigh on May 15th* —The wound was through the muscles, entrance small, exit somewhat larger Patient had field dressing applied May 17th Borsal powder and cresol paste injected (30 hours after injury) 18th Operated on at Boulogne Six incisions made in the thigh, which was very septic, and large tubes put in 21st Admitted to Guy's Hospital Cellulitis was still present and the patient running a hectic temperature Further incisions were made and khaki cloth removed. 25th On fomentations, &c., condition is improving

CASE 2 *Bullet wound through the leg just above the tendo Achillis on May 16th* —Seven hours later borsal powder and cresol paste were applied May 18th Operated on at Boulogne, eight incisions were made in the leg for cellulitis 21st Admitted to Guy's, and it was found necessary to make further incisions 25th There seemed a tendency for still further spread, and it may be necessary to operate again

SOME PRINCIPLES OF DIETETICS

BY J SIM WALLACE, D Sc, M D GLASG, L D S

SOME fifteen years ago the study of the etiology of dental caries led me to conclude that there must be something radically wrong with dietetic habits which were current in civilised communities Further, it became impressed upon me that the dietetic precepts emanating from the highest quarters were possibly on the whole productive of harm rather than good, for it was by no means apparent that dental caries and other diseases resulting from bad dietetic habits were less common among the children of professors of physiology than among the children of the relatively ignorant poor In fact, in time it became evident that the teeth of the children of poor peasants and even of those living in slums were rather less ravaged by caries than were the teeth of those who were supposed to be enlightened in the science of dietetics Naturally I tried to inform myself in the subject Among other things I bought a book on "Food and the Principles of Dietetics," and therein found quite a mass of information on the chemistry of foods and certain physiological details associated therewith, but I found remarkably little about the principles of dietetics It is not, therefore my intention to treat the subject as it is treated in books on dietetics, but rather to indicate that the principles of dietetics branch naturally from the tree of knowledge and bear fruit which is, or may become, of great value I shall endeavour to state some principles of dietetics and add a few words to each of them

The first principle I would refer to is that the kind of food for which man is adapted is the same in all essentials as that on which he has subsisted for countless generations This principle is lacking in direct practical utility, first, because we may not know exactly the kind of food on which primitive man and his ancestors did subsist, secondly, because we are not all agreed with regard to what are the essential elements of food, and thirdly, because man has introduced methods of preparation of foods which, though in some cases they may destroy or impair certain essential qualities, so far improve others that a reversion to primitive foods would be a retrograde step The value of constantly bearing in mind this important principle, however, will be seen from some of the others which follow, for without this one a certain guide for the search for others would be lacking

The next principle to which attention may be briefly directed is that the anatomy of the organs of digestion indicates the type of food which is most generally suitable for the animal under consideration This has long been recognised by those who have concerned themselves with palæontological zoology It has, however, been most completely disregarded by medical experts, who have occupied themselves with framing a pap dietary for young children which still too generally holds sway It is now many years since the dental profession recognised that the complete temporary dentition indicated that the most suitable diet for a child was not pap, but should be of such a nature that the teeth and jaws would require to be used Moreover, we recognised still further that the coming into position of the milk teeth indicated how the transition from the purely milk diet to the solid and varied diet suitable for children with a complete dentition should be brought about

A correlated principle which we have to note is that the physiology of the organs of digestion indicates to some extent the type of food suitable for man To begin with, however, what is the outstanding physiological process for which the first part of the alimentary canal is adapted? The incisor teeth incise or cut off portions of food, and the molars crush, tear, or physically disintegrate it, while at the same time the saliva and mucus are secreted The muscles of mastication concerned with the closing of the mouth are physiologically adapted for the exercise of enormous pressure in order to disintegrate the food, while the muscles which open the mouth are relatively weak If the food were intended to be swallowed without undergoing physical disintegration in the mouth there would be no need for the large muscles and elaborate physiological coördination which at present (necessarily) exist As far as the digestion of food is concerned, the obvious inference is that with regard to the mouth and teeth the physical disintegration of the food is practically its one and only function, notwithstanding the fact that we may have books written on "The Work of the Digestive Glands ' in which the salivary glands are largely referred to Do not let us be befooled into believing that the physiological *raison d'être* of the salivary glands is solely or even primarily for the sake of digesting food The salivary glands exist and function for the purpose of facilitating the movements of the mouth and food for facilitating its disintegration, for facilitating deglutition, and for helping to clean it out of the mouth as rapidly as possible after the disintegration of the food is sufficiently advanced We have heard a great deal about the digestion of starch by the ptyalin, and although the amount is very trivial it was well dinned into us that the function of the ptyalin was to digest starch (for nutritional purposes) Why a copious flow of saliva is poured out when sugar is taken into the mouth did not seem to suggest the idea that the function of the saliva was to clear substances out of the mouth which might be or become harmful to the teeth and mucous membranes during or after mastication So again, we were taught that acid vegetable foods gave rise to a copious flow of alkaline saliva rich in ptyalin, but physiologists were silent with regard to the why of the ptyalin in this case That the flow of alkaline saliva was to neutralise the *acid* was indicated, but that the saliva similarly became alkaline on eating meat was not mentioned and the rationale of such alkalinity was not indicated So, too, we were led by physiologists to believe that the reason why ptyalin did not exist in the saliva of an infant till it had reached about the sixth month was that up to this age the child should not get starch in its dietary No doubt an infant should not get starch in its dietary before this age, but why a ferment from the pancreas capable of digesting starch before this age existed was not told to us The fact that the appearance of ptyalin in the saliva synchronised with the cutting of the teeth and that the saliva exists chiefly for the physiological cleanliness of the mouth and for the protection and preservation of the teeth was apparently never dreamt of. Although, then, the physiological reactions of the saliva to food show us clearly that they are adapted chiefly for facilitating disintegration of food and deglutition and to get rid of certain substances commonly associated with foods which are or might become injurious to the mouth and teeth, it would be a mistake to argue that whatsoever

There appears to be a tendency to think of tuberculosis *only* as a condition of local injury, as an infection either of the lymphatic glands or the lungs, or the bones, or other definite parts of the body, and to consider it only from the point of view of the local results Tuberculosis implies the poisoning of the system with a powerful nervous and muscular poison The systemic changes are not merely those resulting from underfeeding or malnutrition, or what is generally understood by that term, but the signs of actual toxæmic poisoning The indications of this are many, as, for example, the flabbiness of the skeletal muscles and at the same time their irritability, the thinning of the trapezius and deltoid muscles, giving the scraggy appearance and sharpening of the point of the shoulder, are particularly noticeable , the dyspepsia, anæmia, and diarrhœa, all of which may be present together, the temperature and character of the pulse , the glandular changes, not necessarily the gross glandular changes due to bacterial invasion of the glands themselves, but the pinhead multiple " micro adenopathy " These are all manifestations of this powerful neuro muscular poison

A systemic poison which can produce such changes should certainly affect also the elastic and muscular tissue of the respiratory apparatus, especially the tissue of a lung exposed to a particular concentration of the morbid products through the lymphatic circulation There is some reason to suppose that even in purely hilus tuberculosis tidal respiration and percussion note and quality and character of the breath sounds are affected at the apex, perhaps in the same way that loss of " brightening ' occurs on X ray examination, though mechanical obstruction must not be forgotten

Sir Robert Philip has compared tuberculosis with syphilis in this respect of systemic poisoning The first infection takes place (for the purpose of illustration, by way of the tonsil in the "extra tonsillar" lymphatic gland), is followed by lymphatic spread and glandular infection, followed again by wide spread and various signs of systemic poisoning It is surely misleading to divide the disease in one's mind as on a notification form into pulmonary or glandular , glandular with attention to glands, only from the point of view of possible caseation or condition of enlargement, and pulmonary with attention to pulmonary physical signs alone There must be a tendency to do so, because when a report on a child is requested, it is, of course, particularly or altogether a report on pulmonary physical signs which is wanted, and although there may be every other evidence of tuberculosis, pulmonary physical signs may be slight or absent in the earliest stages Unless, therefore, extreme care is taken, the difficulty of demonstration of pulmonary physical signs in children, and in some cases the evanescent character of the signs, will lead to considerable understatement of the prevalence of tuberculosis

Then, again, what should be the proof that enlarged glands are in one case tuberculous and in another non tuberculous—local conditions are misleading A considerable number of children with an obvious cause for enlarged cervical glands, such as carious teeth, &c , suffer from tuberculosis (as proved by subsequent caseation) which may, of course, in some cases be a superadded condition Therefore, to exclude as non tuberculous all those children who show an obvious cause for the glandular enlargement will be to exclude a number of tuberculous On the other hand, to notify all children with glandular enlargement as tuberculous would be ridiculous There are also exceptions to every rule, and if a tuberculous infection becomes shut off and its products are unable to pass into the circulation, systemic evidences will not present themselves

This is, of course, the difference between the *infected person*—which includes most of the population and must include all contacts—and the person who is really suffering from tuberculosis There is also an obvious difference between the single, or infrequent, slight infection of the average person and the repeated massive infection which usually falls to the lot of the majority of contacts. Disputed points about which clinicians like Strümpell, Cornet, Fox, and Osler differ from such others as Aufrecht, Krönig, Lees, Riviere, and Goldscheider do not affect the broad aspect of the disease, and it is impossible that these questions could have produced the wide variation in diagnosis referred to By no means do I wish to imply that the strictest attention should not be paid to the very earliest, slightest, and doubtful or debateable pulmonary signs, but, in fact, to point out that a phenomenon which, taken by itself, may seem bald and unconvincing, may assume a very different aspect when considered in conjunction with a history of infection and the signs and symptoms of widespread neuro muscular poisoning, so obviously present in many cases classed as suspects or non tuberculous. And also that many cases, including those (such as broncho pneumonic and bronchitic) which from the multitude of their physical signs may present extreme difficulty of diagnosis, may have considerable light thrown on them when considered from the point of view of not merely a collection of pulmonary physical signs alone, but of what we know of the disease itself and of the power for evil of its morbid products on the entire system

If the statistics concerning prevalence of infection are reliable, the probability is that a considerable number of children classed as suspects, or merely ill nourished, are in reality tuberculous though this is probably not of much account, as the majority of such children obtain as suspects all that is necessary for complete recovery An important point, however, is that the first person applying for medical advice is not necessarily the most advanced case in a family with several tuberculous members, and failure to recognise the disease in the first case may mean that the infecting case is not discovered

As notification is the first step to further investigation, the state of affairs with regard to diagnosis and subsequent notification pointed out by the medical officer of the Local Government Board evidently calls for careful consideration

Greenwich S E.

THE HOME TREATMENT OF SCARLET FEVER —Mr V Gray Maitland, medical officer of health of Nuneaton in his annual report, after mentioning that the severe epidemic of scarlet fever had practically died out expresses his conviction that cases treated at home did better and suffered fewer complications than those treated in the isolation hospital, particularly during an epidemic, when the wards were more or less constantly full The home treatment of scarlet fever as practised in Nuneaton the results of which were extremely satisfactory meant that the medical man who notified a case and wished for the services of a nurse could have any treatment he ordered carried out by the nurse Should the medical man leave the case entirely in the nurse s hands and cease to visit the case himself the responsibility rested solely upon him and not upon the borough council be spared to secure the activity of what seems to be presumed to be an otherwise insufficient organ for carrying on the work of digestion. Pawlow's ideas are interesting and instructive, unfortunately, however, they are not principles of dietetics; rather are they principles of gluttony. Much that is written about the arrangement of the meal from the glutton's point of view may be interpreted quite differently and more correctly. The meat or vegetable broth which so frequently commences a meal may have little or nothing to do with stimulating digestion, they may have chiefly to do with economy. A proportion of the available nutriment in yesterday's joint might be lost if the remains were not boiled and the resulting "stock" used on the following day. The words "stock" and "*pot au feu*" both suggest this interpretation. Pawlow follows what I have already quoted with the sentence "The usual termination of the repast is also from the physiological standpoint, easy to be understood. The chief meal is generally ended with something sweet, and everybody knows that sweets are pleasant. The meaning of this is easy to guess. The repast, begun with pleasure, consequent on the pressing need for food, must also, notwithstanding the stilling of hunger, be terminated with an agreeable sensation." Let us consider what is meant by "something sweet." Jam rolls, bread and honey, chocolate, &c., may all be recognised as something sweet or sweets, but yet, as it appears to me, his meaning in saying that the meal should be terminated by something sweet, yet which does not burden the work of the alimentary canal at this time, is not at all clear. It is quite obscure unless (which may be his meaning) we assume that sweet things do not burden digestion at this stage. But this would be quite erroneous. He refers also to acids, and attempts to show how acids one way and another assist digestion. He never appears to have dreamed that acids in foods were concerned with dental hygiene; in fact, the whole of his arguments indicate a conviction in the insufficiency of man's organs of digestion except when they are excited, whetted, and tempted by all sorts of psychic and chemical stimulant, and the philosophy of the correct termination of the meal is overlooked.

That the gustatory secretions should be stimulated at the end of a meal, not by sweets but by food of a natural, hygienic, or detergent nature, is evident to all who admit the principle that the mouth should be left physiologically clean. Now what does so most effectually? Fresh fruit certainly does; not only the dilute sugars but the acids, the aromatic and even the acrid substance in the fruit do so most effectually. Fruit contains but little nutriment, and its real value is hygienic and not nutritive—much less is it a digestive tonic. Foods in the form of sweets, jam rolls, bread and marmalade, chocolate, &c., are to be condemned absolutely as meal terminals, as their effect is the opposite of fruit, which leaves the mouth in a hygienic state. Read in the light of my theory I believe Pawlow's experiments are most instructive. Read in the darkness of the old craze for nutrition they are misleading, dangerous, and contradictory.

The amount of food eaten should *not* be regulated by principles of gluttony; it should be regulated indirectly by recognising the principles of dietetics. That the palate is a useful guide is not to be denied, and when it is given a chance to act it acts usefully. If the palate is given the opportunity to discover and appreciate the quality and quantity of the food which passes it, as when the food requires to be disintegrated and retained in the mouth for a time, then it will be a useful guide. If, on the other hand, food is given in the form of pap and is slipped past the palate without mastication, as it so often is in the feeding of young children, and geese which are being stuffed for *pate de foie gras*, then the palate is but an imperfect guide both as regards quality and quantity. Nevertheless, let me say that instinct, custom, and common sense are not invariably to be relied upon. A new environment may come into existence relatively suddenly and the safeguards of necessary limitations existing in the aboriginal environment may disappear. Thus, for example, a relatively unlimited supply of carbohydrate foods may now be easily procured, in addition to this a gratuitous advocacy in influential quarters of the things most to be guarded against may usurp the place of natural limitations, as, for example, the advocacy of highly nutritious foods, the value of sugar as an economical foodstuff or as a proteid sparer, the advocacy of jam and marmalade instead of butter on bread, or the extolling of cocoa and chocolate instead of more hygienic and cheaper foods. It is for reasons such as these that we must have something more than instinct and custom. We need the principles of dietetics and a touch of common sense to be able to coördinate and make practical use of them.

With regard to a balanced dietary little need be said; the principles which regulate this too are similar to those which regulate the amount. Like the amount it is very variable, and if the organism, when restraints such as nature presents are imposed, is not fit to seek for and procure the balanced dietary required, no artificial endeavours will be likely to avail in the long run. The possibility of getting a fair choice and variety is of course necessary. Variety, however, should *not* simply be with regard to proteid, carbohydrate, fat, &c.; it should include also *uncooked* food. Fresh fruit, vegetables, and gustatory stimulants without regard to calories at all are necessary. Throughout the whole course of evolution uncooked food was consumed, and we certainly have not as yet sufficient evidence to make us disregard the probability that certain essential qualities are destroyed by cooking. Possibly the craze for having everything made easily digestible and sterilised before it enters the mouth accounts for much dyspepsia, and may explain why uncooked milk though full of germs, is such a useful drug in restoring what is sometimes necessary for healthy digestion.

I indicated above that restrictions on eating certain foods should be imposed to compensate for the lost restraints which nature imposed. If restraints in the nature of taxation for revenue on consuming alcohol, tea, and coffee are conducive to more good than evil, then surely the taxation of sugar, sweets, chocolate, and cocoa might for similar reasons be imposed, for, as Sir William Osler has maintained, decayed teeth are responsible for greater harm to the community than alcohol. Surely the proportion of misery which alcohol causes is not greater than the amount of dental troubles brought on by the eating of sweets. Indeed, Dr Wheatley's statistics with regard to sweet-eating and caries clearly show this to be the case.

stimulates the salivary glands should necessarily be regarded as specially desirable food Rather should we surmise that in foods which excite a great flow of saliva there may be an element of danger, if for any reason the glands were not capable of responding adequately to the stimulus, or if the food were of such a nature as to hamper the saliva in its attempt to get it out of the mouth. There is, then, an element of danger in food which contains sugar in greater proportion than it exists in vegetable foods as presented in nature, and the physiology of the glands of oral hygiene indicates that sweets, bread and jam, bread and marmalade, and the like should not be eaten at the end of or between meals

I have not referred to mucus Its function is largely that of lubrication, but it is also instrumental in maintaining the hygiene of the mouth, and when thoroughly incorporated with the food during mastication it no doubt facilitates the action of the gastric juice when the food reaches the stomach Possibly this explains to some extent why, as Dr Francis D Boyd has ably shown, digestion is so very much better when the food requires mastication than when it is given in the form of pap

Here it may be noted that the various principles of dietetics cannot be altogether isolated from one another, or perhaps we should say that various principles serve to reinforce each other, so it need hardly surprise us that our fourth principle has been adumbrated in what has already been said This fourth principle is most important not only because of its practical application, but also because it has hitherto been completely overlooked by physiologists I refer to the principle that the food should be of such a nature or the meal so arranged that the mouth and teeth will be left physiologically clean at the end of the meal When once this principle is stated no one can deny it, for it is simply absurd to say that meals should leave the mouth in an unhygienic state The wholesale destruction by caries of the teeth in civilised communities, together with the equally wholesale destruction of the gums and alveolar processes resulting from oral malhygiene, should have been sufficient to call attention to the importance of this principle, and except among those physiologists and medical men who consider that the mouth and teeth are outside their domain, the principle is now fairly recognised amongst the educated Since the teeth of animals and primitive man are kept in a hygienic state by their foods, it is a simple guide to say that food in its natural condition will, if taken at the end of a meal, leave the mouth clean For various reasons I have drawn attention to the value of uncooked fruit for this purpose, and need only add here that unless we are to revert to primitive foods and eschew all the benefits which accrue from the preparation and cooking of foods, we must above all other principles insist on this one

Moreover, recognition that food should be of such a nature that the mouth and teeth should be left in a hygienic state leads by extension to the idea that the whole alimentary canal should be left in a similar hygienic state, and this suggests a still wider field for investigation I have read that the alimentary canal of children nowadays is little more than a series of pathological specimens, and although this may be an exaggerated way of putting it, there is too much truth in the remark, and so long as the craze for nutrition and calorie values is considered to the exclusion of the hygienic value of food what truth there is in the observation will remain

"Science knows no geographical boundaries,' it only recognises the narrower limits of its own departments Being under less than no obligation, however, to follow decadent scientific methods, we may be permitted to transgress the boundaries of our specialty and deal briefly with a few principles which have little or nothing to do with the mouth and teeth. They have, however, to do with the hygiene of the alimentary canal. As overeating is a common cause of alimentary malhygiene I shall deal with a few principles associated therewith The first I shall mention is well known but seldom brought into force as it should be among the civilised. It is simply that "Hunger is the best sauce" Throughout the whole course of evolution our progenitors must often have been hungry, sometimes very, very hungry If hunger had incapacitated them for food when it was found there would have been little chance for them surviving, fortunately it had quite the contrary effect Pawlow has shown by approved experimental methods that digestion goes on best when associated with hunger, and in a general way we all know that it is so Nevertheless I have practically never seen an emaciated child with an unhygienic digestive tract treated by keeping food away from it, and the unhygienic state of the alimentary canal is never given a chance of becoming hygienic

This leads us to state another principle—namely, that tempting the palate habitually is contrary to the dictates of evolution As the importance of economy in nutrition has throughout all ages only been transcended by the importance of getting enough we should recognise that a flagging appetite is a signal that amply sufficient has been consumed We may be assured that as in past ages unlimited supplies of food were seldom available, as much as possible would be eaten of any food which contained the elements for supplying immediate needs and a reasonable reserve for the immediate future without special temptation One might have thought that a scientist who recognised that hunger was the best sauce might also have recognised *this* principle Nevertheless we read in Pawlow's work on the digestive glands "The custom of the chief meal of the day also corresponds with our physiological results After this or that *hors d'œuvre*, perhaps also with a liqueur of brandy (especially customary in Russia), both of which are designed to awaken the appetite, the repast proper begins, and, in the majority of cases, with something hot, consisting mostly of meat broth (*bouillon*, different soups, and so on) After this comes the really nourishing food—meat of different kinds served in various ways, or, in the case of poorer people, stews made with vegetables and therefore rich in carbohydrate material This sequence of foods, from the standpoint of physiology, is quite rational Meat broth, as we have already seen, is an important chemical excitant of gastric secretion An attempt is therefore made in two ways to secure a free secretion of gastric juice to act on the chief food first in the excitement of the appetite juice by the *hors d'œuvre* and secondly in the promotion of the flow by the action of the meat broth' It would appear from this quotation and other similar statements that no effort either in the way of chemical or psychic excitant has to and the ether will rapidly boil When the ebullition has ceased the material will be ready for use The ether will not boil unless the tube is shaken, and it must not be allowed to remain in the bath long enough for the serum to become thoroughly heated

If the blood corpuscles have not been entirely separated from the serum before sterilisation they will be completely laked by the hot ether, and the resulting medium will be more or less deeply stained with hæmoglobin, but nevertheless quite transparent No precipitation or cloudiness appears during the process, on the contrary, the fluids are rendered unusually clear Within our experience this method has never failed to sterilise either ascitic fluid or serum

Among the more obvious advantages of this procedure over any over, it will be noticed that the albumins are unchanged by heat, and thus the fluids are as efficient media as if they were collected aseptically from the living animal The sterilisation is rapid and certain to such an extent that it is unnecessary to prove the sterility before use Finally, the method is applicable to the preservation of certain immune sera, thus we have found that the activity of hæmolytic immune serum is not reduced by ether sterilisation

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

A CASE OF TETANUS OCCURRING TEN WEEKS AFTER INJURY

By ALEXANDER DON, F R C S EDIN,
MAJOR, R A M C (T F), 1ST SCOTTISH GENERAL HOSPITAL, ABERDEEN

A PRIVATE of the First Gordon Highlanders aged 40 years, received a shrapnel wound on Dec 21st, 1914, the bullet entered the right shoulder, fracturing the head of the humerus, the glenoid cavity, and the body of the scapula, and emerging opposite the inner scapular angle, 2 inches from the centre line The wound was cleaned on admission on Dec 31st The scapula was much comminuted and several loose pieces were removed Antitetanic serum was administered two days after the injury (Dec 23rd) at Boulogne On Jan 28th, 1915, he was sent to Aboyne Auxiliary Hospital, and was readmitted on March 2nd with symptoms of tetanus The tetanus bacillus was discovered in the pus and in a piece of bone which extruded from the wound

Three thousand units of serum were given the same night subcutaneously, also gr xxx. potassium bromide and gr x chloral hydrate every four hours Up to March 18th 147,000 units in all were given, doses varying from 3000 U S units a day to 20,000, according to the condition of the patient as regards frequency of spasms It was noted that the severity of the spasms and of pain varied inversely as the number of units injected On three occasions, March 4th, 5th, and 6th, he had 4000 units intravenously, by puncturing a dilated vein in the arm through the skin On all these occasions a distinct red irritated area appeared within the next 24 hours

Twice an attempt to give an intrathecal injection was made At the first attempt no spinal fluid escaped, and the operation was abandoned His back was very much curved by the opisthotonic spasms, but from daily experience of spinal anæsthesia I feel that I had reached the dural sac On the 6th he was very bad, and a second intrathecal injection was attempted Again no fluid escaped, but 2000 Lister Institute units were injected at high pressure, and the night following he became unconscious, passing fæces and urine in bed, and seemed moribund He appeared to have cerebrospinal meningitis, which was attributed to irritation from the serum He recovered somewhat towards morning, and became conscious again shortly after

For some days his condition was very critical; but by March 18th the spasms had entirely ceased, and no more serum was given It seemed that the concentrated serum, supplied in 4000 unit ampoules, was irritating both intravenously and intrathecally Also that the effect of the serum in controlling the spasms lasted for less than 24 hours, and modified the severity of the spasms in three or four hours after injection A quarter of a grain of morphia controlled the pain and gave a more restful sleep than the chloral hydrate with the bromide Morphia was not, however, given except during the night, and on instructions Chloretone rectally in olive oil had no marked effect

The patient all along took nourishment well The wound was in no way red or inflamed The spasms were most severe at first on the side of the injury and at the root of the neck

The long period between the wound and the first symptoms of tetanus suggests either (*a*) a recent infection, or (*b*) a delay in the appearance of the disease, due to the prophylactic dose given at Boulogne The pulse rate reached 140 on March 5th and 6th at night but the temperature was seldom above normal, and seemed to depend more on the amount of discharge from the wound than on the severity of the tetanic spasms The patient is now progressing satisfactorily, but there is still some "position" rigidity, which is gradually wearing off

COMA IN A CHILD

By J H DONNELL, M B, B C CANTAB,
CAPTAIN R.A.M C (T.F)

ON Saturday, May 16th, 1914, at 7 P M, I was called to a case which presents some interesting speculations

The patient was a boy, aged 8 years, residing in a neighbouring village He was in a state of coma The history obtained was that after running about a cricket-field on that rather warm afternoon, he had come in to tea, and during this meal, at 5 45 P M had suddenly become unconscious There were no convulsions at the time, merely unconsciousness When I saw him his limbs were flaccid, his pulse and colour good, the breathing was quiet, temperature 99° F, and the pupils were moderately dilated but reacted to light I inquired from a brother who had been with him for the possibility of any herbal or other poisoning, but failed to elicit any information Two drachms of castor oil in milk were slowly given by the mouth At 8 45 P M convulsions set in and continued with but brief intervals till 10 15, when they became less frequent, the last occurring at about 11.30 He remained unconscious until 3 A M During this period the pulse and colour were good The information was now elicited that some boys had said the lad had eaten some chestnut leaves Later, after recovering consciousness, he vomited and there were some "green" red currants in the vomit On questioning the boy on the morning of the 17th he confessed to having eaten unripe gooseberries and green red currants, but denied eating any chestnut leaves He had never previously had convulsions in his life nor any epileptic fits neither was there any history of similar conditions in the family On this morning he complained of slight gastric pain, but otherwise he appeared well, and the castor oil had been effective

A further principle to which we may refer is that economy in diet is beneficial physically and morally. A long sermon might be preached on this subject, it is not, however, my intention to do so, firstly because it would be more instructive to hear how it is done from a housewife with a family, let us say, of five children and a husband with 30s a week. Secondly, because it involves other considerations besides caloric or hygienic values. Thirdly, because the poor housewife in general does exceedingly well with the money at her disposal compared with those who usually give advice to this class. She does not require to be told that bread, oatmeal, and potatoes are economical compared with many other foods often belauded in medical journals, nor that cheap cuts of meat or cheap cheeses are of as high nutritive values as the more expensive kinds. All that I would say with regard to this principle is that to judge the value of a food by laboratory tests regarding its calorie value has been, and is, most misleading. A food such as uncooked fruit may have a high hygienic value. This may at times be wanted, but though it has calorie value is valueless when it is not wanted. Moreover, the judging of the cheapness of food by the amount of calories procurable from a given sum has led to advice which is worse than useless. Because an amount of sugar representing a large number of calories can be bought for a relatively small amount, it has been argued that sugar is an important and valuable food *for the poor*. Since, however, force of circumstances compels the poor to obtain the great bulk of their nourishment from bread or cereals and potatoes, and inasmuch as these contain relatively a superfluity of carbohydrates every penny spent on sugar by the poor is, from the point of view of nutrition, simply wasted. But this is not all. The sugar is often taken in a particularly obnoxious form, either as sweets between meals or as jam spread upon bread. Not only then is the money spent on the sugar wasted, but the fruit which is made into jam has most of its virtues destroyed as far as oral hygiene is concerned, and this at the considerable expense which is entailed in reducing it from the hygienic and palatable form in which nature provides it to the unhygienic form in which we see it prepared to destroy the teeth of the present day.

Another principle which should be considered by those who issue dietetic precepts is that functional activity is generally necessary for the most perfect development of an organ. A conspicuous illustration of this may be seen in the muscular development of the blacksmith's arm. This principle applies also with regard to the development of the salivary and probably also to other glands for the hygiene of the alimentary canal. Similarly without any doubt the muscular development of the organs of digestion is affected by the physical nature of the food. This is notably so in the case of the muscles of mastication, moreover, the development of the muscles of mastication has a distinct influence on the development of the jaws, and this again has its influence on the arrangement of the teeth. The anatomical perfection, then, of the first part at least of the digestive apparatus of man is quite appreciably affected by the physical nature of the food consumed in childhood.

I might refer to other principles which indicate, for example, that eating between meals should be avoided, that the concentration of the different elements composing foods (especially sugar) should not exceed the concentration habitually found in such foods as man throughout his evolution must have subsisted upon, that three meals a day are to be preferred to any greater number, &c., but as these and other principles dealt with in this paper have been gone into in much greater detail in my books there is no need for further elaboration at present.

I should, in conclusion like to refer to two reasons for bringing forward this communication. The first is to indicate that principles of dietetics might be formulated, and the second that the principles of dietetics or the value of foods cannot be established by those who set up laboratory tests and standards as criteria. Nor can they be deduced from the most elaborate statistics having reference to calorie values. The accumulation of statistics on nutritive values, however accurate, gives no more guide to hygienic values than do hygienic values give a guide to nutritive values, and the use of such statistics as a basis for generalising only prevents us from doing what science ought to do—namely, to methodise knowledge and reduce it to principles.

THE STERILISATION OF ALBUMINOUS CULTURE MEDIA BY ETHER

By PAUL FILDES, M B, B C CANTAB,

AND

L W RAJCHMAN, M D

(From the Bacteriological Laboratory London Hospital— Professor WILLIAM BULLOCH, F R S)

AT the present time, when many require sterile serum and ascitic fluid for the cultivation of certain bacteria, it may be opportune to publish a method for the sterilisation of such materials which we have utilised successfully.

When sterilised by heat, serum, and in particular horse serum, is apt to undergo changes which render it unsatisfactory for use. For instance, many samples of horse serum as obtained at a slaughter house when heated to 60° C become more or less completely "set," and thus cannot be mixed with other constituents in a culture medium. Further, the method of sterilisation by heat as applied to such fluids is far from being invariably successful in destroying contaminating bacteria.

Various volatile antiseptics, such as chloroform and toluol, have therefore been used for this purpose, but in our hands these additions have not always produced sterility, and, further, have the disadvantage of throwing down precipitates which take months to settle completely. On the other hand, ether as used by Ori[1] has been entirely satisfactory.

We have applied the method in the following way. 1. The serum or ascitic fluid is collected without any particular aseptic precautions and enclosed in a well stoppered glass bottle. In the case of the ascitic fluid, which varies greatly in reaction, acid or alkali is added to render it neutral to phenolphthalein, and, if necessary, it is filtered through paper. 2. Ordinary methylated ether is added to 3 per cent and the stopper tied in. 3. The bottle is then placed in a water bath at 45° C for one hour or longer to ensure that the serum is actually heated for the full time. 4. At the end of this time the fluid is found to be sterile and is stored for use. 5. When required a sample is removed from the bottle and placed in a sterile test tube or other vessel. The test tube is then thoroughly agitated in a water bath at about 55° C

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[1] A. Ori: Biochemisches Centralblatt [illegible] v [illegible]

Reviews and Notices of Books.

Œdema and Nephritis A Critical, Experimental and Clinical Study of the Physiology and Pathology of Water Absorption in the Living Organism

By MARTIN H FISCHER, M D, Eichberg Professor of Physiology in the University of Cincinnati Second edition, revised and enlarged With 160 figures London Chapman and Hall, New York J Wiley and Sons 1915 Pp x.-696 Price 21*s* net

DURING the last eight years Dr Fischer has written extensively on the subjects treated of in this volume, which is an elaboration of the two volumes on "Œdema" and on "Nephritis" that formed its first edition To sum up its contents in a single phrase, it may be described as an apotheosis of colloid chemistry in explaining the physiology and pathology of living matter

So far as œdema is concerned, and the transfer of fluids and dissolved substances into and out of the cells of living matter, Dr Fischer criticises very severely the "osmotic theory," which attempts to explain the observed phenomena by appealing to differences in the osmotic pressures exerted by the contents of the cells and by their surroundings He similarly criticises the "lipoid membrane theory," which endeavours to help out the osmotic theory by assuming that there is a lipoid skin outside each cell to act as a semi permeable membrane, and to regulate the direction and intensity of the osmosis In the place of these theories he gives us (1) "the laws of equilibrium" between the contents of the cell and the medium surrounding it (p 171), these "laws" being influenced by (2) solubility characteristics, (3) phenomena of adsorption, and (4) chemical combination Armed with these weapons, he finds no difficulty in explaining processes such as the secretion of urine by the kidney, or the excretion of acid gastric juice from the practically neutral blood The chemistry and physics of colloid solutions and suspensions have made great progress during the present century, and so has the study of the phenomena of adsorption But surely Dr Fischer is going rather far when he asks us to believe that the excretion of urine is satisfactorily explained on the following lines (p 326) "When now we recall the physico-chemical fact that when any dissolved substance is offered simultaneously a liquid colloid, a solid colloid and water (as is the case in the kidney), an *unequal* distribution of the dissolved substance between the three phases is the *rule*, then we will have no difficulty in understanding why a difference in quantitative composition between the blood, kidney tissue, and urine, so far as dissolved substances are concerned, is also the rule *Wherefore a 'selective' secretion is to be expected rather than to be wondered at*" No better instance of an explanation of an *ignotum per ignotius* could be looked for, for what do we know, apart from guess work of the physics and chemistry of that incredibly complex fluid, the circulating blood, and what do we know of the physics and chemistry of the living cells that secrete urine in the kidney? How can it be legitimate to describe the blood simply as "a liquid colloid and the renal cells as "a solid colloid," and further to describe both the blood and the urine as "water'? Given such variables and unknowns as the blood, the renal cells, and the colloids of the body with their variable capacities for attracting water, it is quite easy to speculate on the ways in which urinary secretion and œdema might be produced, without considering the influence that must be exerted by the osmotic pressures of the various crystalloids and colloids entering into the composition of the fluids and cells concerned But speculations as to the *modus operandi* of these complex processes, valuable though they may be as analogies, can have little finality so long as our knowledge of the special colloids concerned and of the laws of adsorption and colloid chemistry remains as fragmentary as it is at the present time

In his anxiety to make out a case for the colloids of the body Dr Fischer appears at times to be in danger of neglecting the crystalloids with which they are inextricably bound up In speaking of the "variable capacity of the body colloids for holding water, he leaves the reader in some little doubt as to the way in which this water is held Dr Fischer compares it to the avidity of fibrin, gelatin, catgut, or the protein of dialysed blood serum for water, and quotes a number of interesting experiments to exhibit the influence of acids, alkalies, and other substances on this avidity Yet the reader cannot but remember that none of these experimental materials exist in the human body during life, and so may hesitate to agree with Dr Fischer that "the absorption of water by muscle is determined in the main by the state of the colloids contained in it' (p 126) Argument by analogy is not a very sound method nor very convincing when the questions at issue are so many and so complex

Regarding œdema as "a problem in colloid chemistry" on the lines indicated above, Dr Fischer will have nothing to do with explanations of it based on "increased permeability of the blood vessel walls, "*decreased* ability to hold back water," "increased imbibition," or "variations in blood or lymph pressure," time honoured phrases of an older day He then quotes (p 178) a simple experiment which proves clearly that œdema may be due to the tissues' "decreased ability to hold back water," or to their "increased imbibition", but, oddly enough, he only draws a most illogical conclusion from the experiment himself—namely, that as the vessels of a limb that developed œdema had been tied, circulation pressures cannot be one of the determining causes of œdema He gives reasons for believing that an accumulation of acids in the tissues is the most potent factor in the production of œdema, and that this over production or over accumulation of acids is often due to a lack of oxygen in the tissues

About 250 pages of the volume are given to the subject of nephritis Dr Fischer recognises only one kind of nephritis—namely, parenchymatous nephritis, but this, he says, may affect either the whole kidney or only spots in it Speaking generally, he sets nephritis down to the abnormal production or accumulation of acid and of substances which in their action upon colloids behave like acid in the cells of the kidney Pathologists who are not satisfied with any of the many classifications of the varieties of nephritis should welcome such simplicist conceptions as these They lead Dr Fischer to interesting conclusions as to the treatment of chronic nephritis He supports the use of the "lacto vegetarian" diet so long advocated by the French his formula being "give alkali, salts, water, and dextrose", without making drastic restrictions in the dietary he would cut

The details of the above case suggest the question whether it really was a case of poisoning from the unripe fruit I take it that in children convulsions are due not to an intoxication but to a gastro intestinal irritation, also the patient was old for an infantile convulsion, and the sequence of coma first and convulsions later is not of the usual type The sequence is equally wrong if an epileptic fit is suspected, and, as pointed out above, if it was an epileptic fit it was his first, and rather an unusual one in its characteristics

Hinckley

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF PATHOLOGY

Adeno carcinoma (Mesothelioma) of the Kidney —Congenital Cystic Kidneys

A MEETING of this section was held on May 7th, Professor E J McWEENEY being in the chair

Mr T T O FARRELL read a paper *on a specimen of* Adeno carcinoma (Mesothelioma) of the Kidney The specimen was a tumour of the left kidney removed by operation by Dr M O Staunton, to whom Mr O Farrell tendered his thanks for leave to exhibit the specimen The patient was a girl aged 6 years Since she had been two years old she suffered from vague abdominal uneasiness and for the past two years the abdomen had been noticeably distended There were no marked symptoms apart from occasional attacks of pain, there had been no wasting, hæmaturia, or evidence of any secondary deposits Since operation the child appeared much improved and at the present time is running about apparently in the best of health To the naked eye the kidney was uniformly enlarged, showing some prominences in places, the tumour seemed continuous with the organ, but in part, more particularly towards the pelvis, the kidney substance was flattened out and formed a shell about the tumour The specimen measured 15 by 9 by 7 cm On section the tumour was soft and divided into distinct lobules, which varied in size from 8 cm to 0 5 cm in diameter The greater bulk of the tumour was towards one pole but the kidney substance was almost everywhere infiltrated by the growth Microscopically sections taken from different parts showed typical adeno-carcinoma, with regular and irregular acini After careful examination no other neoplastic cellular element, such as sarcoma, could be found The naked eye appearances of the specimen exhibited, taken with the youth of the patient were strongly in favour of a diagnosis of teratoblastoma, a not uncommon kidney tumour of children But though he kept in mind that in these tumours one element—the carcinomatous one—may preponderate, the specimen exhibited could not be regarded as such, for not even a trace of other element than the carcinomatous one could be found, and hence he thought it should properly be called a true blastoma, a tumour arising from unpotential cells, in this case a mesothelioma, and accordingly an extremely rare one in such a young patient

Professor McWEENEY said that after examining Mr O'Farrell's microscopical specimens he had no doubt that apart from embryological considerations, the tumour should be called an adeno carcinoma

Professor H METTAM said he did not see why a new growth in the kidney should not be of a compound papillomatous nature such as is met with in the ovary

Mr O FARRELL, in replying, said he was pleased to have had his diagnosis confirmed as to the adeno-carcinomatous appearance of the specimen The presence of muscle fibres was he thought a not uncommon finding in kidney tumours, and was probably due to inclusions from the sclerotome

Professor McWEENEY exhibited the Kidneys of a male aged 47 years, who died at the Mater Misericordiæ Hospital in a uræmic seizure The patient was alcoholic, but had enjoyed good health until three weeks prior to admission, when he began to suffer from "fits" He complained of headache, tenderness over the left hypogastrium, violent pains in the calves of his legs and diarrhœa The seizures consisted of clonic spasms lasting about 15 minutes giving place to coma, with stertorous breathing, which lasted about three hours The pupils were unequal and knee jerks absent After a seizure the patient was quite collected and intelligent On palpation a large tumour could be felt in the left hypochondrium The patient only lived two and a half days after admission Shortly before his death a white frost-like efflorescence was noticed on the skin of the face The urine had a specific gravity of 1010, and contained a small amount of albumin Samples were difficult to obtain, and it was not fully examined At the necropsy the left kidney measured 20 by 10 by 10 cm and weighed 1250 grammes The right measured 17 by 10 by 8 cm and weighed 850 grammes The pelves and ureters were remarkably small The kidney substance was reduced to small patches of parenchyma wedged in between innumerable cysts, and there was no distinction between cortex and medulla The cysts were of all sizes up to that of a walnut, and the contents of some were thinly liquid, whilst others contained solid translucent brownish material like inspissated glue Some of the cysts contained minute yellow spherical concretions with laminated and radiated structure, and consisting of an albuminous matrix with lime salts—chiefly carbonate The largest seen measured 0 3 mm in diameter Microscopically very few glomeruli were visible, and of these the majority were hyaline, with a laminated Bowman's capsule The cysts were lined with a single line of cubical epithelium, *tending* to disappear in the larger ones The connective tissue was much increased and contained patches of lymphoid cells and unstriped muscle There were patches of cells of epithelial aspect lying free in the connective tissue and suggestive of carcinoma, but *presenting no evidence* of mitotic activity

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WEST LONDON MEDICO-CHIRURGICAL SOCIETY —A meeting of this society was held at the West London Hospital on June 4th, Colonel T H Hendley, I M S, being in the chair —Dr F S Palmer read a paper on the Functional Palsies and their Recognition, *in the course of which* he said that excluding cancer and tuberculosis there were few terms more awe inspiring and loosely applied than that of paralysis To the lay mind its significance was serious and unmistakable, and the popular view was probably based on the results seen in organic cases alone The recognition of the functional examples was of paramount importance to the clinician No distinction could be drawn between the words hysterical and functional as applied to paralysis Organic disease and functional disorders might co-exist, as some times seen in cases of cerebral tumour Many grave diseases of the nervous system developed on functional lines and for a time masked the underlying cause, especially the irregular forms of disseminated sclerosis, in their earlier stages they were sometimes indistinguishable The diagnosis of the functional palsies was made by the exclusion of organic signs, evidence supplied by the examination of reflexes and the recognition of hysterical personality Ordinarily recovery was the rule except in long standing cases with fibrotic changes in the joint and tendons Sensation might or might not be disturbed, but *usually marked* anæsthesia in some form was present Although it was *often profound*, and frequently changed its position, it never corresponded to the anatomical distribution of the paralysis which varied from slight motor weakness to absolute loss of power Within recent years some special signs had been noted of great diagnostic value to practitioners Besides several local palsies the types usually encountered were monoplegia, hemiplegia, and paraplegia, diplegia and quadriplegia were so rarely seen that they did not require attention Much importance was attached to the study of the reflexes especially the plantar response gait pupillary and electrical reactions, together with the use of the ophthalmoscope Of the local palsies hysterical aphonia due to paralysis of the adductors, in the eye concentric contraction of the visual fields and in the ocular region pseudo-ptosis from spasm of the orbicular muscle were the most common Some of the functional palsies were comparatively easy to recognise, but others were problems of great difficulty —Mr N Bishop Harman, Dr Alastair MacGregor Dr A Ogier Ward, Mr O L Addison and others took part in the subsequent discussion, to which Dr Palmer replied papers from which the facts included have been taken, and great credit is due to Miss A Newbold, who has been responsible for most of these references, especially those which have been taken from foreign works and journals

This book should have a wide circulation, as it deals with a subject which concerns all medical men who have to treat or to examine workmen

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Medical Applied Anatomy for Students and Practitioners

By T B JOHNSTON M B, Ch B Edin, Lecturer on Anatomy, University College, London With three full page plates in colour and 146 other illustrations in the text Edinburgh Medical Series London A and C Black 1915 Pp 436 Price 7*s* 6*d* net

IF the question were asked what sort of book upon human anatomy could be written at the present day to fill any real gap in our already long series of text books, an answer could easily be given there is need for a medical applied anatomy The ideal book is to be for the physician what so many existing surgical anatomies are for the surgeon It is easy to name several works upon surgical anatomy, every one of which is good but medical anatomies are few, and to recommend any treatise as a text book which should guide the physician would be matter of considerable difficulty To judge by the attempts that have been made, the writing of such a book is no easy matter

It is to be doubted if even now Dr Johnston has produced the exact book we have in mind, but it is certain he has written a very good one The writing is clear and careful, and the accounts of anatomical conditions are for the most part excellent The author has used judgment in assigning definite anatomical explanations for clinical phenomena, and very few criticisms could be made with any justice, it should be pointed out, however, that the commonest anatomical basis of epistaxis is as a rule very beautifully revealed to the anatomist s inspection, and that it is not a communication between nasal veins and superior longitudinal sinus *viâ* the foramen cæcum

We think that a book so good as this should be more fittingly illustrated, the beautiful drawings of Leveillé make but poor blocks when handled by modern processes, and Sir William Turner s illustrations which were excellent 40 years ago, could be improved upon to day It is doubtful if surface markings are best shown upon the cast of a classic figure, and the author s purely diagrammatic work is not always satisfying (see especially Fig 123)

It would be a pleasure to welcome a subsequent edition of this work illustrated by a new and uniform series of anatomical drawings and diagrams

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LIBRARY TABLE

Field Hospital and Flying Column By VIOLETTA THURSTAN London and New York G P Putnam s Sons 1915. Pp 184 Price 2*s* 6*d* net—The Field Hospital was in Belgium and the Flying Column in Russian Poland Miss Thurstan was sent out by the St John Ambulance Association in charge of a party of nurses to serve under the Belgian Red Cross They worked at first in Brussels and in Charleroi and the neighbourhood, where they saw many examples of German "frightfulness, Charleroi being entirely burned down by means of an organised system of incendiarism Then they returned to Brussels, whence after a little they were expelled by the Germans, being conducted as prisoners to Denmark Miss Thurstan gives a vivid account of the hospital work in Belgium, where the detachment seems to have done admirable work under great drawbacks, but patients, doctors, and nurses worked with such a spirit that most difficulties were surmounted The journey through Germany *via* Verviers, Cologne, Münster, and Kiel to the Danish frontier was made singularly unpleasant, but the party were fortunate in meeting one German officer who behaved as a gentleman and a soldier who looked after them at Hamburg After a short stay in Copenhagen Miss Thurstan and three of her nurses volunteered for service in Russia, which service was gladly accepted Here the Flying Column work began in Warsaw, later on the column moved to Lodz, round which there was severe fighting and terrible suffering uncomplainingly borne by the wounded Lodz eventually had to be evacuated and 18,000 wounded were safely moved out in four days Miss Thurstan ended her labours in the trenches at Radziwilow, where she was nearly killed by a bomb from a Taube, which exploded close to her However, she escaped with only a slight wound in the leg In addition to this she contracted pleurisy and was sent to Petrograd to recruit, and there this unpretending and very interesting little book was written

Medicine (Catechism Series), Part II, second edition, pp 180 *Operative Surgery* (Catechism Series), Part II, first edition, pp 144 *Botany* (Catechism Series), Parts I and II, second edition, pp 80 and 152 Edinburgh E and S Livingstone Price 1*s* each.—We reviewed *Medicine*, Part I (second edition of this series), in THE LANCET of Feb 7th, 1914, p 394 *Part II*, now before us, deals with disorders of nutrition, chronic intoxications and sunstroke, diseases of the kidneys, and diseases of the blood and ductless glands Like the former volume, this also appears to be well condensed and kept fairly up to date by its modestly anonymous author —*Operative Surgery, Part II*, is another useful condensation It deals with amputations and other operations on the extremities, and operative treatment of fractures and in the head and neck, with nerve operations, trephining, and operations on the cranium, lips, mouth, and pharynx, the neck, and the thyroid body —*Botany*, Part I, deals with general classification, the anatomy of plants, with insectivorous plants, and with the natural orders Part II with the physiology and histology of plants, and includes the life history of ferns, mosses, and an account of bacteria and fungi For the purposes of revision and for writing up class notes such books as these serve a very useful purpose As we have repeatedly remarked, such books are of value only when used to marshal and review knowledge already gained If used in place of larger works they are pernicious

Towards Racial Health A Handbook for Parents, Teachers, and Social Workers on the Training of Boys and Girls By NORAH H MARCH, B Sc, M R San I With a foreword by J ARTHUR THOMSON, M A., LL.D Illustrated London George Routledge and Sons, Limited 1915 Pp 326 Price 3*s* 6*d*. net —The title of this very excellent little book, which no doubt Miss March has selected after due deliberation, is hardly calculated to convey an adequate idea of its scope and objects down the acid producing proteins of the food Plenty of water should be given, Dr Fischer *believes that* the primary function of the kidney is to *excrete water, and* that "the secretion of all dissolved substances is secondary to this" He has a number of observations to make on methods of estimating clinically the acidity of the urine, and the deductions that may fairly be drawn from the acidities found, that should be of interest to clinicians Using methyl red (0 2 gramme in 100 c c alcohol) as an indicator, he says "I cannot recall a single patient in whom it was difficult or impossible to hold the urinary acidity below that of the turning point of methyl red who did not die" At the end of the *volume he gives a discussion* of glaucoma considered as *one of the local œdemas*, he sets it down to the production or accumulation of acids or similar substances in the eye

The book is long, and the contentious matter with which it is filled is so abundant that it is hard for a reviewer to do full justice to it in a brief compass Dr Fischer writes very clearly and has arranged his matter excellently He often gives the impression that he underestimates the strength of the position of his adversaries—the believers in the importance of *osmosis, for example*, or of cell membranes, or of the distinction between living and dead tissues, in the metabolic processes of the living body He has undoubtedly done good service by drawing attention to the importance of the hydration and dehydration of the colloids of the body, and the necessity for the study of colloid chemistry by those who would understand the why and wherefore of vital processes But perusal of his pages leads to the feeling that the phrase "colloid chemistry" is but an ample cloak for our ignorance of the physico chemical processes of living cells, and that as an explanation it takes us no further than, for example, an *explanation* of bacterial agglutination based on such an obscurity as Helmholtz s theory of double electric envelopes Dr Fischer is an enthusiast with a far reaching theory to push, and so it is perhaps not unnatural to find his views one sided wherever that theory is concerned His volume makes stimulating and even provocative reading, it may be warmly recommended to all physiologists and medical men who are interested in the main subjects with which it deals—namely, œdema, nephritis, and glaucoma

The Heart in Early Life

By G A SUTHERLAND, M D *Edin*, F R C P Lond, Senior Physician to the Hampstead and North West London Hospital, Physician to Paddington Green Children s Hospital London Henry Frowde and Hodder and Stoughton 1914 Pp 211 *Price 6s*

THIS work deals with a subject which receives but little attention in the ordinary text books, but which is of the greatest importance in determining a child s future course of life The heart in childhood and youth, as in adult life, is subject both to organic disease and functional derangement, but the former is more generally understood than the latter The differentiation between the two may be difficult, but it must be determined as far as possible For a child's whole life may be unnecessarily hampered and its development stunted if functional disturbance is mistaken for organic mischief There is a close similarity between the cardiac signs and symptoms of the two conditions, and the whole aspect of each case has to be carefully studied As Dr Sutherland points out, the period of childhood and youth has its own peculiarities and problems, there is an instability about the cardiac action which is not present in the fully developed adult heart This instability would appear to be both in the nervous mechanism—central and peripheral—which *controls* the heart and in the heart itself In early life the *cardiac action is much more* easily disturbed because the cardiac apparatus is not yet fully developed, hence a large number of what may be called developmental disorders and disturbances are met with

A full description is given of the various forms of functional cardiac irregularity in the young, the *cardio respiratory* form being especially considered. The diagnosis and prognosis of these irregularities are discussed at length, and this section will well repay careful study It is rightly pointed out that if the cardiac disturbance is proved not to be of organic *origin* the important conclusion follows that no treatment directed to the heart is required. The patient's surroundings and mode of life must be *carefully considered*, and a search must be made for any source of infection or any disease in other *parts of the body*, particularly gastro intestinal *disorders* We agree that the majority of these disturbances are to be traced to a disordered state of the nerves, and will not be removed except by treatment directed to building up a healthy nervous system

Organic disease of the heart in early life is also well described, and much information likely *to* prove of value in actual practice is *given The importance of preventive treatment* is emphasised In the case of an acute attack of *rheumatic* fever the possibility of carditis must always be kept in mind, and support will be given to Dr Sutherland s contention that to prevent this complication the salicylate treatment should be thoroughly carried out, while rest during the convalescent stage should be sufficiently prolonged

We cordially *recommend* this volume to those engaged in general practice who are likely to be brought into contact with a large number of the diseases—major and minor—of childhood

Occupational Diseases of the Skin a Brief Account of the Trade Processes and Agents which give rise to them

By R PROSSER WHITE, M D Edin, M R C S, Senior Physician and Dermatologist, Royal Albert Edward Infirmary Wigan, &c London H K Lewis 1915. Pp 165 *Price 7s 6d* net

THE more widely our knowledge of the diseases of the skin extends the more do we *appreciate* that many of the *dermatological* lesions which we have to treat arise from the external influence of *chemical substances* and other agents with which the skin is brought into contact, and the multiplicity of modern trades has increased greatly the number of the harmful substances which are able to give rise to diseases of the skin Up to the present no work has been specially devoted to this subject, and we therefore welcome the appearance of this book, for it will enable many practitioners to identify the causative agent of a doubtful lesion of the skin The passing of the Employers Liability Act has also made the matter of more importance

While the value of the book is great *in itself* it has been materially enhanced by the *inclusion* of a very large number of *references* to the original

Mr ARTHUR SAMUEL STOKES, M R C S , L R C P , of Weldon, then gave evidence to the effect that formerly he had 30 club patients at Bulwick, who formed the great majority of the club patients in the place These club patients became his panel patients after the National Insurance Act came into force Mr Kramer started a surgery at Bulwick. He learned that his panel patients at Bulwick, all except four, had transferred to Mr Kramer It was not true that he had stated that he did not wish to go to these Bulwick patients He had made inquiries as to what had been transpiring, and as a result he brought this complaint

Several witnesses gave evidence on behalf of the complainant

JAMES BARRATT (Bulwick) stated that Mr Kramer had come to him and said "I heard you were going to change doctors" He had replied that Mr Stokes had been his doctor for many years Then Mr Kramer asked for his medical card and also that of his brother He (Mr Kramer) took the cards away with him. He afterwards found that he was transferred to Mr Kramer s list He had no fault to find with Mr Stokes

FREDERICK DOLBY (Bulwick) stated that Mrs Saunt had asked him to join Mr Kramer s panel He was quite satisfied with Mr Stokes, and he had not applied for transfer to Mr Kramer

Cross-examined by Mr BATTEN, WITNESS said that he had never made any application for the medical card, but he had received it by post

ALFRED LANE stated that in December last Mr Kramer came to him and asked for his medical card He said that he wanted it to be sent in because it ought to be in next day Witness gave him the card He signed nothing The medical card came to him through the post. When it came it had Mr Kramer s signature upon it He found that he had been transferred to Mr Kramer He was surprised He wished to remain with Mr Stokes He was transferred back again to Mr Stokes

The Council sat *in camera* in order that it might consider a matter in connexion with the case

The Council adjourned.

THURSDAY, JUNE 3RD

Penal Case

The Council resumed consideration of the case of Alfred Bertie Kramer

The case for the complainant was continued

Mr FREDERICK THOMAS FISHER, M.R.C S , L.R.C P , was called as a witness on behalf of the complainant. He said that he had been in negotiation for the purchase of the practice at King s Cliffe belonging to Mr Kramer He had arranged to visit the practice on July 1st He had had his suspicions aroused. He had heard things which he did not like and he had made up his mind to break off the negotiations

Mr BATTEN (cross-examining) There was no intention of selling you the practice until after this inquiry?

Mr FISHER I did not know this inquiry was going on until this morning

Mr BATTEN The negotiations with you were suspended. There was no attempt by Mr Kramer to get you to complete the purchase.

Mr FISHER Yes. I saw his lawyer yesterday and he told me that the provisional agreement I had signed was binding and the practice was sold to me but I refused to take it up

Mr BATTEN Where did you see his lawyer?

Mr FISHER At Stamford.

Mr BATTEN (addressing the President) That puts me in rather a difficulty I should like to consider my position

The PRESIDENT Do you ask the Council that you should retire?

Mr BATTEN I would like a minute to speak to my client. I do not want to place him at a disadvantage.

The PRESIDENT You may do so

Mr Batten and Mr Kramer retired from the Council chamber

Mr BATTEN (returning shortly afterwards) said Mr Kramer appears to have fainted and I wonder whether the Council could do any other business in the meantime and allow this matter to be suspended for a few minutes

The PRESIDENT Certainly

The Council proceeded to deal with other business reported later After certain reports had been received Mr Batten returned

Mr BATTEN said that he understood from all appearance that Mr Kramer would not be able to do anything in his case that day He (Mr Batten) was unable to do it for him

The PRESIDENT Do I understand you withdraw from his representation?

Mr BATTEN I do withdraw, but I feel he is not able to conduct his own defence to-day

The PRESIDENT You do not propose to act for him further

Mr BATTEN No, sir, I do not

The PRESIDENT said that an official of the National Insurance Commission was in attendance to inform the Council what was the normal procedure in sending in the transfers of panel patients who desired to change from the list of one medical man to that of another He would give this information as a friend of the court and not as the witness of either party He would ask Mr Batten to remain in the room in the interests of his late client in order to communicate to him the decision of the Council as to any adjournment

Mr BATTEN assented

Mr JAMES RAE, an official of the National Insurance Commissioners (England), described the procedure by which panel patients could transfer by consent from one medical man to another at any time Otherwise panel patients could only transfer at the end of the year A panel patient who desired thus to change his medical man must give notice to the Insurance Committee before Dec. 1st. The notice could be on a half sheet of notepaper but no notice could be accepted unless it purported to be in the name of the patient himself. With that notice had to be sent the medical card bearing the name of the old doctor

The PRESIDENT Does the person have a new card every year?

Mr RAE No Only a new card in the case of transfer from one medical man to another When the Insurance Committee received the notice they stamped the old card "Not available after December 31st" thus cancelling it after the end of the year The committee prepared a new card and inserted the insured person s name and address on the outside of the card and stamped it "Not available for treatment until January 1st" The new card was then sent to the insured person There was no doctor s name on it when it was sent The insured person then filled up the card and put in the name of the new doctor The doctor if he wished to accept the insured person signed his name in the proper place The card was returned by the doctor to the Insurance Committee so that it might put the patient s name on the doctor s list

The PRESIDENT What happens when a person who is insured cannot write or sign his own name?

Mr RAE I have seen cards where such persons have made a mark or a cross—something to identify the information as coming from them

The PRESIDENT Is there any practice by which bundles of these insurance cards in blank can be supplied to any person?

Mr RAE It is not conceivable These cards were invariably sent direct to the insured person. The insured person should sign the card at the two places where it was indicated he should sign

The PRESIDENT The card filled up should contain twice the signature of the insured person and once that of the doctor

Mr RAE Yes

Mr FISHER gave further particulars about the negotiations for the acquisition of Mr Kramer s practice for which a sum of £750 was asked. He refused to complete the purchase

The further hearing of the case was adjourned.

Appointment of Committees

The following committees were appointed —

Education Committee Dr Norman Moore, Sir G Philipson, and Sir Francis Champneys (nominated by the English Branch Council), Dr Mackay, Mr Hodsdon, and Dr Knox (nominated by the Scottish Branch Council) and Sir Arthur Chance Sir William Whitla, and Dr Little (nominated by the Irish Branch Council)

One of the greatest difficulties which confront parents and teachers is that of conveying to their children or pupils just that amount of knowledge in relationship to sex which is necessary *for their spiritual* and physical salvation Too much knowledge, especially if given at the wrong time and in the wrong way, may do incalculable harm, whereas innocent ignorance may equally well be responsible *for the most fatal* results In the very briefest, as also in the clearest, possible way Miss March explains on social, ethical, psychic, and physical grounds why this side of education should not be neglected, and not only does she explain why, but, what is far more important, she shows how instruction of this kind should be given to children and adolescents of all ages It has been pointed out by Stanley Hall that children begin to ask troublesome questions at a very early age, between 3½ and 8 years Miss March shows how these questions may be answered in such a way that there is nothing left to undo later *She also gives full details of a most admirable* course of nature study designed to lead the child by gradual stages to a full knowledge of the significance of sex and sexual reproduction Beginning with the fertilisation of the tulip, the poppy, and the daffodil, the child is led by almost imperceptible stages to the study of reproduction in earthworms, water snails, land snails, slugs, and other simple hermaphrodite animals Then to the study of the same processes in the spider, the moth, and the butterfly, and finally, in vertebrate animals such as the frog, the lizard, and the chick In a valuable appendix Miss March explains the practical details of keeping these didactic animals in appropriate incubators, aquaria, or vivaria A difficult subject is approached in a delicate and sympathetic manner It is hard to imagine that the most sensitive feeling can be shocked or hurt by any word expressed or idea suggested in any line of this book It is written from start to finish in a most reverent spirit, reverent not only of the great biological principles which are unfolded throughout its pages, but also of the spiritual ties which unite parent to children and teacher to pupil Professor Thomson has contributed a delightful preface in which he testifies to the correctness of the biological facts referred to, on the soundness from a medical and physiological standpoint of the many references to general and personal hygiene we offer Miss March our congratulations

The Dietetic Treatment of Diabetes By B D Basu, Major, I M S, retired Fifth edition Allahabad Panini Office 1915 Pp 90 Price Rs1 8, or 2*s* —This is a revised and enlarged edition of the little work noticed *in these columns* last year The author advises the restriction, or withdrawal, of meat, alcohol, tea, coffee, and "cocoa" (i e, cacao), and recommends milk, the leguminous meal *besan*, and "coconut" (by which he means "coco")

King Edward VII Sanatorium, Midhurst —The Insurance Commissioners have now arranged for the removal of the non commissioned officers and men, for whom beds have been reserved by the War Office in the King Edward VII Sanatorium, to institutions corresponding to the localities in which the patients propose to reside As a result the sanatorium has from June 1st reverted to its original purpose of receiving both male and female patients suffering from pulmonary tuberculosis who belong to the educated classes, whether in professional or kindred employments, but whose means are limited and the sanatorium has been reconstituted for this purpose from June 1st

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION

Wednesday, June 2nd

The Council resumed its sittings at its offices, 299, Oxford street, W Sir Donald MacAlister, the President, was in the chair

Penal Cases

The Council heard charges against medical practitioners

The first case to be considered was that of Alexander Orford Schorn, registered as of Sacriston, Durham, M B, C M 1892 U Edin, who had been summoned to appear before the Council on the following charge —"That being a registered medical practitioner you abused your position by committing adultery with a Mrs Collins, whom you had been attending professionally, of which adultery you were found guilty by the decree of the Probate, Divorce, and Admiralty Division (Divorce) of the High *Court of Justice*, dated June 29th, 1914, and made absolute on Jan 25th, 1915, in the case of Collins *v* Collins and Schorn, in which you were the co-respondent And that in relation thereto you have been guilty of infamous conduct in a professional respect"

There was no complainant in this case.

Dr Schorn attended in person

Mr C Harper, the solicitor to the Council, brought to its notice the decree of the Probate, Divorce, and Admiralty Division, and certain circumstances connected with the proceedings there

Dr Schorn stated, on his own behalf, that in his view he had not been fairly treated in the judicial proceedings He denied that he had committed adultery

The President said Mr Schorn, *I have to inform you* that the Council has judged *you to* have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase your name from the Medical Register

The next case to be considered was that of Alfred Bertie Kramer, registered as of King's Cliffe, Wansford, Northants, M R C S Eng 1911, L R C P Lond 1911, who had been summoned to appear before the Council on the following charge "That being a registered medical practitioner you have systematically canvassed for patients by visits made personally and by a Mrs Saunt on your behalf to persons in the village of Bulwick, Northamptonshire, who were patients of Mr Arthur Samuel Stokes And that in relation thereto you have been guilty of infamous conduct in a professional respect"

The complainant was Mr Arthur Samuel Stokes M R C S Eng 1881, L R C P Edin 1882, of Weldon, Kettering

Mr Kramer attended and was represented by Mr J Batten solicitor

Mr Stokes was represented by Mr J J Parker, solicitor

Mr Parker, in opening the case on behalf of the complainant, said that he wanted *to allege* that Mr Kramer *himself* canvassed *for* panel patients and he sanctioned the canvassing by Mrs Saunt. He further alleged that Mr Kramer obtained the medical cards of these persons and instead of getting the people to sign *it would seem that* he signed them himself

The President These are insurance cards given to patients to fill in with the name of the doctors whom they chose

Mr Parker Yes They were not *filled in* by the patients in this case He had witnesses who would say that they had *not so filled* in their cards The lady referred to in the course of the charge he would submit canvassed patients in Bulwick In her declaration she said that she was not asked to do so by Mr Kramer Some statements were made to the effect that Mr Stokes was not carrying on these panel patients in Bulwick There was not a word of truth in these statements Mr Stokes had never said anything about it to anyone It was pure invention He (Mr Parker) put in certain insurance cards which he said had been filled in by some persons other than the panel patients themselves The Council would be able, he said to examine the handwriting for themselves diseases, and anæsthetics should be required antecedent to qualification. The attestation certificate forms which were drawn up in 1912 were found by the Indian Government to be in some degree unsuitable, and were modified in 1914. The second of two communications from the India Office now under consideration intimates the approval of the new forms by the Indian Government in all respects save one, and that of a purely technical character. It had been provided originally that the attestation forms dealing with the preliminary examinations in general knowledge should be signed in all cases by a university official. The Indian Government now suggests that in the case of the preliminary examination of the United Provinces (India) Education Department the certificates should bear the signature of the secretary of the examining board. The proposal is one which solely concerns the local management, and the Council will have no hesitation in agreeing to it. In the first of the two communications the Council is informed that the course of professional study for the Indian Subordinate Medical Service will be extended in the future from four to five years, and that prior to its commencement candidates will be required to pass a preliminary examination recognised by the General Medical Council. With regard to the course of study the lengthening of the curriculum will necessitate a reconsideration on the part of the Council of the recommendations issued to the licensing bodies in 1912 dealing with the extent of the recognition to be extended to it in this country, and to this end the Council is advised by the committee to request from the India Office full particulars of the new conditions, including the subjects of study, the time devoted to each, the nature of the examinations and the character of the teaching. In view of the intimation that the Indian authorities will in future require from the candidates a preliminary examination in general knowledge recognised by the Medical Council, the committee recommend that the 'regulations in regard to the *registration of students*' as published yearly by the Council be regularly transmitted to the India Office. In the present circumstances as the older regulations were to some extent modified last year, the report of the Education Committee upon Indian examinations as adopted by the Council in June, 1914, should also be transmitted. Under the new conditions the actual 'preliminary examinations' at present conducted in India are accepted by the Council as marking the date of the commencement of the curriculum and establishing full recognition to the courses of study in chemistry, physics and biology, but they do not of themselves entitle to admission to the Students Register in this country and for that end must be supplemented in each case by an additional examination specified in the list printed by the Council. The committee recommend that this report be adopted and transmitted to the India Office."

Dr. MACKAY, in moving the adoption of the committee's recommendation, said that the subject of the Subordinate Medical Service in India had been before the Council on several occasions. On the last occasion the Council took the step of saying that certificates brought by Indian students who sought recognition as students in this country should be on uniform forms which had been drawn up and approved by the Indian Government. The forms as first drawn up were not quite satisfactory but they were altered as the report showed. The next matter with which the report dealt was of more importance. The Council would remember that with regard to subordinate medical officers the preliminary examination was not necessarily one accepted by the Council and the course of study was a modified one extending only to four years. The Indian Government had now intimated that they proposed to change this arrangement. Under the new circumstances candidates for subordinate medical posts would be required to pass a preliminary examination accepted by the General Medical Council and also to undergo a five years course. In these circumstances it was necessary that the Council should modify its recommendations to the licensing bodies as to the amount of recognition of the Indian course for students who came to this country. One part of the report, it would be observed asked for details of the new five years' course. If the Council adopted the report it would get the information from the India Office in order to enable it to take effective action.

Sir JOHN MOORE seconded, and the motion was agreed to.

The Apothecaries' Hall of Ireland

Three reports were submitted by the Examination Committee in regard to the Apothecaries' Hall of Ireland—viz., (1) report on tables furnished by the Apothecaries' Hall of Ireland in regard to examinations held in October, 1914, and February, 1915; (2) report on the tables showing the results of examinations held in June, July, and August, 1914, by the Apothecaries' Hall of Ireland, together with the reports of the assistant examiners thereon, the reply of the Apothecaries Hall of Ireland to the committee's report, and the report of the committee on the reply; and (3) summary of particulars to be considered by the General Council in regard to a proposed representation to the Privy Council as to the licence of the Apothecaries' Hall, Dublin.

The third report contained the following conclusions: "1. Notwithstanding a considerable inducement to take the first professional examination at the Apothecaries' Hall, students do not to any appreciable extent, when commencing the study of medicine, select the Apothecaries' Hall as the means of obtaining a registrable qualification. 2. Many who obtain the L.A.H. diploma have commenced their series of professional examinations, but have failed to obtain a qualification elsewhere, and the cases given support this statement."

Dr. MAGENNIS observed in relation to the third report that it was hardly fair to expect him to reply completely to it as he had not received previous information of its contents. A copy of it might surely have been given to him the night before. In these circumstances it was only fair that its consideration should be postponed until the November session.

Sir CHARLES BALL moved: "That it appears to the General Council that the course of study and examinations to be gone through in order to obtain the qualification of Licentiate of the Apothecaries' Hall of Ireland are not such as to secure the possession by persons obtaining that qualification of the requisite knowledge and skill for the efficient practice of their profession." He said that as long ago as 1895 a somewhat similar question arose before the Council. From 1888 to 1894 a Conjoint Board had existed between the Royal College of Surgeons in Ireland and the Apothecaries' Hall for the purpose of holding qualifying examinations in medicine, surgery, and midwifery. It was frequently inspected, and it was reported that the medical portion of the examination was not sufficient. This was reported in the ordinary way to the Privy Council. Before the Privy Council had heard the case the Royal College of Surgeons withdrew from the conjunction and the Privy Council replied that it appeared to be unnecessary for it to come to a decision as the Conjoint Board was no longer in existence. There had been no inspection of the Apothecaries' Hall of Ireland under the Medical Act, 1886, since 1902, but instead of that assistant examiners were required to report to the General Medical Council on the whole final examination, not only in surgery, but in medicine and midwifery. From this time on the assistant examiners furnished reports. Some of these contained very useful information. They almost invariably reported that the final examinations were sufficient. In May, 1913, it was decided to discontinue the reports from assistant examiners on the subjects of medicine and midwifery at the final examinations of the Apothecaries Hall, and to appoint a representative or deputy to be present at all the examinations other than surgery held by the Hall, and to report thereon. Dr. J. Magee Finny was appointed. In 1895 the Apothecaries' Hall said before the Privy Council that one of the reasons why their power to grant qualifications should not be withdrawn was that "young men who cannot afford to pay high fees for examination elsewhere pass the examination at the Hall at moderate cost." The fact was that the fee charged by the Apothecaries' Hall for the first professional examination was only one third of that charged by the Conjoint Board of the Royal Colleges in Ireland for the same examination, but the total fees charged for the subsequent examinations including the final examination, were the same for both bodies. As would be seen from the summary of particulars Dr. Finny had reported that during the year when he acted as deputy, in which there were four stated examinations, no candidate presented himself in all the subjects of the primary professional examination, while only a single candidate presented himself at one examination in physics and biology, and he withdrew before the

Examination Committee Dr Taylor, Dr Saundby, and Dr Caton (nominated by the English Branch Council), Sir Thomas Fraser, Dr Russell, and Dr Knox (nominated by the Scottish Branch Council), and Sir John Moore, Sir Charles Ball, and Dr Kidd (nominated by the Irish Branch Council)

Public Health Committee Dr Newsholme, Dr Latimer, and Mr Verrall (nominated by the English Branch Council), Dr Norman Walker, Dr Cash and Dr McVail (nominated by the Scottish Branch Council), and Sir John Moore, Dr Magennis, and Dr Kidd (nominated by the Irish Branch Council)

Coördination of School Examinations in England

A report was submitted from the Education Committee upon the recognition of certain preliminary examinations That report stated that a communication on the subject of the examination of schools from the Board of Education had been remitted for consideration by the Education Committee of the Council The Education Committee recommended that the Council should in reply report to the Board of Education as follows "The General Medical Council cordially welcomes the proposed foundation by the Board of Education of a central authority to be charged with the supervision and coördination of school examinations in England, and the establishment of a system of leaving certificates In taking this step the Council will, in fact, be reaffirming its resolutions on the subject of Nov 26th, 1904 With reference to the recognition of the proposed examinations for the purpose of admission to the register of medical and dental students, the Council reports that the standard of the second examination, as contemplated, would appear to be satisfactory, and that that of the first, which the Council is informed is to be approximately that of the senior local examinations of the University of Oxford, would be accepted under the present regulations, provided in both instances that the several subjects required by the Council are included in the examination These are Latin, English, mathematics, and one of the following Greek or a modern language This proviso would necessitate in the syllabus of the second examination, as at present planned, the inclusion of more than one 'subsidiary subject' When the detailed arrangements have been completed the Council will be glad to receive further particulars from the Board of Education'

Dr MACKAY moved that the Council should approve of the reply recommended to be sent to the Board of Education He said that it would be remembered by most of the members of the Council that in 1903 and 1904 the Council had under consideration a suggestion from the Board of Education in England that steps should be taken to make uniform a large number of examinations which existed to qualify for admission to the universities and the learned professions The Council consulted the Board of Education, which agreed in a general way to the proposals then put forward The matter had taken a very considerable time to carry through, but the Education Committee was very glad to see that the Board of Education had at length been able to take a very definite step and to put forward agreed proposals which were now almost ripe for adoption The Education Committee thought it highly important that the Council should again emphasise its support to the Board of Education in this most laudable step The last paragraph of the proposed reply to the Board referred to matters which were not absolutely settled, and expressed an opinion which perhaps might lead to further discussion later

Dr NORMAN MOORE seconded the motion

Sir BERTRAM WINDLE emphasised the importance of the subject The multiplicity of examinations had previously given the Council a great deal of trouble He only wished that there was a similar prospect of obtaining in Ireland what was now being proposed for England If the proposal could be carried out it would be very greatly to the advantage of education generally, and to no profession would it be of more importance than to the medical He cordially supported Dr Mackay's motion

The PRESIDENT remarked that it was not mentioned in the report, but it was a matter of common knowledge that the coöperation of the universities in England had been engaged in the matter, so that if it came to fruition it would be the result of the national effort on the part of all concerned The motion before the Council amounted to this that it should give its general support to the proposal as it did ten years ago and ask that details should be submitted to it

The motion was agreed to

Pharmacists and the Medical Curriculum

The report of the Education Committee also dealt with the question of pharmacists and the medical curriculum That report went on to say —" A request has been put forward by the Pharmaceutical Society of Great Britain for the recognition, for the purpose of admission to the Students Register, of the certificates attesting the preliminary examination of qualified pharmacists desirous of attaining a Licence in Medicine, and, further, for the recognition in the medical curriculum of the classes taken and the examinations in medical subjects passed by qualified pharmacists in their special course of instruction These proposals are made in view of the present 'shortage of medical men and the possible emphasis of that shortage in the near future' The committee would point out that the society has no preliminary examination of its own, and that among the examinations which it recognises there are many which are not accepted by the Council, on the ground that their standard is not sufficiently high The professional course embraces botany, physics and chemistry, and materia medica and pharmacy These subjects are studied chiefly from the point of view of their practical application to pharmacy, and the examinations appear to be amply sufficient for that purpose The question is one which does not seem to call for any action on the part of the Council, as machinery already exists in the Students' Registration Committee under which candidates whose preliminary examination is in any respect incomplete may have *pro tanto* recognition extended to those portions which are satisfactory So far as the recognition of the professional course is concerned, the matter is primarily one for the consideration of the licensing bodies, who have power to recognise any courses of study and examinations other than the final or qualifying examination, which in their opinion is equivalent to the course of study and examinations prescribed for the medical curriculum"

On the motion of Dr MACKAY, seconded by Dr NORMAN MOORE, the Council expressed its approval of the terms of the report

Public Health Committee

Sir JOHN MOORE intimated that no formal report would be presented by the Public Health Committee He, however, had been requested to inform the Council that the Registrar had been asked to draw up statistics relating to passes and rejections amongst candidates for Diplomas in Public Health for the last ten years That statistical information had been drawn up

Indian Subordinate Medical Department

A report was received from the Examination Committee, together with the chairman of the Education Committee and the chairman of the Students Registration Committee, on (1) Indian Subordinate Medical Department, preliminary examinations in general knowledge and course of study, and (2) the form of the certificates to be granted to Indian graduates and students seeking admission to the Students Register of the United Kingdom Mr C E. Mallett, the secretary for Indian students, wrote on March 31st that "since Nov 11th last fresh regulations have been sanctioned by the Government of India, with the approval of the Secretary of State, for the recruitment of military assistant-surgeons of the Indian Subordinate Medical Department The intention of the changes was to raise the preliminary educational standard for candidates for admission to the service to that required by the General Medical Council and to extend the course of study to five years'

It was stated in the report of the Examination Committee that "With regard to the recognition and subsequent training of members of the Indian Subordinate Medical Service applying for admission to the Students Register and seeking to proceed to licence in this country the Council in 1912 made the following recommendations to the licensing bodies That no certificates should be accepted from the candidates except those embodied in the special forms prepared by the India Office, that a preliminary examination in general education recognised by the General Medical Council should be required, that no one of the three professional examinations of the Indian Subordinate Medical Service should be accepted, and that two years of actual study in addition to the four years course pursued in India, and embracing the subjects of pathology pharmacology and therapeutics medicine, surgery, midwifery, vaccination, hygiene, mental

Royal College of Physicians of Ireland he could say that one candidate who was rejected at its final examination went over to the Apothecaries' Hall of Ireland and passed for the L A H. He afterwards came back and asked the Royal College of Physicians to examine him again He was rejected The Royal College had thought it necessary to alter its by laws, and to say that it would not accept any medical practitioner unless he fulfilled certain conditions The thing was becoming little short of a scandal. This matter should not be postponed unduly It had been dragging on year after year, and was damaging the standing of medical men in Ireland

Dr Norman Moore did not regard the motion as necessarily hostile to the Apothecaries' Hall of Ireland It was not deliberately intended to injure that body, and he would vote for it in the hope that it would do good to the Hall and lead to its reformation It was quite clear from the discussions which had taken place in the Council that it needed reformation At the same time it would be very wrong to send this resolution to the Privy Council That would be a hasty act, which the Medical Council should not do This was a final opportunity to the Apothecaries Hall of Ireland to put its house in order The question of the Hall s examinations had been before the Council for ten years

Dr Little observed that the matter had been under consideration not 10 years, but 30 years

Dr Magennis said that the motion was practically a first attempt at the extinction of an old Irish institution On the reports of Dr Finny he thought that any court would come to the conclusion that the examinations of the Hall were sufficient The reports which had been submitted to the Council would show that they had been improving year by year He maintained that the examinations in medicine and surgery were as difficult as those held elsewhere His great difficulty as representative of the Apothecaries' Hall of Ireland in dealing with this report was that he had received it only a very short time ago To him Sir Charles Ball had appeared to be the prosecutor in this case

Sir Arthur Chance expressed sympathy with Dr Magennis in regard to the short notice he had had

Dr Caton said that it was with great reluctance that many members of the Council had been forced to the conviction that the examinations in question were not satisfactory This opinion was the cumulative effect of a very large number of points that had been brought forward not only now but in the past They felt that there was a need either for reform or for extinction He was, however, strongly opposed to the motion being sent to the Privy Council It should be sent to the body immediately concerned so that it might have an opportunity of considering it and making the necessary reforms If no reforms were made then the Council ought to send this or a similar motion to the Privy Council

Dr Saundby hoped that the motion would not be postponed, but that it should be passed and sent to the Apothecaries' Hall of Ireland

The amendment of Dr Macdonald was rejected on a show of hands

The motion of Sir Charles Ball was carried by 29 votes to 2. Three members did not vote and four were absent

Dr Norman Moore moved that "this resolution, together with the report of the Examination Committee on the summary of particulars be forwarded to the Apothecaries Hall of Ireland for its information."

Sir Henry Morris seconded He thought that it was reasonable that some indication should be given to the Apothecaries Hall in what way modifications or additions to their curriculum and examinations should be made

Dr Magennis said that it would be unfortunate if the authorities of the Apothecaries Hall who were anxious to improve and who had improved their examinations, were not assisted by the Council as to the manner in which they ought to improve them Any recommendations or suggestions made by the Council to the Apothecaries' Hall, he would guarantee, would be stringently carried out

The President remarked that the Council could not undertake the duty of governing a body which was capable of governing itself The Council could not both pass the final verdict on these matters and at the same time be responsible for the regulations

The motion was agreed to

The Pharmacopœia Committee

The President submitted the report of the Pharmacopœia Committee, which was in the following terms "Up to the end of the year 1914 the total sales of the British Pharmacopœia (1898) amounted to 46,535 copies and those of the Indian and Colonial Addendum amounted to 4529 copies The British Pharmacopœia (1914) was issued in pursuance of the Council s instructions on Dec 31st, 1914 Up to May 29th, 1915 the number of copies sold amounted to 17,239 As the first issue of 20 000 copies is thus nearly exhausted a second issue of 10,000 copies has been prepared and will shortly be ready for distribution The opportunity has been taken to amend the typographical faults which were noted in a slip attached to the first issue, together with a few others of minor importance The only alteration in the text which calls for notice is that referring to the specific gravity of guaiacol This should read 1 116 to 1 140 The Government of India has intimated that no special edition of the Pharmacopœia for use in that country will on this occasion be required The Belgian Government has courteously undertaken to inform foreign governments, who were parties to the international agreement of 1906, of the publication of the British Pharmacopœia (1914) and of the manner in which effect has been given therein to the recommendations the agreement contained The Finance Committee have furnished figures relating to the expenditure of the Pharmacopœia of 1914, as compared with that on the Pharmacopœia of 1898, which show that a saving of about £2205 has been effected in the case of the former A large proportion of the saving is due to the advantageous arrangements made with the printers and publishers, and to economy in the expenses of the committee The committee have received with regret the resignation of their secretary, Dr Nestor Tirard He has held the office for 20 years and during that time has seen through the press the Pharmacopœia of 1898, and has acted as senior editor of the Pharmacopœia of 1914 His services to the committee have been many and valuable, and have been rendered in a manner which won for him its constant esteem His important duties as commanding officer of the 4th London General Hospital occupy his time so fully that he is now constrained to limit his other engagements The committee in accepting Dr Tirard s resignation conveyed to him an expression of their high appreciation They suggest that the President should be authorised to express to him in the name of the General Council also, its grateful acknowledgments of his able work on its behalf."

The President in submitting the report, drew special attention to the passage in which the committee expressed its regret at the resignation of Dr Tirard and its high appreciation of his work He was sure that the Council would desire to authorise him to convey to Dr Tirard the expression of their appreciation of his long services

Members Hear, hear

The President said that the members of the Council all recognised Dr Tirard s devotion to the country, which had induced him to lay down his office as secretary of the Pharmacopœia Committee in order that he might fully devote himself to his military duties

It was then agreed by the Council that the President should be authorised to convey to Dr Tirard "its sense of the very valuable services which he had rendered in the course of the last 20 years as secretary of the Pharmacopœia Committee and editor of the British Pharmacopœia, 1914"

Students Registration Committee

A report was submitted from the Students Registration Committee

On the motion of Dr Norman Moore it was resolved (1) "That satisfactory evidence as to visitation having been received, Reading School Blaenau Festiniog County School, and the Intermediate County School Towyn (Merionethshire) be added to the list of recognised teaching institutions approved by the Council", and (2) "That the City of Dublin Technical Schools be added to the list of recognised institutions approved by the Council, so far only as their day classes are concerned."

Appointment of Registrar

On the motion of Dr Norman Moore, seconded by Sir Henry Morris Major Norman C King was reappointed Registrar for the ensuing year

The Council adjourned.

oral portion of the examination The Apothecaries' Hall said that the reason they had so few students for the early examinations was that the General Council refused to register as medical students candidates who had passed the preliminary arts examination held by the Apothecaries' Hall By direction of the Council (Sir Charles Ball, still quoting from the summary of particulars, proceeded to say) the Examination Committee made an analysis of the returns sent in by the various licensing bodies as to the exemptions granted from professional examinations This analysis was made for the five years 1907 to 1911 The returns furnished by the Apothecaries' Hall showed that during that period 51 candidates were granted exemption from some portion of their professional examinations on the ground that they had passed similar examinations elsewhere During the same period only 37 candidates passed for the L A.H diploma, and the returns furnished to the Council did not show whether any one of the 37 candidates had passed all the professional examinations at the Apothecaries' Hall These facts showed that students did not to any appreciable extent select the Apothecaries Hall from the commencement of their professional course as the means whereby they might obtain a registrable qualification in medicine, surgery, and midwifery The committee believed on very strong evidence that almost all the candidates who came up for these examinations were those who, having passed some of their professional examinations elsewhere, had failed to obtain their qualification elsewhere It seldom happened that the full previous professional history of candidates who took the L A.H came under the notice of the Council, but statements were obtained by the Registrar from the licensing authorities concerned relating to three gentlemen who registered on the L A H between May, 1912 and March, 1913 He would like to draw the attention of the Council to what the summary of particulars said This was the passage —

"Mr X , registered as medical student Dec 26th, 1911, was rejected in all three subjects of the First Professional Examination held by the Scottish Conjoint Board January, 1912, was rejected in chemistry and biology, but passed in physics March, 1912 He registered the diploma L A H Nov 25th, 1912 less than one year from the date of registration as a medical student Mr Y was rejected twice in chemistry and once in biology at the First Professional Examination of the Irish Conjoint Board He was afterwards rejected twice in anatomy and once in physiology In January, 1912, he was examined for the fourth time in pathology and obtained no marks He subsequently obtained the L A H at a time when the separate examination in pathology had been temporarily discontinued He registered in March, 1913 Mr Z had been rejected six times in pathology, three times in materia medica, seven times in forensic medicine, and four times in medicine, the only portion of the Final Examination at the Irish Conjoint Board at which he presented himself On the last occasion (January, 1910) he obtained 70 out of a possible 250 in clinical medicine He registered as L A.H in May, 1912 The Apothecaries' Hall have declined to discuss these cases but have not challenged the facts " The reason why the Apothecaries' Hall of Ireland declined to discuss these cases was because the gentlemen in question had become qualified It was true that Dr Finny, who attended from 1913 to 1914, spoke favourably of some portions of the examinations, although he made serious comments on other portions It was desirable to recall to members of the Council some of the things that Dr Finny said For instance in regard to physiology at the examination in July, 1913, he reported "The very smallest acquaintance with the subject seemed to satisfy the examiner, and the questions were by no means of a searching character " He further reported 'The facilities for an examination in practical physiology were *nil* with the exception of the microscope in histology ' In pathology he said that in July, 1913 the only examination was in connexion with the orals in medicine and surgery In 1914 the separate examination was reinstituted Dr Finny spoke favourably of this new examination "now that it is given a special place to itself in 1914, previous to this change it was open to grave objection ' The motion which he (Sir Charles Ball) now proposed was a simple one What would happen if it was adopted by the Council? It became a question for its further consideration whether any move in the direction of reporting to the Privy Council should be carried out But the passing of the motion did not in any way bind the Council to report its finding to the Privy Council The Medical Act said that "if it appears to the Council it shall be lawful" for it to represent to the Privy Council It was not incumbent on the Medical Council to make the representations The Council might do so if it desired There were one or two points which he desired to mention A gentleman who registered as a member of the Apothecaries' Hall of Ireland had practically all the advantages of any other registered medical practitioner A large proportion of those who took this particular diploma very soon afterwards came to some of the Royal Colleges, and presented themselves as registered medical practitioners seeking the separate licences given by those Royal Colleges If the gentleman succeeded in passing the examination he could come and register his new qualification, not as an additional one, but in substitution for his first acquired one

Mr VERRALL seconded the motion In November he seconded the proposal for an inquiry, and now, having satisfied himself of the justice of this motion, he proposed to second it Sir Charles Ball spoke out of full knowledge on this matter He did not think that, subject to any explanation or reply, anybody could doubt that there was a substantial case for impugning the value of these examinations Even if the Council were prepared to continue the expense of supervising this particular examination there was no proof that it would provide such a test of candidates as the Council was bound to see was given

Dr MACDONALD moved as an amendment "That the further consideration of the motion be adjourned to the November session " He said that his reason was that the report had not been long enough in the hands of the Council for consideration The report only came into the hands of members that day It might be necessary to pass the motion, but they should first have time for consideration

Sir HENRY MORRIS seconded the amendment He said that he was at a loss to know what would follow if this motion was passed If it were passed there would be no alternative if the Council acted consistently, but to send it to the Privy Council If the Council did not think that course should be taken, then he wanted to know what course would be taken Surely the Council would not pass a resolution of this sort without something following on it It was clear that if the Council passed a resolution of this sort something ought to be done to take care that if the examinations were to be continued the course of study should be such as to bring the examination up to a proper standard He confessed that he did not see the point of Sir Charles Ball s remarks about the man who had got the L A H coming to London and getting the M R C S and the L.R C P , and substituting that qualification for the L A H on the Register Why should he not? He was sure that Sir Charles Ball did not mean to insinuate that the Royal College of Surgeons of England was likely to pass a man any easier because he was a possessor of the L A H It was quite possible that the man might pass the examination because of the amount of study which he had done after obtaining the L A.H He was sure Sir Charles Ball could not have made the remark to prejudice the body for which he (Sir Henry Morris) was speaking It was unhappy that he should have made the remark

The PRESIDENT said that he would explain what courses were open if the motion was passed Some time ago legal opinion was taken on the consequences of motions of this kind He was advised that the Act was clear The Council was entitled to pass such a resolution as this but it was not obliged by anything in the Act or in the nature of the case to report it to the Privy Council The alternative course was to send the motion to the Apothecaries Hall of Ireland along with the summary statement on which the motion was based and to invite any reply or any suggestion of improvement or any suggestion of alteration of the present system which the authorities of the Hall might desire to bring to the notice of the Council That could be done if this motion was passed and the Council saw fit

Sir JOHN MOORE said that he would vote against the amendment It was futile to say that this subject was sprung on the Council. It was all very well for people in England to talk about it But as representative of the

The report went on to state that a covering letter was sent by the chairman of the committee to each of the dental schools, in which the further inquiry was made whether the supply of students was or would be affected by the ultimate selection of one or other of the alternative methods of obtaining instruction in mechanical dentistry—viz. at the hands of a private practitioner or in a department of a dental school The committee regretted that as it had up to the present received answers from only about half the number of the licensing bodies and from a somewhat larger proportion of the teaching bodies, it was not in a position to make a complete report nor to make any recommendation It was within their knowledge that some of the licensing bodies who had not yet answered had the matter under careful consideration, but were not yet in a position to make their report

Dr SAUNDBY mentioned that the body which he represented was considering the matter

Sir HENRY MORRIS said that his College was also considering it. A joint committee was considering the matter to see whether any change could be made which might be advantageous to the public and the profession

The report was adopted

National Insurance Act Committee

On the motion of Dr KIDD, Sir Arthur Chance was appointed an additional member of the National Insurance Act Committee.

End of the Session

At the close of the session of the Council on Friday, June 4th, it was intimated that Major N C King, the Registrar, who was present in khaki, had been instructed to report himself for duty with the 3rd Battalion of the London Rifle Brigade at Tadworth Camp Major King received the good wishes of the Council on his departure It is understood that he will be called to an important command in his regiment.

On the motion of Dr NORMAN MOORE a vote of thanks was passed to the President for his services in the chair

The session then came to a conclusion, and the Council rose to meet again in November

THE VALUE OF ANTITYPHOID INOCULATION

IN view of the opposition that continues to be made in some quarters to the use of antityphoid vaccination, we are enabled, through the courtesy of Dr L S Mackid, to publish the following report made by him as medical officer at Calgary, Alberta, Canada, to the *Canadian Pacific Railway*, on the results of a systematic antityphoid vaccination of the company's employees extending over the three years 1911–13 —

With the large increase of the population in the western country during the last few years it has been a hard matter to keep pace in a sanitary way with the growth This is true not only of this country, but of all new districts which open up, and as a result we suffer from those diseases which follow insanitary conditions Our worst enemy in this field is typhoid fever To a large company like the Canadian Pacific Railway the presence of typhoid means a very great loss much more than one would imagine without going into it thoroughly We have already done our utmost to fight the condition by sanitation and have been greatly rewarded for our efforts We followed pretty closely the rules as laid down by the military authorities covering the sanitation of the camps With the introduction of typhoid vaccine into the armies of the world and the marvellous results that have been recorded we decided to introduce it into the railway world.

To give an idea what typhoid means to a big company a few figures are given. When a man goes down with typhoid he is incapacitated for a period of at least four months or in terms of days about 120 days In the year 1911 there were about 320 cases of typhoid fever on the Alberta Division, which means a loss of time to the company of 38 400 days Again this disease comes just at the time of the year when these men are most needed, that is in the fall of the year, when the work is being finished before the oncoming winter, and when the company is getting the harvest away and placing coal and other winter supplies all over the country Now if it means all this to the company what does it mean to the man himself? It means that he is incapacitated just at the time when there is plenty of work for him to do It means a heavy raid on his financial condition for medical, hospital, and convalescent expenses at the time of the year when he can least afford it.

Initial Difficulties —Technique and Reactions

Having all this in our minds we decided to approach the company and get their coöperation and were met more than half way in the scheme This however was only the starting point, as we still had to get the consent of the men, as it was upon them that the vaccine had to be used We interviewed as many as possible and placed the proposition before them as clearly as we could and were more than satisfied to find that a great number entered in the work, sufficient, at least to warrant our going ahead with the vaccination All the district surgeons were also eager to start ahead with the work as soon as possible We soon found out that our troubles were only commencing The men all had very painful recollections of having been vaccinated for small pox and immediately put typhoid vaccination in the same category We were also dealing with a non disciplined lot of men whom we could not force to be vaccinated, so it had to be optional, and in several places it required a great deal of patience and some hard talking to convince them that it was being done for their own good

For the complete treatment we used three inoculations at intervals of 10 days The first inoculation consisted of 8 minims containing 500 000 000 killed bacteria. Ten days later a second inoculation of 15 minims containing 1 000 000 000 bacteria, and again, 10 days later, 15 minims of 1 000 000 000 bacteria. The site of the inoculation was chiefly the upper arm either at the insertion of the deltoid muscle or the back of the arm into the triceps These injections were done as far as possible in the afternoon so that the reaction would be all over by morning A few hours after the injection the reaction commenced like an oncoming attack of la grippe —slight headache, general soreness lassitude slight elevation of temperature and in some cases slight nausea This lasted for about 10 hours and was then completely gone. The local reaction was redness, pain swelling, and heat This lasted longer than the general symptoms but was pretty well over in 48 hours We used the ordinary hypodermic syringe with several needles which were sterilised by boiling a separate needle being used for each inoculation The site of inoculation was simply prepared by painting with iodine, and after the injection was done no dressing was applied Some of those inoculated showed more severe symptoms than the rest, such as syncope which lasted for a short while and was recovered from without any treatment Examination of these men showed no reason why it should have happened We found no condition that we could classify as a contra indication to vaccination As to the time lost as the result of the vaccination about 95 per cent. of the men kept right on at their work The other 5 per cent. were laid off for not longer than 48 hours

Results Showing the Value of Antityphoid Vaccination

In 1912 there were about 5500 inoculations done with two cases of typhoid developing amongst them, and one of these two had only received one injection and came down with the fever a few days later, so that it is possible that he was coming down at the time of the inoculation Among the other men living under exactly the same conditions as the men who were vaccinated there were 220 cases of typhoid

One of the most striking results of the vaccine was in a gang of about 35 men, who were camped within the city limits, and who absolutely refused to be vaccinated at first In this camp 11 cases developed, and then the men began to ask to be vaccinated, which was done, and following it we had the only other case

FRIDAY, JUNE 4TH

Penal Case

The Council resumed the consideration of the case of Mr. A. B. Kramer.

The PRESIDENT said: I have received a telegram from Mr. Kramer: "Sorry unable to appear. Letter following by express messenger." The letter has just come. It says: "I wish to apologise for the inconvenience and delay caused by indisposition yesterday, and after a bad night I feel quite unable to appear at the Council this morning as wired a short time ago. If the Council will be good enough to postpone the hearing until I am well enough to appear all the accusations brought against me will be fully answered." A telegram and a special messenger have been sent to Mr. Kramer stating that the case is proceeding and his presence is desired. No medical certificate has been sent indicating that he is unable to be present. I have asked the Insurance Commissioners to allow one of the local officials, Mr. Groves, to come as a friend of the Council and give us such information as is in his power, not as a witness upon either side.

Mr. GROVES, clerk to the County Insurance Committee of Northamptonshire, said that intimations of the time at which transfers of panel patients could be made were inserted in the local newspapers. It was therein stated that the notices must be in before Dec. 1st. He described the procedure adopted in the transfer.

The PRESIDENT: Do you issue a blank card to a person who has not applied for a transfer?

Mr. GROVES: Certainly not.

Were there many applications for transfer in the district of your committee last November?—Approximately 240 in the whole of the county.

Can you say whether there were many applications for transfers in Bulwick?—I can tell you how many Mr. Kramer had transferred to him. There were 91 cases in which people transferred from another doctor to him.

Of the 91, had all been preceded by an application on behalf of the insured person for the transfer?—Yes.

Do you take any steps to ascertain the authenticity of a notice to transfer?—No. We accept the letter. We verify that there is an insured person. We do not verify the handwriting or the signature.

Mr. GROVES handed in the original applications for transfer in a number of cases.

The PRESIDENT: Will you look at these cards? (Certain cards were handed to Mr. Groves.) Will you look how the body is filled up? Is that in the same writing as this application?

Mr. GROVES: I should think so. In his experience the insured person frequently only signed the card at one place.

Mr. PARKER addressed the Council.

The PRESIDENT stated that the messenger who had been sent to Mr. Kramer reported that he had left his lodgings and it was not known where he had gone.

After deliberating *in camerâ* the PRESIDENT said: "I have to announce in public that the Council have adjudged Alfred Bertie Kramer to have been guilty of infamous conduct in a professional respect and have directed the Registrar to erase from the Medical Register the name of Alfred Bertie Kramer."

Dental Education and Examination Committee

Mr. TOMES submitted the report of the Dental Education and Examination Committee. He said that an application had been received from the National University of Ireland that their degrees of Bachelor of Dental Surgery and of Master of Dental Surgery should be recognised, particulars of the curriculum prescribed by the University being submitted. In accordance with the recommendation of the committee he moved "That the degrees of Bachelor and Master of Dental Surgery of the National University of Ireland be recognised."

Dr. KNOX seconded.

The motion was agreed to.

Mr. TOMES said that an application had been received from the University of Melbourne that their degree of Bachelor of Dental Surgery be recognised. This degree was only obtainable by those who had gone through the courses for the Licence of Dental Surgery, and this licence was granted to them. The licence was already recognised by the Council, so that the question was merely the admission of the Bachelor degree to the columns of the Dentists' Register. He concluded by moving that "the application of the University of Melbourne should be acceded to."

Dr. KNOX seconded.

The motion was agreed to.

Mr. TOMES went on to refer to a passage in the report which stated that "an application has been received from the University of Illinois (i.) that its College of Dentistry be recognised as a teaching body, (ii.) that its degree of Doctor of Dental Surgery be recognised. With regard to (i.) it is pointed out that the recognition of schools as teaching bodies does not lie in the hands of the General Medical Council; with regard to (ii.) the curriculum extends to only three years instead of four as in Great Britain. The information furnished as to the scope and conduct of the examinations is quite insufficient to enable the committee to judge of them." He moved that "the application of the University of Illinois be not acceded to."

Dr. KNOX seconded.

The motion was agreed to.

The Alleged Deficiency of Qualified Dentists

In its report the Dental Education and Examination Committee narrated the steps which had been taken in pursuance of a resolution of the previous session under which the committee was asked to consider and report on questions affecting the dental curriculum and the supply of dental practitioners. Power was given to the committee to communicate with the licensing authorities on the subject. The report stated that a letter had been sent to the licensing authorities on March 11th by the acting registrar. It was in the following terms:—

"At the November Session (1914) of the General Medical Council Dr. Newsholme, medical officer of the Local Government Board, called attention to the fact that the number of dental practitioners registered in the Dentists Register showed no appreciable increase since the institution of the Register 36 years ago. The total number on the Dentists' Register for 1879, which included all those in practice prior to the passing of the Act in 1878, was 5289, of whom 9·17 per cent. possessed dental qualifications granted by the licensing bodies; the total number in the Register for 1915 is 5426. A steadily growing proportion, now amounting to 71·08 per cent., are registered in virtue of qualifications granted by the licensing bodies, but the additions from this source are not more than sufficient to make up the loss by death or removals. It was suggested that the supply of registered dentists is insufficient to meet the increasing needs of the population, and it was pointed out that in recent years dental practice by unqualified persons had undergone a very great extension in many parts of the country. The General Medical Council expressed no opinion on the statements made in the course of a short discussion, but instructed its Dental Education and Examination Committee to consider them and to make on behalf of the Council such inquiries as might be of service and to report to the Council at its session in May, 1915. Amongst the questions suggested for consideration by the Committee are the following:—Assuming for the moment that there is a real shortage of qualified dentists, and that it is desirable in the public interest that their numbers should be increased to a considerable extent: (1) To what extent is the deficient supply attributable to the failure of the existing law, as judicially interpreted, to check unqualified practice? (2) To what extent is it due to the inability of candidates to pass the required preliminary examination in Arts before commencing professional study? (3) To what extent is it due to the length, stringency and expensiveness of the courses of professional study and examination required for qualification? If the points enumerated in the latter (3) be thought to be important factors, (4) What modifications, if any, are possible in the direction of lightening the present curriculum without impairing the sufficiency of the guarantees for efficient practice contemplated by the Dentists Act? As one of the authorities interested you are invited to communicate to the Council's committee any conclusions your experience may have enabled you to form on these points and upon the subject of dental education and qualifications in general. Such communications will, if it is so desired, be treated by the committee as confidential in so far as that their source will not be disclosed without the authorisation of the body concerned."

THE LANCET.

LONDON SATURDAY, JUNE 12, 1915

The Metropolitan Hospital Sunday Fund.

THE public is truly generous in its contributions to charity, and on the whole our general benevolence takes a practical rather than a sentimental form. Before the purse is opened the prospective giver seeks for proof that the exercise of his charity is needed. The professional beggar and the secretary of the faked charity both know this well, and will provide with fluent pen all the documentary evidence that the most exigent can desire, but while the harvest of the charlatans is great—far too great—the written word never speaks with the same force as the revealed fact. A mining disaster, a shipwreck, or a factory explosion appeals to the reason as well as to the imagination, and the realisation of the need at once calls forth a hearty response both in money and in personal help when the latter is required. It is the visible proof of their work that enables the hospitals of the metropolis to secure the amount of voluntary support that they receive, and in the same way it is the unrevealed character of much hospital energy which prevents that support from being as large as it should be. For there is little or nothing to stir the imagination of the public and help them to comprehend the enormous amount of sickness and suffering that is being ministered to daily within the walls of our great hospitals. In one large London hospital alone over 16,000 in patients, nearly 170,000 out patients, and 3917 maternity cases are treated yearly, and the Metropolitan Hospital Sunday Fund, in common with the King's Hospital Fund for London, exists to help 126 hospitals, to say nothing of other institutions. This year the privacy which surrounds hospital work has been modified by circumstances, the case of the sick and wounded soldiers has been public property and there is a wider knowledge of what hospitals really can do. The figures of admission to the London hospitals will be multiplied owing to the war, and will in themselves make a more powerful appeal than usual on behalf of the sick and suffering, but figures do not convey to the mind the vivid picture which the interior of our hospitals presents to the eye. It would not be practicable or decent to admit into the wards of our hospitals everyone who had a desire to see for himself the work of healing which is there carried on, but the hospital treatment of our wounded soldiers and sailors has been so ably described by the public press that there will be no excuse for not realising at any rate one side of hospital activities. The skill and experience of the medical, surgical, and nursing staffs of our voluntary hospitals, and the completeness of equipment of these institutions, naturally make them the best possible places for treating such of the wounded as can be moved from the seat of war, and the hospitals have responded most generously to the call which the country has made upon them. This has not been done without entailing an expenditure severely taxing their already overburdened resources, and in many cases the burden has been increased by the necessity for extending existing accommodation and the difficulty of maintaining an adequate personnel.

If the public could fully realise the enormous amount of good work that is being done by our hospitals, not only on behalf of the poor, but indirectly also in the interests of those who are able to pay for medical treatment, there would, we feel sure, be a larger response to the yearly appeal which is made on behalf of the London hospitals by the Metropolitan Hospital Sunday Fund. For it is in the wards of our hospitals and in the laboratories of our medical schools that the skill and experience are gained which are demanded from the medical man by the whole community. And not only does the individual benefit, but collectively the gain is immense, for the general improvement in public health which has so characterised the later years of our era is due largely to the facilities for experimental study in chemistry, in bacteriology, and collateral sciences which are afforded by laboratories attached to or worked in connexion with our hospitals. Again, the coöperation of hospitals with the large army of workers in the sphere of tropical diseases has helped to make vast tracts of our colonial possessions inhabitable by the white man, thus extending the Empire and adding to our prosperity by increasing trade. These are only some of the great benefits which have accrued under our voluntary hospital system, making it, whatever may be its faults and failures, of inestimable benefit to all classes. To this record, however, must now be added the wonderful response to the call of war. Without the splendid initiative and organising power of the managements of our leading institutions this response could not have been made, and the great funds which collect on behalf of these charities have played a fine part in the national struggle by helping to keep the hospitals at full working strength. The Metropolitan Hospital Sunday Fund is one of the three great agencies which help to maintain the London hospitals, its main purpose being to collect money from the various religious congregations. Primarily the appeal is made through the churches, chapels, and missions of London, but in reality the large sums that are yearly distributed among the hospitals are made up of congregational collections, with the addition of private donations and legacies. As this second source of income must of necessity fluctuate it is of the greatest importance that every effort

Dr Maclaren, Dr King, and Dr Green used the vaccine in the treatment of cases, using at each injection small doses, the first of 1,000,000 bacteria and doubling it every fourth or fifth day They found that in those cases which were treated from the beginning of the disease the complications were almost *nil*, although it did not lessen the course of the disease at all Those cases that were well advanced before they came in under treatment showed no effect at all, the vaccine here being more harmful than beneficial

For 1913 we have not as yet received all the reports, so can only give an incomplete report So far the total number vaccinated is 2771, with 1 case developing fever, and against this there are reported 70 cases amongst the non vaccinated When all the reports are in, these figures will probably be between 8000 and 10,000

The conclusions that we draw from this work are —

1 We have a very valuable aid for the prevention of typhoid fever in the use of vaccine

2 The name of vaccination should be abolished and inoculation should be used in its place

3 When cases of typhoid come under observation early enough most of the complications can be lessened

4 The use of the method should be advocated in all places where men are to be in camp and under doubtful sanitary conditions for any period of time

5 The period of immunity is apparently indefinite, probably equal to that produced by a single attack of typhoid

Since this report was made the various lists to complete the work for 1913 have been sent to us by Dr Mackid The additional number vaccinated was 8400 with only the one case developing, making a total vaccinated of 13,900, among whom 3 cases of typhoid developed The figures read as follows,—

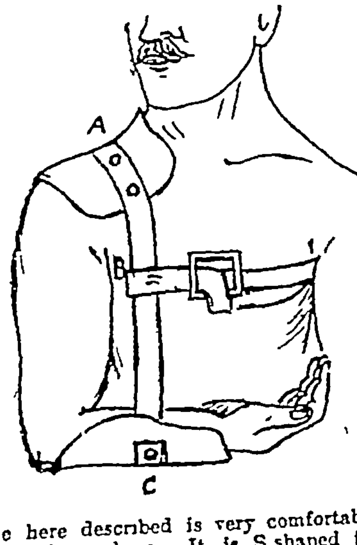
Total number men employed	24,000
,, ,, vaccinated	13,900
Number of cases among non vaccinated	290
,, ,, ,, vaccinated	3

New Inventions.

A USEFUL SHOULDER SPLINT

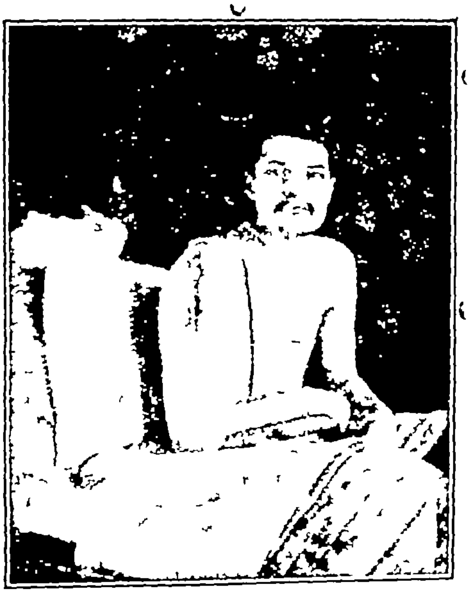
AFTER excision of the shoulder joint it is often difficult to give the necessary support to the arm, and a splint which acts perfectly in the sitting position may be quite unsuitable when the patient is lying down

FIG 1



The one here described is very comfortable and easily made, as well as cheap It is S shaped in side view, fitting *over* the shoulder and *under* the forearm It consists of a kidney shaped shoulder piece (Fig 1) A, of thin zinc or sheet steel, 7 × 3¼ inches, or wide enough just to clear the neck muscles and the acromion on either side. This is riveted to the upper end of a piece of galvanised iron strap 1½ inches wide and 1/16 inch thick, so that it (the latter) can be bent on its long axis to fit the chest The splint C for the forearm is approximately 10 inches long and of the ordinary trough pattern, or

FIG 2



long enough to reach to the wrist It will be found that the forearm varies very greatly even in persons of the same height This part of the splint is riveted to the upturned end of the upright strap shaped bar at C The whole splint is kept in place by a strap and buckle passed from a slit in the shoulder piece behind and under the opposite axilla The splint must, of course, be moulded and bent to a perfectly snug fit and as a refinement a still more perfect result can be obtained by inserting a piece of house flannel soaked in plaster of Paris under the shoulder piece, padded with wool, when the splint can be bent to fit this at leisure The arm is bandaged to the side at night and the wound can be dressed without removing the splint

The cost of the above is trifling and, what is more, the materials can be got even in an out-of way French town and it can be put together by anyone of the slightest mechanical ability

J CROPPER, M D Cantab

Anglo-Ethiopian Hospital France

A RUSSIAN WOMAN DOCTOR —According to the *Novoe Vremya* M G Stanishevskaya has been appointed *privat docent* of the chair of pathology in the Imperial Novorossisk University She is the first woman to receive this appointment in a Russian university She finished her medical studies in Nancy in 1899, passed her examinations in the Moscow University in 1900 and in 1913 presented and defended a treatise for the degree of M D

BIRMINGHAM HOSPITAL FOR NERVOUS DISEASES —The second annual report of the Birmingham and Midland Hospital for Nervous Diseases states that the new cases treated were 1093 and the total attendances numbered 13 215 Among the conditions most frequently dealt with were epilepsy 122 cases neurasthenia 176 acute neuralgia 48 hysteria 34, neuritis 23 alcoholism 20 dementia and insomnia 18 each and melancholia 16 The experience of the last two years has emphasised the need for beds There has been a great increase in the employment of massage and electrotherapy has been used with considerable success so that the expenditure of £300 for the installation of more up-to-date electrical appliances has been sanctioned The year s income amounted to £892 which left a favourable balance after payment of expenses of £143 but general supervision from the centre would none the less be welcome. It is difficult to see how men at any given hospital can tell whether their patients, under the treatment which is being adopted, are doing as well as similar patients in other hospitals. There is not a definite medium for the interchange of knowledge and it is hard to say whether certain cases are being treated at the most suitable points in the lines or whether more sorting of material would not be of advantage both to medical men and to patients. If there were regular collecting and collating of results by an advisory body whose business it would be to inspect treatment all along the lines, from what is practically the front through the intermediary hospitals to the base hospitals, we feel that practical results would follow. There is no definite suggestion that the medical service is not good, and in numberless directions its achievements speak for it as wonderfully efficacious resourceful, and devoted, the point is that its proven virtues would operate more promptly and widely under some central control. The work done cannot all be equally high in standard. Where it is not good at some point in the periphery central control would reinforce it. Where it is good the peripheral efforts would be recognised, the lessons learned in that place would be applied in another, investigation and scrutiny would be followed by coördination. In short, a service with automatic limbs would be endowed with a brain. In an epilogue to the address by Sir ALMROTH WRIGHT published in THE LANCET in April, he suggested that an Advisory Committee having much the same functions as those that have been indicated should be instituted. This body, to cover the field should consist of a surgeon, a physician, and a bacteriologist. To these we would add a second surgeon to act as secretary and registrar to the committee, and we cannot help thinking that the Director General of the Army Medical Service would find the recommendations of such a body of great assistance. Nothing, it must be clearly understood, can be done without the approval or order of the Director General of the Army Medical Service. But such an Advisory Committee would, we are sure, enable him to discharge his onerous and important duties with less chances of waste of time, with less risks of re duplication of labour, or of overlapping. The Director General, while absolutely retaining his own authority, and retaining also the right to be advised by other distinguished officers, would look to such a committee to supply him with the results of experience and practice all along the lines, when it is quite likely that there would emerge general recommendations for treatment analogous to those which already prevail in the cases of tetanus and of *typhoid fever*. The Advisory Committee would be in a *position* also to suggest the best distribution of cases, so that we should not hear that "so many" cases had been relegated to a certain man, but rather that "such and such" cases had found their way to him.

We make these suggestions with the less diffidence because we know that something in the indicated directions has found favour in the sight of high authority. There is no intention to imply that the medical work with the Expeditionary Forces has not been good, for it is admitted on all hands that the Royal Army Medical Corps has earned the gratitude of the country and that the coöperation of civilian medicine and surgery has been valuable in the highest degree. But the war has already been a long one, and may continue for some time. Many therapeutic lessons have already been learned and surely it would be advantageous to make a move in organisation which would place these lessons fully at the disposal of future workers.

Annotations.

"Ne quid nimis."

PRECAUTIONS AGAINST AERIAL ATTACKS

THE dangers of an aerial raid may be said to be threefold. There is, first, the actual explosion of the dropped bomb which may instantly destroy life by the intense concussion formed, this acting directly or indirectly, there is the chance of poisonous gases being released, and, lastly, the incendiary bomb may cause a serious outbreak of fire. It is well to be on our guard against these contingencies. Of course, little or nothing can be done in the first contingency. Concealment in a well protected shelter, as in an underground cellar, may be possible for some people in some circumstances, but the number of people to whom the advice applies is small. The protection of the household against poisonous or asphyxiating gases discharged by bombs at once suggests the same measures taken by our *soldiers* in the trenches. It is well to remember that most, if not all, asphyxiating gases are acid in character and that therefore they can generally be neutralised by the use of *an alkali*. The available alkali in every house is *common* washing soda. The bath towel made of netting with a big mesh when soaked in a 10 per cent solution (1 lb in one gallon of water) of this salt, and the excess squeezed *out*, would enable, in all probability, a person to breathe *in* an atmosphere contaminated by chlorine, nitrogen oxides, or sulphurous acid gas. The towel should be in double or quadruple layers so as to expose as much as possible the contaminated air to the neutralising action of the alkali. A *dish* cloth or a well squeezed out sponge soaked in *the* same alkaline solution would answer *equally* well. The sponge forms a very comfortable and efficient respirator if thoroughly *squeezed* out before application. It adapts itself well to the mouth and nose. The breathing should be slow, inwards through the mouth and outwards through the nose. The protection of the eyes, unless special goggles are used, is more *difficult*, the simplest precaution being to shut them *tightly* in the event of the gas causing extreme *irritation*, *until* a purer atmosphere is reached. In any case it is well to learn how to move in an enforced darkness in one's own house. In the event of an outbreak of fire the sooner steps are taken the better chance there is of keeping the outbreak local. There is nothing should be made to ensure an adequate collection on Hospital Sunday Of recent years congregational collections have shown a steady decline, owing in a great measure to the fact that a large number of well to do people spend the week end out of town Appeals have been made to absent church members both before and after Hospital Sunday, but the result has not been at all satisfactory The week end habit should not, however, operate to the same extent this year, for there is more serious work on hand than these recurring holidays imply Large calls have been made already upon the charitable in connexion with the war relief funds, huge liabilities are piling up ahead of all of us, and many of those from whom help was always forthcoming are serving their country at the front These things will certainly militate against the Metropolitan Hospital Sunday Fund this year, and unless special efforts are made the collection which takes place to morrow may suffer

But never has the need for help been greater in the hospitals of the metropolis and never has it been more deserved than at the present time The hospitals have been deprived of many of their valued workers who are giving their services directly to the men who are fighting abroad, while those who remain at home have been working at serious pressure to make up for the deficiency thus created Yet, in spite of this, not only have the sick poor been attended to with the care and efficiency of normal times, but, in addition, thousands of the sick and wounded from the front have received devoted care in these institutions, removed from the terrible environment of the war area This all means increased work, carrying with it an increased expenditure which has taxed the resources of the managers of our voluntary hospitals in some cases to breaking strain, and such facts should suffice to bring home to everyone who can help even in the smallest way the crying need for an increased financial support of the metropolitan hospitals Without the aid of hospitals as centres for the training of nurses there would have been a deficiency in an important auxiliary to all medical and surgical treatment, and our hospitals have made many sacrifices in order that a sufficient number of nurses might be trained at short notice To prompt action in this direction many must owe their restoration to life and health For many years the management of the Metropolitan Hospital Sunday Fund has placed before itself the ideal of collecting for the medical charities of London and the vast outlying districts the sum of £100,000 on each Hospital Sunday, but this total has never been realised The present moment is an admirable one for the public to show their gratitude to the London hospitals by placing at the disposal of the managers of the Metropolitan Hospital Sunday Fund a larger sum than usual—why not their ideal £100,000?—with which to lighten the burden of debt which presses so heavily upon many institutions

Medical Organisation and the War

TWO great questions are concerned when we consider medical organisation in respect of the war They are, first, the engagement of a sufficient personnel, and, secondly, its employment to the best advantage The first question has been receiving the close attention of the medical authorities at the War Office, an Emergency Committee of the British Medical Association is considering it, and a strong Emergency Committee, with Dr NORMAN WALKER as convener, has taken in Scotland practical steps towards answering it But the second question is of equal importance, if only because a personnel that is working to the best advantage with its material is more economical in its employment of men than one where there is overlapping, or where there are many round pegs in square holes The position of the medical service with the Expeditionary Forces depends, as it always has done, on the military situation But great experience has now been gained Tried men have been collected, and to a certain extent these are being detailed for the posts most suited to their capacities, so that some large general lessons in pathology are being learned There remains, however, in the minds of many a feeling that all the splendid work might be more fruitful, might be simplified, and at the same time have its value disseminated, if there were some general supervision of work done, possibly it would then be found that men could be spared in some places for more suitable work in others

In the hands of such surgeons as Sir ANTHONY BOWLBY and Sir GEORGE MAKINS, of such physicians as Sir WILMOT HERRINGHAM and Sir JOHN ROSE BRADFORD, each of whom is also a tried organiser and man of affairs, we may be sure that nothing has been wanting in the hospital treatment through the various areas that organisation would ensure, but, as we have pointed out before, each centre must work largely upon its own lines, as there is no recognised scientific supervision, while official means of intercommunication have not been established At any given hospital as its staff changes men come in who have not had experience on the spot, and there is no machinery by which to place them in immediate possession of the lessons learned by their predecessors The tendency to revert to classical treatment is therefore inevitable, and ground may have to be gone over again with clear waste of energy in the many directions in which classical treatment has to be modified to meet new and unexpected conditions This may be going on in many localities, while it is clear that local experience will vary and local standards of practice will vary also, so that the lesson to be learned in one centre is not the same necessarily as that to be learned at another It speaks volumes for the high standard of medical and surgical practice of this country that so many hospitals should have been staffed with good result by officers who have relied upon their own initiative for treatment, Nov 4th, following aspiration, and 14 ounces of pus were removed from the right pleural cavity, this again showed pneumococci Following the suggestions of the symptoms, operations were considered necessary for left sided empyema containing four ounces of pus (Nov 15th), for intestinal obstruction revealed at operation (Nov 24th) as due to strands of peritoneum dragging upon the junction of the small intestine and the colon, for a third collection of pus in the right upper chest, and apparently having no connexion with the lower focus previously drained (Dec 15th) This relieved the pain in the right shoulder Finally, on Jan 18th, the last operation, upon the right hip joint released more pus, and from that time onwards the child wasted to a skeleton and throughout having pyrexia, made an uninterrupted recovery It is remarked that vaccines proved of no avail Notable also is the fact that no pyæmia ensued in spite of the obviously generalised distribution of the infecting organisms

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THE SPREAD OF TYPHUS FEVER BY LICE

READERS of that extraordinarily vivid book the "Memoires du Sergent Bourgogne," giving the report of an eye witness and victim of the disasters of Napoleon s Russian campaign in the year 1812, will remember the horror with which the author found himself suddenly infected with vermin a few days after the French retreat from Moscow had begun The infection was picked up, he says, from some reed mats on which he went to sleep in the village of Dorogobouı, as soon as he felt the itching he got up, stripped, and threw his shirt and trousers on the fire The vermin exploded in the flames like the fire of two ranks of infantry, but for the next two months the gallant sergeant was never free from vermin, and in consequence his Memoires contain repeated longings for clean linen General de Segur, who wrote a well known account of Napoleon s Russian campaign from the point of view of a staff officer, concerned himself with such things as the European political situation, Napoleon s plans and conversation, or the disagreements between the various members of his staff but hardly touched upon such lowly matters as pediculosis among the French troops. Yet the subject was one of the utmost importance had he known it, in its retreat from Moscow Napoleon s Grand Army was harassed by a severe epidemic of typhus fever carried by vermin, and the soldiers forming the wreck of the Grand Army spread death and destruction by typhus fever right and left wherever they passed through Germany on their way from Russia As Dr A Rose points out in "Napoleon s Campaign in Russia" the position of affairs is clearly shown in the report of Dr Krantz a Prussian army physician attached to the Grand Army published in 1817 The lice carried typhus fever with them and soldiers showing no sign of the disease were capable of infecting the families of civilians in whose houses they were quartered The rapidity with which the infection spread is indicated by facts such as the following In the 1st East Prussian Regiment of Infantry there was not a single case of typhus fever until it had marched for 14 miles on a highway along which the French had passed, while after this there were 15 or 20 cases in every company of 150 men Dr Krantz had most interesting observations to record on the treatment of typhus fever. The open air treatment, inevitable in the case of soldiers on the march, had a mortality of only 2 or 3 per cent, while the patients treated in hospitals died in large numbers, also infecting and killing the physicians and nurses who attended them Soldiers presenting the headache, nausea, and vertigo that are the first symptoms of typhus fever, were dressed warmly and put into wagons and covered with straw, with other precautions to avoid frostbite At night they were quartered in isolated houses to avoid the spread of infection. It was remarked that the open air method of treatment abolished the stage of convalescence after the attack was over Three days after the patients had been free from fever for 24 hours they were fit for half a day s march or more Dr Pose, in a recent issue of the *Medical Fortnightly*, St Louis, lays great stress on the importance of killing the lice that seem even nowadays, to judge by what one hears from the front to be inseparable from fields of battle, and he quotes on this point from a circular recently issued by the German Imperial Board of Health It is obvious that powerful parasiticide drugs must be used to kill the lice, in cases where baking or boiling the infected clothes, or, as Virgil puts it, *Infectum eluitur scelus, aut exuritur igni* is a counsel of perfection and impracticable. The Board recommends for this purpose sabadilla vinegar (containing veratrine), kerosine, eucalyptus oil, and balsam of Peru. Weyland in the Franco Prussian war of 1870 found benzine excellent for this object The clothes were exposed to benzine vapour in a tightly closed box for two or three hours A recent number of the *Deutsche Medizinische Presse* speaks of asafœtida and naphthaline, regretting that no satisfactory prophylactic and no curative remedies have yet been found. Dr Rose thinks that benzine or gasoline will probably prove the most serviceable. The German State railways have an excellent plan for cleansing their railway carriages The whole carriage is run into a large iron cylinder, which is hermetically sealed, then the air is exhausted from the cylinder and its contents are warmed up (far short of the boiling point of water) by steam pipes The lice infecting the upholstery of the carriage can survive the exposure to a partial vacuum, but when the heat is turned on their body fluids are evaporated at the low pressure, and so they die the death of desiccation.

THE DEATH-RATES DUE TO DISEASE OF THE HEART ARTERIES, AND KIDNEYS

IN the United States of America the death rates due to chronic heart disease, arterial disease, and renal disease all show considerable relative and absolute increments in the last few decades Excluding valvular disease of the heart and acute nephritis, Dr. A E. Shipley in the Bulletin of the Department of Health, New York, argues that all these conditions are promoted by (1) environmental circumstances demanding a persistent hyperactivity of the circulation (2) the retention of toxic products of metabolism in the blood, and (3) senile change, so called. Examining the death rates for America in 1912 he finds that one fifth of all deaths were due to diseases of the cardio-vasculo renal type In 1870 the death rate from all causes was under 29 per 1000, in 1912 it was under 15 per 1000, but in 1912 the death rates from these disorders in persons aged 45 or more had increased by from 100 to 300 per cent., as compared with the death rates recorded at these ages in 1868 Dr. Shipley asserts that these disorders are largely preventable, and calls for special measures to so effectual as a wet blanket thrown over the scene of conflagration, followed by the application of buckets of water on the blanket We strongly advise all those who possess gardening hose to have it near at hand for use in the house Small fires can be quenched by throwing upon them a solution of ammonium chloride mixed with common salt, this when used at the outset is often effective There are many chemical extincteurs on the market, some good, some worthless, but all requiring more or less technical management It is doubtful whether the public should be advised to incur the outlay which their installation in the house involves, especially as a pail of ammonium chloride solution and a syringe would probably meet the case just as well The simpler the precautions are the better, for as a rule simplicity in the matter of appliances generally means much less nervous handling in moments of excitement and a more effective dealing with the situation The public would be well advised also if on retiring they turned off all lighting services at the meter and for night use reverted to candles The house might be placed in great danger if gas or electric mains were damaged by an explosion or fire It is well to remember what potentialities these services mean when they are let loose The switch and the tap will control them, but if any part of the system is destroyed behind these the outbreak may well defeat all attempts to subdue it

BACTERIAL FLORA OF WOUNDS

THE attention of bacteriologists has naturally been prominently drawn to the bacterial infection of wounds produced during the present war Investigations are being carried out as to the nature of the organisms present both in this country and in France The results hitherto obtained are interesting, but can only be considered as experimental and preliminary to a combined investigation of scientists and surgeons The National Research Committee is rendering valuable service by contributing grants towards the expenses of such inquiries In another column we publish a communication from three observers who have been working on the bacterial flora of wounds, Dr L S Dudgeon, Mr A D Gardner, and Mr F Bawtree The investigation was carried out in this country so that no records are given which refer to the type of bacteria found directly after injury It is interesting to note that there is the closest similarity between the bacteriology of severe injuries of the soft parts produced by shrapnel and infected by manure and a street accident infected by horse dung There is usually infection of the damaged tissues with the B aerogenes capsulatus, streptococci, and coli form bacilli The authors express the opinion that the mere presence of the B aerogenes capsulatus is not the important factor in a wound but it is the presence of this organism in tissues which are under considerable increase of tension that is of such extreme importance This would help to explain the beneficial results obtained by freely laying open the parts affected Especial attention is paid to those wounds in which pathogenic anaerobes were found Twenty one wounds yielded cultures either of B tetani or of B aerogenes capsulatus, or of both With a single exception every wound was also infected with aerobic bacteria in association with the anaerobes The frequency with which B coli appeared with B tetani suggests that its presence may be particularly favourable for the survival of this anaerobe Although no reference is made to treatment in this paper, the opinion is expressed that the prophylactic injection of antitoxin has been the means of saving the majority of the patients from serious disease arising from wound infection The communication is of considerable interest from a bacteriological point of view, and the scientific investigation is preliminary to the application of measures intended to antagonise infection We trust that a practical outcome of the research will soon be forthcoming

ROYAL COLLEGE OF SURGEONS OF ENGLAND
THE ELECTION TO THE COUNCIL.

ON Thursday, July 1st, a meeting of the Fellows of the College will be held for the purpose of electing five members of the Council The vacancies are due to the retirement in rotation of Sir Rickman J Godlee, Mr C W Mansell Moullin, Mr Charters J Symonds, and Mr Charles Ryall, and by the death of Mr C B Lockwood There are 24 members of Council, and three of these retire each year, but Sir Rickman Godlee did not retire last year as he was President at the date of the election The following list gives the dates at which the several members will retire —

1916 Sir A Pearce Gould (first elected 1910), Sir W Arbuthnot Lane, Mr W F Haslam

1917 Mr W Harrison Cripps (first elected 1905), Sir W Watson Cheyne, the present President (first elected 1897), Mr J Stanley Boyd

1918 Mr Bilton Pollard, Sir J Bland Sutton

1919 Sir Berkeley G A Moynihan, Sir G H Makins Vice President (first elected 1903), Mr L A Dunn

1920 Mr D Arcy Power, Sir F S Eve, Vice President, Sir Anthony Bowlby, K C M G, Vice President (first elected 1904)

1921 Mr J Ernest Lane, Mr H J Waring

1922 Mr C A Ballance M V O (first elected 1910), Mr W Thorburn, Mr W McAdam Eccles

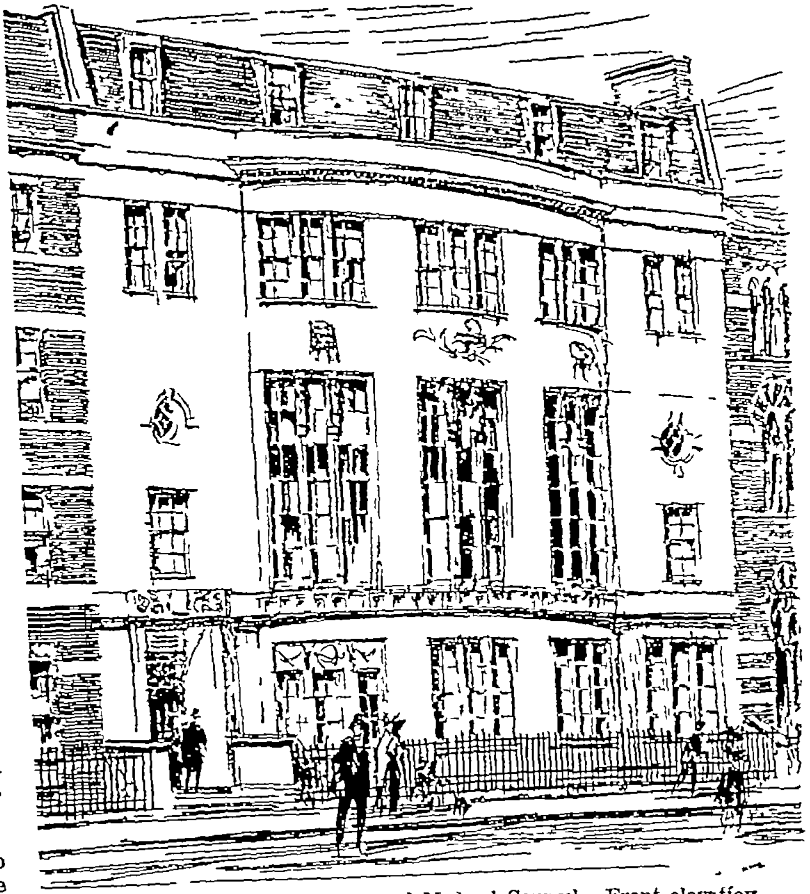
For the 5 vacancies there are 9 candidates Of the retiring candidates only two, Mr Charters Symonds and Mr Charles Ryall offer themselves for re election The other candidates are the following, the figures in brackets representing the date of obtaining the Fellowship —Mr J B Lawford (1885), Mr T H Openshaw (1886), Mr H B Robinson (1887), Mr W G Spencer (1887), Mr F F Burghard (1888), Mr H F Waterhouse (1890), Mr P Macleod Yearsley (1893)

A CASE OF GENERALISED PNEUMOCOCCAL INFECTION

A REMARKABLE case of this nature is reported by Dr D A Cameron in the *Medical Journal of Australia*, vol i, 1915 A girl aged 7 years, was taken ill on the morning of Oct 22nd, 1914 She had severe pain in the abdomen, sickness and diarrhoea The temperature was 104° F, pulse 140, respirations rapid, and there was general abdominal tenderness Pneumonia or appendicitis was suspected Twelve hours later the first operation was performed There was considerable fluid in the abdominal cavity and the appendix was much inflamed The fluid yielded a pure culture of pneumococcus The temperature afterwards still remained high though drainage was satisfactory Pain was complained of in the right shoulder A week later cough developed The second operation took place on

THE NEW BUILDINGS OF THE GENERAL MEDICAL COUNCIL

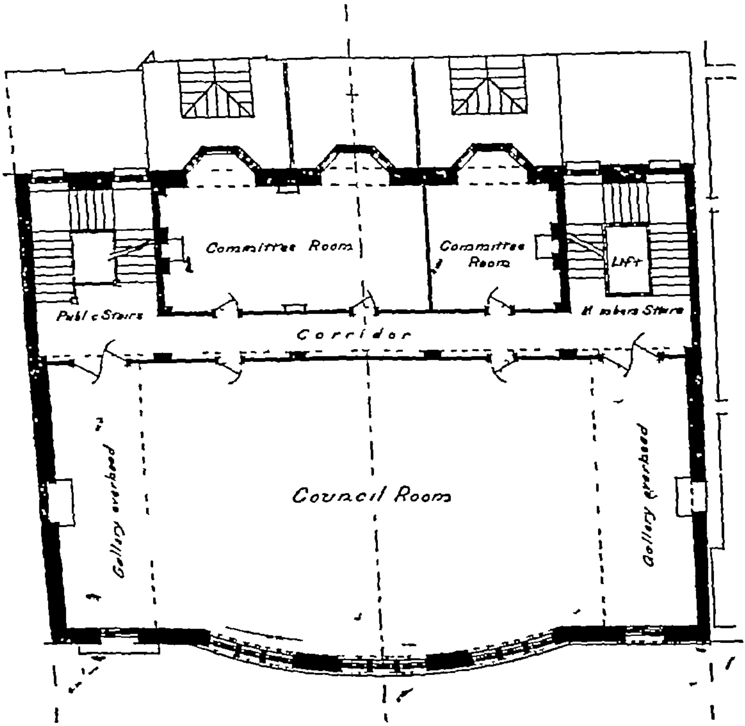
FIG 1.



The New Buildings of the General Medical Council. Front elevation.

THE first meetings of the General Medical Council took place at the Royal College of Physicians of London, and subsequently a registration office was opened in Soho square. In 1874 the Council obtained from H.M. Office of Works the premises at 299, Oxford street, which were formerly occupied by the Royal College of Chemistry, and in 1895 the Council purchased the freehold of the site and of the ground behind it, which runs through to 16, Hanover square. For some time it has been considered that it would be advantageous to dispose of the Oxford street site if a suitable one could be obtained elsewhere. Not only might the Council's income be thereby increased, but it would be possible to put up a new building more suitable to the Council's requirements. Although a council chamber had been built on and a storey added to the old building, the premises were by no means convenient. Not only was the office accommodation inadequate, owing to the large extension of the membership and work of the Council, but during the session it was quite impossible to provide proper rooms for the legal advisers, the medical profession, the witnesses, and such members of the general public who may be present during the proceedings.

FIG 2.



The New Buildings of the General Medical Council. First floor plan.

The Oxford street portion of the site has now been disposed of, and a new site has been taken on the Howard de Walden estate in Hallam street, which lies between Portland place and Great Portland street, parallel to these two thoroughfares. The street is one which has no direct openings at either end, and is therefore not much used for through traffic. The whole of it is now being rebuilt, and in about three years' time, with the exception of the Council's building and the Jewish Synagogue next door, it will consist of residential flats. The new building has been designed by Mr. Eustace Frere, A.R.I.B.A., of 1, Lincoln's Inn fields, and the contractors are Messrs. Chinchen and Co.

The front elevation is shown by Fig. 1. The front is of Portland stone, with a central bay extending educate the public in the avoidance of the conditions known to promote the occurrence of these degenerations Among the things to be avoided are undue mental strain and worry in business, abnormal social activity, over eating, the indulgence in too much protein food, excessive alcoholic indulgence, lack of fresh air and exercise, chronic constipation and intestinal stasis, and the vascular degeneration so often associated with such diseases as syphilis, rheumatism, lead poisoning, and the like Emphasis should be laid on the importance of drinking water as an aid to ridding the blood of toxic substances that raise the blood pressure Adults should undergo medical examination from time to time, so that the beginnings of these degenerations may be detected and treatment for them instituted in their early stages Dr Shipley develops a comprehensive scheme for educating the public in these matters, to be managed by local health departments on much the same lines as tuberculosis campaigns or pure milk campaigns have been managed in the past

LAVAGE IN CARBOLIC ACID POISONING

IN carbolic acid poisoning lavage with various solutions has been recommended, and two substances—alcohol and sodium sulphate—have been particularly recommended, apparently on rational grounds In the Johns Hopkins Hospital Bulletin Dr David I Macht has published an important experimental investigation on the subject and shown that alcohol is not only useless but injurious Its use is due to a fallacious deduction from the fact that it is beneficial in carbolic acid burns Alcohol was introduced as an antidote for carbolic acid in 1899 by Dr S D Powell, of New York, who used to demonstrate his view by washing his hands in pure carbolic acid and then in alcohol, and even by filling his mouth with the acid and quickly rinsing with 95 per cent alcohol Subsequently isolated cases were recorded as illustrations of the value of alcohol With regard to the use of sodium sulphate, contradictory researches have been published In the higher animals the first symptoms of carbolic acid poisoning are weakness and a peculiar muscular tremor These are soon followed by clonic convulsions, collapse, coma, and death There is very little pain, as the central nervous system is quickly paralysed Dr Macht introduced liquefied carbolic acid, both in concentrated solution and in various dilutions through a stomach tube into various animals and washed out the stomach at different periods after the appearance of symptoms with solutions or suspensions of various substances—egg albumin, alcohol, sodium sulphate, sodium sulphite, and syrup of lime Albumin proved of little use and sodium sulphite too poisonous Lime water and syrup of lime, recommended in the hope of forming an insoluble compound, were found unsatisfactory In cats the success of lavage was found to depend on the amount of carbolic acid given, the time of lavage, and the solutions used After small, though lethal, doses, washing out the stomach thoroughly with either plain water or a concentrated solution of sodium sulphate on the appearance of convulsions (three to five minutes after ingestion) saved the animals in most cases Lavage with solutions of alcohol was followed by death more often than by recovery After large doses of carbolic acid prompt lavage with alcohol was followed almost invariably by death, plain water also failed, but solution of sodium sulphate gave the best results—survival for a time or recovery After later lavage with alcohol or plain water the animal invariably died, but after lavage with sodium sulphate it occasionally recovered. Dogs withstood carbolic acid better than cats, and could be saved by immediate lavage irrespective of the medium used After larger doses immediate lavage with sodium sulphate or plain water sometimes saved the animal, while lavage with alcohol was almost always followed by death In late lavage (about 15 minutes after ingestion) sodium sulphate gave the best results and plain water the next, while the use of alcohol was almost invariably followed by death Dr Macht agrees with Tauber that sodium sulphate does not act chemically, but by hindering absorption and possibly also by purgation Magnesium sulphate can be used for the same reasons, but the possible depressing effect of the magnesium ions in case of absorption is a disadvantage Further experiments showed that animals which had previously been poisoned with alcohol withstood carbolic acid better than others Possibly this was due to the greater affinity of the alcohol for the nerve cells which prevented the carbolic acid from acting on them On the other hand, alcohol given after ingestion of carbolic acid simply promotes absorption, as it is an excellent solvent of the latter This is confirmed clinically, for of 10 cases mentioned by Falck in which carbolic acid was taken in various alcoholic drinks 9 were fatal, whereas in 17 in which the acid was simply taken by mistake 13 were fatal The point is important, for the recommendation of alcohol as an antidote to carbolic acid is to be found even in text books

NYSTAGMUS AND LABYRINTHINE STIMULI

FOR nearly two decades the problems connected with the physiology and pathology of the association of eye movements—nystagmus—and labyrinthine stimuli have attracted the attention of aurists, neurologists, and physiologists Of later years the tracts along which these impulses pass from the ear to the eye, as well as a clearer and more definite localisation of the nerve centres which receive these impulses, have been the subjects of careful investigation But at the same time much speculative matter has been put forward, some based on most ill defined premisses All good earnest scientific work is to be welcomed, the more so on account of the speculative character of much modern teaching Dr J Gordon Wilson and Dr F H Pike have recently given us a very important contribution on this matter, a series of laboratory experiments dealing with the afferent and efferent tracts of the stimuli and their effects These are to be found in the records of the American Otological Society, this particular paper being delayed by the fact that the illustrations were being reproduced on the continent of Europe The value of the experiments appears to be great, showing amongst other things that 'lesions of the cerebral hemisphere abolish on the side of the slow deviation of the eyes or reduce the quick component'

THE Seventh International Congress for Obstetrics and Gynæcology, which was to have taken place this autumn in New York, will not be held on account of the political situation existing in Europe The American committee has decided to postpone the date of meeting of the Congress until September, 1917 number of his students and assistants have obtained commissions and are serving in the army One has been killed in the fighting which took place in Nyasaland Miss Porter, D Sc., has resigned her post of helminthologist upon her appointment to a Beit Memorial Scholarship.

Report of the London School of Tropical Medicine

This includes reports by the entomologist the helminthologist and the protozoologist, for the two half years ended Oct 31st, 1914 furnished respectively by Lieutenant Colonel A. Alcock, I M S (retired) Dr R T Leiper and Dr C M Wenyon Dr Leiper's report is addressed from China whither he had gone as Wandsworth scholar, accompanied by Surgeon E. L Atkinson R.N for the purpose of studying the mode of spread of trematode infections of man, especially bilharziasis, a special report on which is given and further particulars promised later Dr Wenyon has resigned his post and has been succeeded by Dr J Gordon Thomson formerly of the Liverpool School of Tropical Medicine The operations of the London school have been much disturbed by the war and by the departure of some of the teachers who have joined the forces in the field

Report of the Liverpool School of Tropical Medicine

In this are contained reports by Professor J W W Stephens Professor R Newstead and Professor Warrington Yorke, and by Dr H B Fantham and Dr B Blacklock, of the work done in their various departments. A summary of the scientific papers contributed by members of the staff of the school is appended At the Runcorn Laboratories Dr Blacklock has been engaged for some time upon investigations in connexion with Trypanosoma cruzi the South American trypanosome of man. As this parasite is transmitted by a reduviid bug experiments were made to ascertain if the common bed bug might also act as a carrier of this disease Dr Fantham among other researches continued his investigations on bronchial spirochætosis

Report from the Wellcome Research Laboratories, Khartoum

This report deals with the work carried out by the Bacteriological Section and that by the Entomological Section concerned with subjects of interest in tropical medicine, after the resignation of Dr Andrew Balfour, C M G, and under the directorship of Dr Albert J Chalmers

Observations on the Life History of Dermatobia Hominis

Dr Louis W Sambon, in the course of a recent visit to the West Indies found opportunities for examining several cases of cutaneous myiasis in man and animals He also collected some interesting information regarding the bionomics of Dermatobia hominis a warble fly the larva of which is a common parasite of man in certain regions His observations were made in Colombia, British Guiana, and Trinidad and his report which is illustrated, makes very interesting reading He appends to it a long list of references on the subject

Reports on Work Carried out in Colonial Laboratories

The report from the Institute for Medical Research, Kuala Lumpur Federated Malay States among other things deals with beri beri, leprosy and blackwater fever from the scientific standpoint and as an "annexure Dr H Fraser and Dr W Fletcher furnish a contribution on 'The Bacillus Lepræ Has it been Cultivated?'' [2] The Hong Kong Bacteriological Institute supplies a report on investigation of the mosquitoes in that colony in which the stegomyia fasciata is definitely stated to be present, especially on the Kowloon side of the harbour Dr Aldo Castellani gives a report on the very varied and valuable work carried out by him at the Clinic for Tropical Diseases and at the Bacteriological Institute, Ceylon Lastly Dr H Harold Scott presents an interesting report for the year ending Sept. 30th, 1914 on the work done at the Pathological Laboratory, Public Hospital, Kingston Jamaica.

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[2] THE LANCET Sept 27th 1913, p 912.

DONATIONS AND BEQUESTS —By the will of the late Sir James Rankin first baronet of Bryngwyn Hereford the testator bequeathed £1000 to the Herefordshire General Hospital —The Royal Westminster Ophthalmic Hospital has received from the trustees of the Zunz Bequest a further donation of £300

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned have been granted temporary commissions as Surgeons in His Majesty's Fleet Stanley Ninian Wright (dated June 3rd) Harold Oliver Martin (dated June 4th) Charles Milwyn Burrell (dated June 5th), Gerald William Mooney, and John Arnold Fairer

The following appointments have been notified —Fleet-Surgeon H J Hadden to the *President* Temporary Surgeons M Fawkes and H. H. Gellert to the *President*, J T E Evans and G W Mooney to the *Pembroke* and J A Fairer to the *Victory* the two last named officers for Chatham and Haslar Hospitals respectively, J Lambert to hospital ship *Rewa* and J S Kennedy to the *Monarch*

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Ebenezer Snell has been promoted to the rank of Honorary Staff Surgeon Surgeon C S McK Murison to the *Vivid*, additional for R N Barracks at Devonport

ROYAL ARMY MEDICAL CORPS

Captain Douglas S B Thomson is placed on the Half pay List on completion of 10 years service with the Egyptian Army (dated April 20th)

Lieutenant John F Hutton relinquishes his temporary commission on account of ill health (dated March 26th)

Lieutenant John P Brown relinquishes his temporary commission (dated May 10th)

The undermentioned are granted temporary honorary rank whilst serving with the British Red Cross Society in France —As Lieutenant-Colonel Leonard Nicholas Robinson (dated June 6th) As Major Charles George Jarvis (dated June 6th) Sir David Hardie to be temporary Major (dated April 4th) Captain John Charles Davies 5th Battalion, The Royal Welsh Fusiliers Territorial Force, to be temporary Major whilst employed with the Field Ambulances of the 43rd Division (dated May 12th)

Alfred Wills to be temporary Lieutenant whilst serving with the British Red Cross Hospital Netley (dated June 7th)

The undermentioned to be temporary Majors Major Robert Thomas Hughes, Welsh Divisional Train, The Army Service Corps (dated May 17th) Major Nathaniel Samuel Manning, 6th Battalion The Devonshire Regiment (dated May 18th) Major Edward Burdett Pooley 4th Battalion The King's Own (Royal Lancaster Regiment) (dated May 19th) Arthur Neve (dated April 8th) and Philip Turner (dated May 18th) Richard Gundry Rows is granted temporarily the honorary rank of Major whilst doing duty at Moss Side Military Hospital (dated May 25th) Elwin Harral Thomas Nash to be temporary Major whilst employed at the Lord Derby War Hospital (dated March 24th)

The undermentioned to be temporary Captains Henry Mainwaring Holt Home Hospitals Reserve (dated April 27th) George Blacker (dated May 1st) Captain Sidney Herbert from 9th (Service) Battalion. The Bedfordshire Regiment (dated May 14th) Captain Christopher Victor Bulstrode Shropshire Royal Horse Artillery (dated May 18th) Dated May 20th Temporary Lieutenant Godfrey M. Huggins and Temporary Lieutenant Lewis E Barnett

The undermentioned to be temporary Lieutenants —Dated April 4th Cuthbert Arnold Verge Dated April 6th Roger Orme Bridgman Russell William Richards, and Charles Frederick Strange. Dated April 15th Kerr Simpson and Thomas Dymoch Kennedy Dated April 22nd Denis Fitzgerald O'Kelly Dated April 25th Horace Carlos Barr Dated April 27th Robert James Ledlie, Colin More Geddie Frank Jubb, John Harry Hebb John Bowes Charles Coventry, Reginald Tom Cox, John Howe William Ritchie Main Alfred Hardman Mountcastle William Francis Gordon Scott and Arthur Sydney Webley Dated April 28th Oliver Heath John McKenzie, Hassell Dyer Field Walter Edward Cooper Robert Hanham Cox Charles Crerar Stanley Denovan Adam, William Wallace James Ash, Richard John Batty, John Harry Saunders and Thomas Harold Phillips Dated April 30th John Joseph McConnell and William Sinclair Stevenson Dated May 1st William John Dunlop, Alexander Smith Allan Michael Alfred McKeever Sidney Ernest Holder, John Hamilton Hart, Norman Devereaux John Harmer Drew Reginald Wynyard Davies George Edward Kinnersly, John Gawler Murray John MacDonald William George Ridgeway Macauley, John Purcell George Malcolm Blue t John Lancelot Atkinson Reginald Thompson Raine Cecil Price Jones Henry Harvey, William Albert Rogerson Francis Bernard Chavasse Michael John McCarthy David Lindsay Hutton Worsley John Harris Stanley Allman Hall, Edgar Duesbury Wellburn Richard Hugh Williams James Cameron Turnbull David Moodie Joshua Bower Dalton, Cyril Mary Brophy, James Rae Charles Edward Fenn Leslie Fraser Elloart Jeffcoat Ernest George Sworder, Andrew Duffield Blakeley Thomas Maitland Crawford Augustus Lower Palologus, Robert Hughes, Richard

nearly to the full height of the building On entering the visitor will find himself in a large hall, round which are the registration office, rooms for the President and Registrar, and separate cloak rooms and lavatories for the members of the Council and the public At each end of the building is a staircase, one of these being for the public and the other for members A lift is also provided for members, who thus have access to all parts of the building independently of the passages intended for the public, except in the entrance hall itself The Council chamber extends the full width of the building on the first floor, and in rear of it are two committee rooms, one of these can be subdivided by a movable partition and retiring rooms for complainants, defendants, and the legal profession will thus be provided The Council chamber occupies in height the space of two floors, there will be a gallery at either side of it and the room will be panelled in oak On a mezzanine floor at the back of the upper part of the Council room are two large committee rooms on a level with the galleries, these will provide accommodation for the press when the Council sits *in camera* Above this again is a members' luncheon room and a smoking room, together with another committee room, and at the top are quarters for the caretaker The war has caused a great rise in the cost of building materials and labour, and it has therefore been found necessary to postpone the installation of some of the decorative features in the original design, such as the panelling of the Council chamber, but it is hoped that these may be added in a few years' time

The new building will probably be occupied before the end of this year, but the next two sessions are likely to take place in the Oxford street premises

REPORT OF THE ADVISORY COMMITTEE FOR THE TROPICAL DISEASES RESEARCH FUND FOR 1914[1]

As was pointed out last year when commenting upon the annual report for 1913, the advisory committee of the Tropical Diseases Research Fund, which was constituted by the Secretary of State for the Colonies in 1904, continues to be greatly hampered in its good work by the insufficiency of its financial resources The income for 1914 amounted to £3745, of which the Imperial Government contributed £1000 and the Government of India £500, the remainder being made up by contributions from the Dominion and Colonial Governments The expenditure was £4250, so that there was an excess of £505 on the wrong side This deficiency had again to be made up by drawing upon the accumulated balance of the fund which is now reduced to £750, so that this method of meeting the annual deficiency must soon come to an end

The Expenditure of the Fund

The expenditure comprised a grant of £1450 to the London School of Tropical Medicine, of this amount, £1200 were expended in payment of salaries and the maintenance of the laboratories of the teachers and investigators of helminthology, protozoology, and entomology, £250 being also given as a contribution towards the investigation of schistosomiasis carried out by Dr R T Leiper in the Far East The Liverpool School of Tropical Medicine received £1200 of which £500 were spent on research work on trypanosomiasis £250 on research work on parasitology and helminthology £250 on entomological research and £200 on malaria investigation A sum of £950 was given to the University of London, £750 of which was expended in paying the salary of the professor of protozoology, and on the application of the University £100 were granted towards the salary of the professor's scientific assistant, Dr H M Woodcock To the University of Cambridge £750 were paid, £100 of which were given in respect of the research studentship in medical entomology £100 towards the salary of an assistant to the Quick professor, £100 towards the payment of a helminthologist £50 towards the salary of a demonstrator in medical entomology and £100 for the general expenses of the Quick laboratory A special grant of £300 was made towards the expenses of sending Dr E Hindle to Uganda and Nyasaland to carry out research work there, but owing to the war the expedition was postponed, and the £300 will remain earmarked for this work

Statistical Returns

Appended to the report are the statistical returns received from certain colonies and protectorates with regard to mosquito-borne diseases, supplied in accordance with the circular of the Secretary of State dated Dec 20th 1910 Reports are also appended of the work done by the London and Liverpool Schools of Tropical Medicine and reports of the professor of protozoology in the University of London and his assistant, also a report by Professor G H F Nuttall on the work done in the Quick Laboratories. Certain reports on work done at various colonial laboratories are also appended, and one by Dr Louis W Sambon on Dermatobia hominis in the West Indies, where he has been recently conducting inquiries By arrangement a résumé of the Annual Report of the Gordon College Research Laboratories at Khartoum is likewise included

Reports on Antimalarial Measures in the Crown Colonies and Protectorates &c

These reports are preceded by a note furnished by Professor Sir Ronald Ross on the Prevention of Mosquito-borne Diseases in the Colonies, along with a suggested form of return The colonies, the reports of which are printed in the appendix, include the Windward Islands (St Vincent) Hong Kong, the British Solomon Islands Protectorate, South Africa, the Leeward Islands (Antigua, St Kitts Nevis, Dominica, and Montserrat), Nyasaland the Straits Settlements, Zanzibar, Mauritius the Northern Territory of Australia and Trinidad. The committee observe with satisfaction that these reports have been prepared with great care, and they call special attention to the valuable reports supplied by Hong Kong, Zanzibar, and the Straits Settlements

Report of the Professor of Protozoology, London University

The work of Professor E A. Minchin included further researches, with the assistance of Dr J D Thomson on Trypanosoma lewisi and its immediate host the rat-flea the complete memoir of which embodying all the results and fully illustrated has been sent to the *Quarterly Journal of Microscopical Science* for publication A résumé of the report, however, is given by Professor Minchin, and this is divided into three parts Part I contains an introduction and a description of the technique employed and the anatomy and histology of the flea Part II contains the results of the observations made and Part III the results of the experiments carried out The development of the trypanosome in the flea is described, as also the experimental results with regard to the transmission by the flea and other kindred problems

Report by Dr H M Woodcock

Dr Woodcock, assistant to Professor Minchin, reports on the work done by him during the year ended June 30th 1914 under the headings of (1) Research and (2) Assistance to the Professor and in the Department Under the first he deals with flagellates occurring in the common British mosquito Culex pipiens, and as to the second he refers to demonstrations which he gave in connexion with Professor Minchin's course of lectures on the Protozoan Parasites of Man Dr Woodcock also rendered considerable assistance to the workers in the laboratory

Report on the Work of the Quick Laboratory Cambridge

Professor Nuttall gives an account of various papers to the number of 10 published by workers in this laboratory during the year and incidentally mentions that the work of his department has been greatly disturbed by the war A these orders, which have been issued by the Government of India, will be regarded as provisional, subject to the officers passing the required examination at the first opportunity on the restoration of normal conditions

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[1] Report of the Advisory Committee for the Tropical Diseases Research Fund for the Year 1914 Presented to both Houses of Parliament by command of His Majesty London 1915 Printed under the authority of H M Stationery Office Pp [illegible] Price 2s [illegible]

THE ROYAL NAVY LIST

A second edition of the Royal Navy List, containing a special war supplement bringing the records of men and ships up to date (May, 1915) has just been issued The alphabetical arrangement of this book, as regards the services of the personnel, greatly facilitates ready reference A current history of the Royal Navy, the events of the war, and a summary of ships' services and commissions are other useful features of this publication Messrs Witherby and Co , 326, High Holborn, London, are the publishers, and the price is 7*s* 6*d*

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50 000 persons at the last Census, 7337 births and 4756 deaths were registered during the week ended Saturday, May 29th The annual rate of mortality in these towns, which had been 15 5 14 2, and 15 4 per 1000 in the three preceding weeks declined in the week under notice to 13 7 per 1000 of the average population estimated at 18,136 180 persons at the middle of last year During the first eight weeks of the current quarter the mean annual death rate in these towns averaged 16 6, against a corresponding rate of 17 1 per 1000 in London The annual death rate in the week under review ranged from 4 3 in Lincoln, 5 9 in Bath, 6·0 in Wallasey 6 4 in Hornsey, and 6 5 in Acton, to 20·9 in Huddersfield 21 3 in Halifax 22 1 in Barrow in Furness, 22 9 in South Shields, and 24 7 in Middlesbrough

The 4756 deaths from all causes were 584 fewer than the number in the previous week, and included 439 which were referred to the principal epidemic diseases, against 484 and 603 in the two preceding weeks Of these 439 deaths, 221 resulted from measles, 90 from whooping-cough, 64 from infantile diarrhœal diseases 31 from diphtheria, 21 from scarlet fever, 11 from enteric fever, and 1 from small pox. The mean annual death rate from these diseases was equal to 1 3 or 0·4 per 1000 less than in the previous week The deaths attributed to measles which had been 276 238 and 309 in the three preceding weeks fell to 221, and caused the highest annual death rates of 1 8 in Coventry 1·9 in Dewsbury 2·0 in Sunderland, 2 3 in Northampton, 3·0 in West Bromwich, 3 3 in South Shields 3 4 in Sheffield 6 1 in Walsall, and 6 6 in Middlesbrough The deaths referred to whooping-cough, which had been 121 105 and 137 in the three preceding weeks declined to 90 in the week under notice, and included 18 in London, 6 each in Liverpool and Wigan, 5 in Birmingham and 3 in South Shields The fatal cases of diarrhœa and enteritis (among infants under 2 years) which had been 67, 57 and 70 in the three preceding weeks fell to 64 of which 13 were registered in London, 5 in Liverpool, and 3 in Barrow in Furness The deaths attributed to diphtheria which had been 51, 48, and 51 in the three preceding weeks declined to 31 and included 6 in London and 3 in Birmingham The deaths referred to scarlet fever, which had declined from 34 to 20 in the four preceding weeks, were 21 in the week under review, of which 4 occurred in London and 2 each in Northampton and Wigan The fatal cases of enteric fever, which had been 12, 11 and 15 in the three preceding weeks, fell to 11, and included 3 in Manchester and 2 each in Stoke-on Trent and Liverpool The death from small pox was registered in Bristol

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2384, 2332, and 2286 at the end of the three preceding weeks further fell to 2252 on May 29th , 257 new cases were admitted during the week, against 307, 270, and 320 in the three preceding weeks These hospitals also contained on the aforementioned date 1059 cases of diphtheria 126 of measles, 51 of enteric fever, 11 of whooping-cough, and 1 of small pox. The 1139 deaths from all causes in London were 149 fewer than in the previous week, and corresponded to an annual death rate of 13 1 per 1000 The deaths referred to diseases of the respiratory system, which had steadily declined from 469 to 212 in the six preceding weeks further fell to 182 in the week under notice but were 17 in excess of the number registered in the corresponding week of last year

Of the 4756 deaths from all causes in the 96 towns 252 resulted from different forms of violence and 353 were the subject of coroners' inquests while 1412 occurred in public institutions The causes of 40, or 0 8 per cent , of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Hull, and in 72 other smaller towns Of the 40 uncertified causes of death, 10 were registered in Birmingham, 5 in Liverpool, 3 each in Stoke-on Trent and Darlington, and 2 each in London, Gillingham, Bootle, and Sheffield

In the 96 English and Welsh towns 9202 births and 4847 deaths were registered during the week ended Saturday, June 5th The annual rate of mortality in these towns, which had been 14 2 15·4, and 13 7 per 1000 in the three preceding weeks rose in the week under notice to 13·9 per 1000 During the first nine weeks of the current quarter the mean annual death rate in these towns averaged 16 3 against a corresponding rate of 16 7 per 1000 in the metropolis The annual death rate last week ranged from 4 6 in Reading, 6 2 in Walthamstow 6 4 in Hornsey, 6 6 in Ealing, and 6 8 in Enfield, to 20 8 in Rotherham, 23 7 in Carlisle 23·9 in Middlesbrough, 27 6 in Sunderland and 28 2 in Gillingham

The 4847 deaths from all causes were 91 in excess of the number in the previous week, and included 489 which were referred to the principal epidemic diseases, against 603 and 439 in the two preceding weeks Of these 489 deaths, 239 resulted from measles, 90 from whooping-cough 75 from infantile diarrhœal diseases, 50 from diphtheria, 22 from scarlet fever and 13 from enteric fever, but not one from small pox. The mean annual death rate from these diseases was equal to 1 4 against 1 3 per 1000 in the previous week The deaths attributed to measles, which had been 238, 309, and 221 in the three preceding weeks, rose to 239 last week, and caused the highest annual death rates of 2 1 in Derby, 2 2 in Walsall, 2 6 in Stockton on Tees, 3 2 in Barrow in Furness, 4 1 in Sunderland, 4 2 in Sheffield, 4 5 in Middlesbrough and 5 3 in West Bromwich The deaths referred to whooping cough, which had been 105, 137, and 90 in the three preceding weeks were again 90 last week, and included 23 in London 9 in Liverpool, 4 in Birmingham, and 3 each in East Ham Manchester and South Shields The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 57 70 and 64 in the three preceding weeks, rose to 75 last week of which 15 occurred in London, 7 in Manchester, 5 in Sheffield, and 4 each in Birmingham and Liverpool The deaths attributed to diphtheria which had been 48, 51, and 31 in the three preceding weeks, rose to 50 last week, and included 13 in London 5 in Northampton, and 3 in Norwich The deaths referred to scarlet fever, which had been 25 20 and 21 in the three preceding weeks, were 22 last week, of which 7 were registered in London, and 2 each in Warrington and Manchester The fatal cases of enteric fever, which had been 11 15, and 11 in the three preceding weeks rose to 13 last week, and included 2 each in Bristol and Manchester

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had declined from 2384 to 2252 in the four preceding weeks had increased to 2267 on Saturday last, 327 new cases were admitted during the week, against 270 320 and 257 in the three preceding weeks These hospitals also contained on Saturday last 1091 cases of diphtheria, 110 of measles, 50 of enteric fever, 11 of whooping-cough, and 1 of small pox The 1151 deaths from all causes in London were 12 in excess of the number in the previous week, and corresponded to an annual death rate of 13 3 per 1000 The deaths referred to diseases of the respiratory system, which had steadily declined from 469 to 182 in the seven preceding weeks were 181 last week, and were 2 in excess of the number recorded in the corresponding week of last year

Of the 4847 deaths from all causes in the 96 towns, 227 resulted from different forms of violence and 344 were the subject of coroners inquests, while 1468 occurred in public institutions The causes of 45, or 0·9 per cent , of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in Manchester Leeds, Bristol, West Ham, Bradford Hull, and in 71 other smaller towns Of the 45 uncertified causes, 8 were registered in Liverpool, 7 in Gillingham 5 in Birmingham, 4 in Sunderland 3 each in Warrington and Gateshead, and 2 each in Preston and Barrow in Furness

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns, with an aggregate population estimated at 2,345,500 persons at the middle of this year, 1075 births and 818 deaths were registered during the week ended Saturday, May 29th The annual rate of mortality in these towns, which had declined from 20 2 to 16 1 per 1000 in the four preceding weeks rose to 18 2 per 1000 in the week under notice During the first eight weeks of the current quarter the mean annual death rate in these towns averaged 18 8, against a corresponding rate of 16 6 per 1000 in the large English towns

Dowden, Henry Porter D'Arcy Benson, Martin Ashley, William Kenneth Bigger, George Barthorpe Simpson, Guy Verney Fletcher, William Stewart Stolker, William Robert Watt, Alexander Duncan Roland Danvers Brinton, Henry Hugh Rose Clarke, Arthur Matthew, George Douglas Kerr, Edward Patrick Carey, George Stephen Ware, James Francis Wolfe, Samuel Wyborn, Roy Mackenzie Stewart, Henry Spinks Thomas Forbes Brown Reid, Frederick William Rowland, Clayton Campbell Harris, Thomas Henry Harker Montagu David Eder, Robert Park, Eliot Watson Blake, Bernard Pickering, Harold Heafford Proudfoot, James Thomas Macnamara, Archibald George Kirwood Ledger, Alan Randle, Robert Alexander Mackenzie Macleod, Benjamin Henry Shaw, Howel Gabriel Gwyn Jeffreys Dated May 2nd Percy Haycroft Berry Dated May 10th Lewis Edward Barnett Dated May 15th John Macqueen, from Royal Field Artillery

The following officers have been appointed to command Station Hospitals in India —Lieutenant-Colonel C F Wanhill, Poona, Lieutenant-Colonel H G F Stallard, Colaba, Lieutenant-Colonel W B Winkfield, Murree, Lieutenant-Colonel F Ashe, Agra, and Major L L G Thorpe, Ranikhet Lieutenant-Colonel S F Rennie (retired) has been re-employed and ordered to assume command of the Station Hospital at Chakrata The following transfers have been ordered —Lieutenant-Colonel C F Wanhill from the 5th Division to the 6th Divisional Area, Lieutenant-Colonel W B Winkfield from the Burma to the 2nd Division, Lieutenant-Colonel H G F Stallard from the 5th Division to the 6th Divisional Area, Lieutenant-Colonel F Ashe from the 9th Division to the 7th Divisional Area, Major L L G Thorpe from the 9th Division to the 7th Divisional Area, and Captain L Murphy from the 9th to the 4th Division

INDIAN MEDICAL SERVICE

Lieutenant-Colonel to be Colonel Charles Mactaggart, C I E (dated March 29th)

Captains to be Majors Dated Feb 28th Robert Kelsall, Charles Hildred Brodribb, John McCallum Anderson Macmillan, Clifford Allchin Gill Richard Francis Steel, Arthur Charles Ingram, Ernest William Charles Bradfield, and John Brown Dalzell Hunter

Lieutenants to be Captains —Dated Oct 22nd, 1914 Harry Slater Cormack, Edward Slade Goss, and George Blenkhorn Harland Dated Jan 27th Ronald Herbert Candy, Philip John Veale Jamasji Cursetji Bharucha, Henry Hingston, Heerajee Jehangir Manockjee Cursetjee, Frederick Jasper Anderson, Peter Fleming Gow, John Simson Stuart Martin, Robert Victor Morrison, James Walker Jones, J Chandra Dey and James Hall Hislop

The promotion to their present rank of Majors Henry Ross and Leonard Hirsch is antedated from July 1914 to January, 1914, and of Majors John O'Leary, Cuthbert Lindsay Dunn, and Raghber Dayal Saigol is antedated from September, 1914, to March, 1914

The King has approved the retirement of Surgeon General George Francis Angelo Harris, C S I, K H S (dated April 1st)

The King has approved the promotion of Temporary Lieutenant James Robert Hall Walker to Temporary Captain (dated Dec 22nd, 1914)

SPECIAL RESERVE OF OFFICERS

Supplementary to Regular Units or Corps Royal Army Medical Corps —Cadet Sergeant Eric Jamieson, from the Edinburgh University Contingent, Officers Training Corps, to be Lieutenant (on probation)

TERRITORIAL FORCE

Army Medical Services

Lieutenant-Colonel Francis E Fremantle from Sanitary Service, to be Deputy Assistant Director of Medical Services, East Anglian Division, vice Major E C Freeman, who vacates the appointment

Royal Army Medical Corps

The undermentioned to be Captains, whose services will be available on mobilisation Alfred Herbert Horsfall, D S O (late Major, Australian Medical Corps) Matthew John Stewart and Herbert James Macvean

Harold Dobson Pickles (late Cadet, Leeds University Contingent, Senior Division, Officers Training Corps) to be Lieutenant

1st Southern General Hospital Frederick William Ellis to be Lieutenant Colonel (temporary), whose services will be available on mobilisation

1st London (City of London) Sanitary Company Vincent Philip Norman (Lieutenant, Indian Medical Service) to be Lieutenant

1st South Western Mounted Brigade Field Ambulance Lieutenant Ivan C Keir to be Captain

3rd Home Counties Field Ambulance William Walker Maxwell to be Lieutenant

3rd East Lancashire Field Ambulance Lieutenant Kingsmill W Jones to be Captain and to remain seconded

5th London Field Ambulance Lieutenant Colonel Edward Lloyd Williams from the Territorial Force Reserve, to be Lieutenant-Colonel (temporary)

5th Northern General Hospital Alfred Ernest Payne to be Captain, whose services will be available on mobilisation

North Midland Mounted Brigade Field Ambulance Robert Hargreaves (late Cadet Sergeant Cambridge University Contingent, Senior Division, Officers Training Corps) to be Lieutenant

Notts and Derby Mounted Brigade Field Ambulance Captain Oswald Kentish Wright to be temporary Major

South Eastern Mounted Brigade Field Ambulance William Tresawna to be Lieutenant

Yorkshire Mounted Brigade Field Ambulance Captain Charles H Bullen, from Attached to Units other than Medical Units, to be Captain

3rd Highland Field Ambulance Alexander Reid Moodie (late Second Lieutenant St Andrews University Contingent, Senior Division Officers Training Corps) and Alexander Brown Jamieson to be Lieutenants

1st Lowland Field Ambulance Alexander Graham Buchanan to be Lieutenant

1st Eastern General Hospital Henry Samuel Crichton Starkey to be Captain, whose services will be available on mobilisation

4th London General Hospital Edward Bellis Clayton to be Captain, whose services will be available on mobilisation

2nd Northern General Hospital John Kay Jamieson to be Major (temporary) on the permanent personnel

1st East Lancashire Field Ambulance Lieutenant John Bruce to be temporarry Captain

2nd Welsh Field Ambulance Lieutenant Charles W C Myles to be Captain

1st Western General Hospital Major James M Beattie from 3rd Northern General Hospital, to be Major Edgar Stevenson to be Captain, whose services will be available on mobilisation

2nd Western General Hospital Judson Sykes Bury (late Major in this Unit) to be Major

3rd Western General Hospital Gilbert Innes Strachan to be Lieutenant

Attached to Units other than Medical Units —Surgeon Major Arthur C Oldham, from 2nd South Midland Brigade, Royal Field Artillery, to be Major Captain Arthur C Bird, from the Territorial Force Reserve to be Captain Captain Haldinstein D Davis is restored to the establishment. Lieutenant Cecil W Rowntree to be Captain and to remain seconded George James Elliot Trotter to be Lieutenant

DEATHS IN THE SERVICES

Deputy Surgeon General Henry Joseph Rose, formerly in the 2nd (Queen's) and West Yorkshire Regiment, at a nursing home in London on June 2nd aged 82 He joined the Army Medical Service in 1855 and saw service in the Crimea (medal with clasp and Turkish medal) He also took part in the China War of 1860 (medal with two clasps) and in the Afghan War of 1878–80 (medal) He retired in 1881

Surgeon General George William Robertson Hay, I M S, formerly principal medical officer of the Madras Command on May 27th, at a nursing home in Edinburgh, aged 70 He retired from active service a few years ago

Deputy Surgeon General Christopher Joynt, I M S (retd), suddenly on June 4th, at the advanced age of 87 Born in Ballina, Co Mayo, and educated in Queen's College, Galway, within a few years of its opening he entered the Indian Medical Service and went to India shortly after the Mutiny He served in the Persian Expeditionary Force in 1857, with the Okamandel and Kattywar Field Forces 1859-60 and in the Abyssinian Campaign He was for some time professor of midwifery in Bombay and was principal medical officer of the Quetta District Since his retirement he has lived in Dublin, devoting himself to philanthropic and religious work He was greatly interested in the study of theology He was until recently a constant attendant at the meetings of the Royal College of Physicians of Ireland of which he was a Fellow Of late years his sight was failing but he had unusually good health for a man of his age Two of his sons are in the medical profession, one practising in Fiji and one in South Africa

INDIAN MEDICAL SERVICE PROMOTIONS

Consequent on the suspension during the war of examinations for promotion lieutenants with less than three years' service will be promoted to the rank of captain on completion of that term of service irrespective of whether they have passed the prescribed examinations or not provided they are qualified in all other respects Lieutenants who have already completed three years service and who have not passed or have failed to pass, will be promoted as from Oct 22nd 1914 the earliest date on which they could have presented themselves for examination in the ordinary course provided they are certified to be fit for promotion in all other respects Lieutenants who have not been able for approved reasons to present themselves for examination will be dealt with under the ordinary rules Promotions made under

Correspondence.

"Audi alteram partem

THE METROPOLITAN HOSPITAL SUNDAY FUND THE APPEAL OF THE LORD MAYOR OF LONDON

To the Editor of THE LANCET

SIR,—May I, as president and treasurer of the Metropolitan Hospital Sunday Fund, remind your readers that on Sunday next, June 13th, they have their annual opportunity of showing practical sympathy with the work of our London hospitals

This year the need is greater and the call clearer than ever, for, in addition to the ordinary work of healing the sick poor, the hospitals have nursed and cared for many thousands of our brave sailors and soldiers, and the doctors and nurses now at "the front" would readily tell how much of their knowledge they owe to hospital training in London

Every man restored fills a gap in the line, every contribution, therefore, is a help towards victory

I will gladly receive and acknowledge any sums sent to me by those who cannot be at their place of worship next Sunday

I am, Sir, your obedient servant,
CHARLES JOHNSTON,
Lord Mayor

The Mansion House London E C June 10th 1915

As chairmen respectively of the Committees of Distribution, General Purposes, and Finance we warmly support the Lord Mayor's appeal

(Signed) A S CHURCH,
DAVID ANDERSON,
C ERNEST TRITTON

THE WAR AND THE SUPPLY OF MEDICAL OFFICERS

To the Editor of THE LANCET

SIR,—I was glad to see that in the leading article of your issue of June 5th you have taken up the question of the supply of medical officers in connexion with the war The experience gained so far by the War Emergency Committee of the Metropolitan Counties Branch of the British Medical Association shows very definitely enormous difficulties in the way, and much might be written on the curious anomalies which have come to the notice of the committee But the essential question is to prepare a scheme for what you rightly describe as the "mobilisation of the whole profession."

There are only three ways in which the supply of medical officers for the army can be made good (1) by voluntary recruiting, (2) by compulsory service, (3) by the importation of foreigners

Compulsory service is probably the most satisfactory solution, but conscription is a political question at present, and however likely it may seem in the future, it must not be counted upon at present The importation of foreigners would not only cast a slur on the British profession, but might also very well lead to unsatisfactory conditions when the Royal Army Medical Corps officer comes to work side by side with the foreigner at the front

Can voluntary recruiting satisfy the requirements? To my mind it can, but only under certain conditions, of which the first and most important is that all the different bodies concerned in war service should be in touch with one another The medical authorities of the War Department are supreme in dealing with officers actually in the army, but they cannot know anything about civilian practice Therefore they must be in close touch with a body representative of every side of medical practice Such a representative body should include hospital men, general practitioners, officials of societies such as the Red Cross, and a layman or so to voice the sentiments of the patriotic philanthropist who has placed private hospitals and other such facilities at the disposal of the Government This body needs a central office and clerical assistance in order that records may be kept Every medical man should be recorded, with his age and the service for which he is suitable Every hospital should be noted with its staff and the number of medical men required for its working When fresh men are required for any service the War Department should communicate with this office, whereupon a list of suitable names would be submitted, from which the war authorities would select the number of men they require In this way overlapping, over work, and the over staffing of hospitals, especially with men of unsuitable age, might be avoided

To get anywhere near an ideal arrangement of this kind two things are necessary, both in individuals and in bodies of men—(1) the avoidance of jealousy, and (2) the recognition of one's limitations Much of the difficulty of the present situation is due to jealousy between different bodies, and between individual men The lack of recognition of one's limitations is shown at the War Office by the attempt to deal in an unorganised way with a body of civilian practitioners of which the department knows nothing, it is shown by the civilian practitioners in attempting to dictate conditions in a matter on which they are ignorant—the organisation of the R A M C, by the military and civil hospitals, and by the Red Cross Society, which are run without any coördination or settled line of action with regard to their junior staffs and other points

To me it appears that none of these troubles can be adjusted except through a central bureau, clearing house, exchange, or whatever it may be called To form such a body and to have it accepted, recognised, and used by the War Department and by everyone interested in the successful organisation of the medical profession, is the idea I suggest, and if ever the suggestion is adopted I would implore all parties to forget their petty jealousies, to recognise their individual limitations, and to work in a united manner for the achievement of success.

I am, Sir, yours faithfully,
Inverness-terrace, W June 7th 1915 CHAS BUTTAR

THE EFFECT OF ATROPINE IN "GASSED" PATIENTS

To the Editor of THE LANCET

SIR,—I was glad to read Dr Ida C Tengely's letter on this subject in your issue of June 5th, in that her experiences afford a certain confirmation of the suggestion that atropine is beneficial to those suffering from the effects of irritant gases

I should like to criticise, if I may, her suggestion for using atropine as a prophylactic measure

Among the several towns the death rate in the week under review ranged from 10·1 in Paisley 10 2 in Kirkcaldy and 11 3 in Motherwell, to 20·7 in Leith, 22 1 in Perth, and 23 7 in Aberdeen

The 818 deaths from all causes were 94 in excess of the number in the previous week, and included 145 which were referred to the principal epidemic diseases, against numbers declining from 150 to 90 in the four preceding weeks Of these 145 deaths, 72 resulted from measles, 43 from whooping cough, 15 from infantile diarrhœal diseases, 10 from diphtheria, and 5 from scarlet fever, but not one from enteric fever or from small pox The mean annual death rate from these diseases was equal to 3 2, against a corresponding rate of 1 3 per 1000 in the large English towns The deaths attributed to measles, which had been 47, 49, and 36 in the three preceding weeks, rose to 72, and included 53 in Glasgow, 13 in Aberdeen, and 4 in Falkirk The deaths referred to whooping cough, which had declined from 82 to 40 in the four preceding weeks, rose to 43, and comprised 25 in Glasgow, 5 each in Edinburgh and Aberdeen, 4 in Dundee, 3 in Hamilton, and 1 in Leith The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 15, 9, and 5 in the three preceding weeks, rose to 15, and included 3 each in Glasgow and Dundee, and 2 each in Edinburgh, Aberdeen, and Motherwell The deaths attributed to diphtheria, which had been 7, 8, and 2 in the three preceding weeks, rose to 10, of which 5 occurred in Glasgow The 5 fatal cases of scarlet fever included 3 in Glasgow and 2 in Aberdeen, and were 2 below the average in the earlier weeks of the quarter

The deaths referred to diseases of the respiratory system, which had been 118, 121, and 117 in the three preceding weeks, rose to 141 in the week under notice, and were 45 in excess of the number recorded in the corresponding week of last year The deaths attributed to violence numbered 26, against 26 and 21 in the two preceding weeks

In the 16 largest Scotch towns 1171 births and 848 deaths were registered during the week ended Saturday, June 5th The annual rate of mortality in these towns, which had been 17·9, 16 1, and 18 2 per 1000 in the three preceding weeks, further rose to 18 9 per 1000 in the week under notice During the first nine weeks of the current quarter the mean annual death rate in these towns averaged 18 8, against a corresponding rate of 16·3 per 1000 in the large English towns The annual death rate last week ranged from 10 9 in Ayr, 11 7 in Leith, and 11 8 in Coatbridge, to 20 9 in Dundee, 21·0 in Glasgow, and 21 8 in Aberdeen

The 848 deaths from all causes were 30 in excess of the number in the previous week, and included 147 which were referred to the principal epidemic diseases, against 90 and 145 in the two preceding weeks Of these 147 deaths, 85 resulted from measles, 40 from whooping-cough, 10 from infantile diarrhœal diseases, 7 from scarlet fever, and 5 from diphtheria, but not one from enteric fever or from small pox The mean annual death rate from these diseases was equal to 3 3, against 1 4 per 1000 in the large English towns The deaths referred to measles, which had been 49, 36, and 72 in the three preceding weeks, further rose to 85 last week, and comprised 70 in Glasgow, 4 in Aberdeen, 3 each in Dundee, Kirkcaldy, and Clydebank, and 2 in Perth The deaths referred to whooping-cough, which had been 45, 40, and 43 in the three preceding weeks, fell to 40 last week, and included 20 in Glasgow, 5 each in Edinburgh and Dundee, 4 in Aberdeen, and 2 in Kilmarnock The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 9, 5 and 15 in the three preceding weeks, fell to 10 last week and included 4 each in Glasgow and Dundee The 7 deaths referred to scarlet fever, of which 3 occurred in Glasgow and 2 in Aberdeen, were equal to the average in the earlier weeks of the quarter The fatal cases of diphtheria which had been 8 2 and 10 in the three preceding weeks, fell to 5 last week, but showed no excess in any of the towns

The deaths referred to diseases of the respiratory system, which had been 121, 117 and 141 in the three preceding weeks, further rose to 145 in the week under notice, and were 46 in excess of the number in the corresponding week of last year The deaths attributed to violence numbered 35, against 21 and 26 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland, with an aggregate population estimated at 1 212 380 persons at the middle of this year, 653 births and 382 deaths were registered during the week ended Saturday, May 29th The annual rate of mortality in these towns, which had been 19·9 18 8 and 18 3 per 1000 in the three preceding weeks, further fell to 16 4 per 1000 in the week under notice During the first eight weeks of the current quarter the mean annual death rate in these towns averaged 20 1 against corresponding rates of 16 6 and 18 8 per 1000 in the English and Scotch towns respectively The death rate in the week under review was equal to 17·0 in Dublin (against 13 1 in London and 19 7 in Glasgow), 16·9 in Belfast, 19·0 in Cork, 16 5 in Londonderry 17 6 in Limerick, and 7 6 in Waterford while in the 21 smaller towns the mean death rate was 14 4 per 1000

The 382 deaths from all causes were 43 fewer than in the previous week, and included 20 which were referred to the principal epidemic diseases, against numbers declining from 41 to 24 in the five preceding weeks. Of these 20 deaths, 10 resulted from measles, 4 from infantile diarrhœal diseases, 3 from whooping-cough, and 1 each from enteric fever, scarlet fever, and diphtheria but not one from small pox The mean annual death rate from these diseases was equal to 0 9, against corresponding rates of 1 3 and 3 2 per 1000 in the English and Scotch towns respectively The deaths attributed to measles, which had been 10, 4, and 9 in the three preceding weeks were 10 in the week under notice, of which 5 occurred in Belfast and 3 in Dublin The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had declined from 10 to 4 in the four preceding weeks, were again 4, and comprised 3 in Belfast and 1 in Wexford The fatal cases of whooping cough, which had been 9, 10 and 5 in the three preceding weeks further fell to 3 of which 2 were registered in Belfast and 1 in Dundalk The deaths from enteric fever and diphtheria were recorded in Dublin, and that from scarlet fever in Belfast

The deaths referred to diseases of the respiratory system, which had been 76, 82, and 93 in the three preceding weeks, fell to 63 in the week under notice Of the 382 deaths from all causes 120, or 31 per cent, occurred in public institutions, and 9 were attributed to different forms of violence The causes of 11, or 2 9 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the large English towns the proportion of uncertified causes did not exceed 0 8 per cent

In the 27 town districts of Ireland 645 births and 396 deaths were registered during the week ended Saturday, June 5th The annual rate of mortality in these towns, which had declined from 19 9 to 16·4 per 1000 in the four preceding weeks, rose to 17·0 per 1000 in the week under notice During the first nine weeks of the current quarter the mean annual death rate in these towns averaged 19 8, against corresponding rates of 16 3 and 18 8 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 19·0 in Dublin (against 13 3 in London and 21 0 in Glasgow), 16 7 in Belfast 15 6 in Cork, 20 2 in Londonderry, 23 0 in Limerick, and 15 2 in Waterford while in the 21 smaller towns the mean death rate was 13 0 per 1000

The 396 deaths from all causes were 14 in excess of the number in the previous week, and included 27 which were referred to the principal epidemic diseases, against numbers declining from 41 to 20 in the six preceding weeks Of these 27 deaths, 12 resulted from infantile diarrhœal diseases, 5 each from scarlet fever and whooping-cough, 3 from measles, and 2 from diphtheria, but not one from enteric fever or from small pox The mean annual death rate from these diseases was equal to 1 2, against corresponding rates of 1 4 and 3 3 per 1000 in the English and Scotch towns respectively The deaths of infants (under 2 years) from diarrhœa and enteritis, which had declined from 10 to 4 in the five preceding weeks rose to 12 last week, and comprised 8 in Dublin, 3 in Belfast and 1 in Cork The 5 deaths referred to scarlet fever were 3 in excess of the average in the earlier weeks of the quarter but showed no excess in any particular town The fatal cases of whooping-cough which had been 10, 5 and 3 in the three preceding weks, rose to 6 last week, of which 3 occurred in Dublin The deaths attributed to measles which had been 4 9 and 10 in the three preceding weeks fell to 3 last week and included 2 in Dublin and 1 in Belfast The fatal cases of diphtheria were recorded in Dublin and Belfast

The deaths referred to diseases of the respiratory system, which had been 82, 93, and 63 in the three preceding weeks, Of the 396 deaths from fell to 56 in the week under notice occurred in public institu all causes, 128, or 33 per cent, The tions, and 12 resulted from different forms of violence causes of 12, or 3 0 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the 95 English towns the proportion of uncertified causes did not exceed 0·9 per cent

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THE death is announced of Dr Alfred Hollis of Freshwater, Isle of Wight Dr Hollis qualified in 1857 as L S A, taking the M R C S in 1868 the M B, C M of Edinburgh in 1869, and proceeding to the M D degree of that university in 1873 He had been civil surgeon in charge of the Royal Engineers at Fort Victoria, and medical officer of health of Yarmouth Isle of Wight He was a friend of Tennyson, and one of his medical attendants there seemed no doubt as to the diagnosis About 6 P M on the same day I found her comatose having, just before my arrival, had severe convulsions I then opened the right median basilic vein and let out five ounces of blood, but to no purpose, she died during the night There was no reason to suppose that the girl showed any signs of kidney disease before her sojourn in the hospital, but that she succumbed to acute uremia following upon almost complete suppression of urine there can be no room for doubt I have not the least doubt that the injection of salvarsan received constituted the chief cause of her kidney trouble and her death.

CASE 2.—A little girl, aged 5 years, who had had crabs in the sole of her left foot for two years She was sent to the yaws hospital where she received an injection of "606" on admission The site of the puncture was in the left buttock and immediately over the course of the great sciatic nerve. She came to me eight months after the injection for fever and an enlarged spleen, but noticing that she dragged her left leg and had a peculiar gait, I got from the mother the history of the treatment at the yaws hospital When she left the yaws hospital her left leg was dragging and painful, and there was a lump of about the size of a small Tangerine orange at the site of the puncture. Her mother, observing a small aperture at the top of the swelling, squeezed, and suddenly there spurted out about a teaspoonful or more of matter The swelling subsided gradually but the left leg and foot remained weak, and she has never been able to regain her proper gait since the operation, it being now over eight months Here, then, is a child crippled for life by the inadvertency of a careless operator What has occurred is fairly obvious, and the damaged nerve is likely to be a source of trouble for the balance of this child s life

I venture to think that if all the cases of yaws treated with salvarsan were to be systematically examined the statistics of failures would be found to be far greater than the average of successes published in the reports, or the calamities attendant on its use would be so alarming as to demand an immediate check on the indiscriminate use of such a powerful remedy

I am, Sir, yours faithfully,
Port of Spain, Trinidad B W I. A B DUPREY

ELECTRIC TREATMENT IN ARTERIO-SCLEROSIS

To the Editor of THE LANCET

SIR,—With reference to your abstract of a very able article on arterio sclerosis by Dr W Lyne Blight in THE LANCET of June 5th, in the paragraph which treats of the treatment of this condition there is no mention made of the value of electric current It is generally conceded by those who have any knowledge of electricity as a therapeutic agent that it has the power of modifying pathological arterial tension The headache, which is present when the sclerosis affects the cerebral vessels, can usually be instantly relieved by the proper application of electricity, and there occurs coincidentally with this a fall in the pressure as registered by the sphygmomanometer Very often the instrument will register a *drop* of 20 millimetres in 15 minutes with the patient feeling more cheerful and in better temper At the same time there is evidence of increased oxidation, the output of the urea is increased, and that of uric acid diminished—that is to say, nitrogenous matter becomes more completely oxidised

Of the various modalities the current of D'Arsonval is the most efficacious The manner in which it is applied varies with the operator, some, especially the French physicians, preferring the auto condensation cage, whereas in America the auto condensation *couch* is more general, both give equally good results, provided that a current of sufficient ampèrage be employed, say, 1000 milliampères, which is not difficult, provided that the coil and condensers are of sufficient capacity and a multiple spark gap be put in circuit The current may be passed for 10 to 15 minutes, or until the patient flushes or the skin becomes moist The treatment should be given daily, or thrice weekly, according to the nature of the case and the readiness or otherwise with which the patient responds to the treatment Frequent reading of the sphygmomanometer should be taken as a guide to the treatment Headache and a feeling of lassitude are sometimes noted after one or two treatments These are due to the fact that in consequence of the rapid tissue change induced by the treatment more toxins are liberated than can be carried off These facts will be more marked should constipation be present and altogether avoided if the bowels are kept freely opened

I have been using this method for over 10 years and can confidently speak to its beneficial effects, and feel that no monograph or article dealing in arterio sclerosis or a raised arterial tension is complete without a reference to it

I am, Sir, yours faithfully,
F HOWARD HUMPHRIS, M D
West Chapel street Mayfair W June 8th 1915

PRODUCTION OF LACERATED WOUNDS BY POINTED RIFLE BULLETS

To the Editor of THE LANCET

SIR,—The essential factor which normally prevents a rifle bullet turning over in its flight in the air and during its passage through the denser semi fluid tissues of the body is that it has a certain rate of spin which bears a definite relationship to the forward velocity This rate of spin depends, of course, on the number of turns which the grooves of the rifling make in the barrel. If this rate of spin is greatly too fast or too slow for the forward velocity, then the bullet will wobble in its flight and eventually turn over, thus producing a lacerated wound Now the forward velocity of a bullet diminishes very rapidly owing to the resistance of the air to its flight, but the rate of spin is diminished hardly at all, since as the bullet has a smooth surface *it meets* with hardly any air resistance, and there being therefore almost nothing to slow it, it naturally keeps on spinning at practically its original rate To give an instance It is well known that carefully balanced tops have been constructed which will spin for over half an hour, whereas the bullet has only got to maintain its rate of spin for, at most, a few seconds The result is *that* the relationship between the rate of spin and the forward velocity is upset, the former becoming too great proportionately for the latter, and the bullet then has a tendency to turn over *and* thus produce a lacerated wound

A bullet which makes a clean entrance wound may produce laceration inside the body both for the above reason and *also for* another—namely, *that* a rate of spin which correctly corresponds *to the* forward velocity in the air may be quite incorrect in the denser semi fluid medium of the body This explains also the remarkable changes of direction of track of the bullet in the body, which may occur sometimes even apart from striking a hard structure Generally speaking the *blunter* a bullet is, the less tendency has it to turn over in its flight either in the air or in the body—that is to say, *the* more pointed a bullet is the more closely has its rate of against such gases Surely the "tightness of the chest" or bronchial spasm produced by such irritants is Nature's way of attempting to lessen the amount of these gases inhaled, and consequently to reduce to a minimum the damage to the respiratory apparatus It follows that the administration of atropine prior to exposure to such gases, by paralysing the broncho dilator nerve endings, would effectually prevent the slightest degree of broncho constriction, in other words, a widely dilated air passage would be ready to receive large inhalations of the irritant fumes Consequently the damage to the respiratory apparatus would be likely to be increased

On the contrary, *after* the irritant gases have been inhaled, the air passages being full of an inflammatory exudate and a certain degree of bronchial spasm being present, the subject experiences a "tightness of the chest"—a difficulty in forcing air into the lungs, and probably a still greater difficulty in expelling the CO_2 from the lungs By relieving the spasm and opening out the air passages to their widest possible calibre atropine is of the greatest value in relieving the distressing and exhausting symptoms

May I add the fervent hope that if Dr Tengely has the misfortune to be in the proximity of a 'gas cloud," she will for her own sake keep her dose of atropine until the cloud has passed

I am, Sir, yours faithfully,

DOUGLAS COW

Pharmacological Laboratory, Cambridge June 7th 1915

THE MANAGEMENT AND TREATMENT OF YAWS EXEMPLIFIED BY TWO CASES

To the Editor of THE LANCET

SIR,—The usual method, as far as I know, of dealing with yaws cases in the tropics in the British West Indies is more or less similar in every one of the islands There is a faithful similarity among the management and reports that savours strongly of a slavish attachment to red tapeism and an utter lack of originality Segregation is the chief object desired, and ordinances are passed from time to time to drive yaws infected patients to special hospitals, where they reside from three months to three years under treatment, while some are quite satisfied to make the hospital their permanent homes I cannot say that I have seen anywhere in the British West Indies signs of any vigorous and scientific interest in the management of yaws infected persons There have been from time to time spasmodic revivals of interest taken in the disease, but soon to subside into the humdrum routine and indifference that is characteristic of everything West Indian I have known a case of yaws return from the hospital after a year s residence showing well marked nodules It is with a view, if possible, to revive an active interest in this disease that I venture on the publication of this protest, for I feel sure that working on right lines the stamping out of yaws is a measure not only possible but extremely probable It has already been noted that the prevalence of yaws in the British West Indies is on the decrease, but nobody, I think, has given a thought to the proper reason for this happy result It has not been brought about by the efforts of the different governments, which if anything are a drawback to its ultimate eradication, nor has it been effected by the successful scientific treatment of yaws cases admitted yearly in the hospitals instituted for that purpose Those who know and have watched the progress of these West Indian Islands cannot have failed to observe the simultaneous advance of scientific agriculture and the gradual decrease of the disease known as yaws There is no room to doubt that from the moment that agriculture took on a rational and scientific turn there was an appreciable decrease in the incidence of the disease This is remarkably exemplified in the small island of Grenada, where the brush has been applied to some advantage The squatters attached to estates in that island, who lived anyhow and whose wages of 1s a day were hardly sufficient to maintain the ordinary needs of life, were removed, and agriculture was pushed on a scientific and business like manner, and almost immediately the prevalency of yaws declined Grenada is now, I believe, ready to apply the remedy to a section of her population by reclaiming estate lands wherewith to dump her surplus population in a fresh and cleanly made peasantry In that island the authorities take some interest in the poorer section of the people

With regard to the treatment of yaws, the system of routine has even been more marked Since the advent of the spirochætæ the contagiousness of yaws seems to have been adopted universally as an admitted fact, yet, in my humble opinion, there has never been a greater mistake made Syphilis is constantly being confounded with yaws, which I venture to think is purely and simply a non contagious skin disease There is no difficulty in demonstrating the spirochæta pallida of syphilis, and it does not require an expert to do that I have repeatedly done so, and showed it to intelligent people who took an interest in such matters, yet not once have I been able to obtain the organism of yaws I cannot see why the one should be more difficult to obtain than the other under the ordinary methods prescribed The virtues of arsenical preparations as the specific treatment in yaws are not new, and I, years ago, strongly suggested it as the only drug which can be depended upon for a speedy cure of the disease The coming of salvarsan as a specific treatment in yaws is somewhat of a misfortune, if only for this reason, that the drug has been used too indiscriminately and without technical knowledge on the part of the operators A second reason is that a very much less dangerous preparation of arsenic, intelligently used, can have the same effect, without endangering the life of the patient The wholesale injection of salvarsan for the cure of yaws in incompetent hands cannot be too strongly deprecated, while the routine habit of injecting every patient on admission, whether able to bear the remote effects of such a powerful remedy or not, is extremely dangerous A couple of cases which have come under my notice would suffice to show the carelessness evinced in the use of salvarsan in the routine treatment of yaws

CASE 1 —A girl aged 17 to 18 years the only help to poor and hardworking parents She contracted yaws and was by the ordinance forced to go to a yaws hospital where she received two injections of '606' On her return from the hospital, apparently in good health she returned to her gardening On the sixth day of her return home she was taken with chills, fever and 'bursting' headache She appeared to be drowsy or dozed her tongue was protruded slowly and with difficulty and she could not, or would not answer questions I procured two ounces of her urine by catheterisation I ordered her an immediate hot bath, to be followed by grain doses of calomel and soda every hour for six hours I found the sample of urine to be highly albuminous and occurs at the height of inspiration. Further, although the tracing is a close likeness, it is not a true picture of the pulsus alternans; one feature is alien—namely, the length of the downstroke of the weaker beat which equals the length of the downstroke of the stronger beat. In descriptions of the pulsus alternans hitherto given no mention is made of the relative length of the downstroke of the beats. To determine this relationship I have examined a large number of tracings, and I find in true pulsus alternans that although the downstroke of the weaker beat may be longer than its upstroke, it is never so long as the downstroke of the stronger beat. On these considerations I submit, with all deference, that the presence of true pulsus alternans in Fig. 6 cannot be accepted without demur.

With regard to the prognostic significance of pulsus alternans this has not been worked out, so far as I know, except in one group of cases—namely, when it occurs in association with myocardial and arterial disease in aged people. I published notes of a number of these cases in the *Quarterly Journal of Medicine*, July, 1913, and at that time ten of the patients were living; since, all except one have died, and none of the lot lived much over three years. In other conditions in which the pulsus alternans occurs present experience only warrants this conclusion, that it adds to the gravity of the outlook.

In my own experience it is not met with in rheumatic heart disease, or acute illnesses in the absence of other signs of danger.

I am, Sir, yours faithfully,
June 5th, 1915. J. DAVENPORT WINDLE.

THE GRATUITOUS TREATMENT OF DEPENDENTS

To the Editor of THE LANCET.

SIR,—I think it is time, if conscription is approaching, for the profession to reconsider their attitude towards the wives and children of those men who are serving either at the front or training in Britain. The number is increasing daily, and is likely to go on doing so. At the present time we are not paid for the insured among these men—a considerable loss to those with a large panel list—and we appear to be in danger of having our practices still further decreased by a large increase in the number of "dependents."

There is no lack of loyalty in the writer of this letter; he has done his share so far, but the future has to be borne in mind. Loyalty will not feed the doctor and educate his family. There is no wish to pile extra burdens on those whose men are fighting for us, so surely this is a matter for Government to arrange.

I am, Sir, yours faithfully,
May 31st, 1915. M.D.

THE USE OF TRAINED NURSES FOR ORDINARY DUTIES

To the Editor of THE LANCET.

SIR,—I have before me letters from two trained nurses at present serving in stationary hospitals with the Expeditionary Force. One takes spells of duty as cook and housekeeper, while the other has to cook her own meals and wash up afterwards. Both are thoroughly good nurses and both, I believe, are thoroughly bad cooks. I bring the matter forward in the hope that the authorities may be able to prevent such an apparently unnecessary waste of our nursing material. Trained nurses are scarce but there are many experienced housekeepers, and the women of France have a deservedly high reputation as cooks.

I am, Sir, yours faithfully,
June 4th, 1915. H. B.

THE MEDICAL PROFESSION AND THE NEEDS OF THE ARMY

To the Editor of THE LANCET.

SIR,—The doubtful manner in which the records of our naval and military successes, no less than of our failures, have reached us—the hesitation as to the real significance of any news vouchsafed—has been as bad almost as silence. Just as in general affairs it makes for good if as much information as is possible, having regard always to the military and political exigencies of the campaign, were published in clear language, so the medical man would be helped by definite information. No one knows better than he how seriously anxiety that is perhaps not justifiable, and puzzledom that need not exist, militate against the output of good work. As a whole we are an educated people, and the desire to understand before we act has increased among us. The feeling is there, and though its manifestations are sometimes inconvenient, it should not be ignored, for that only leads to its aggravation. The output of the munitions of war is stated to have been delayed and even now to be jeopardised by alcoholic habits in certain centres. The statement, while reiterated by some and flatly contradicted by others, has a basis of fact which we should think by this time has been exposed sufficiently to the nation. But the position might have been made clear sooner, when much ill will would have been avoided, and possibly ready remedies for some of the evil would have been found already.

It seems still to be in doubt how far most stringent calls are yet to be made on the medical profession, and no definite guidance is given to the medical profession as to how such calls should be met. I am, Sir, yours faithfully,
SENEX.

SCIENCE IN CATALONIA

To the Editor of THE LANCET.

SIR,—The book noticed last week under this heading may be taken to prove the vitality of the revival of the Catalan language, and we should all wish the revival success.

For small states and small nationalities have a precarious existence to look forward to, should the centralisation and unification of nations and countries so vigorously prosecuted by Germany gain any general adoption in Europe. The principle of nationality for which Germany stands is entirely averse from the employment of their native tongues or dialects by subject races, thus contrasting with the principle of encouraging national individuality practised by ourselves. At no period of her history has Spain produced many men of science of European reputation, a fact in striking contrast to her centuries of eminence in the fields of literature and art. Catalonia certainly gave birth to an alchemist of note in the thirteenth century—namely, Raymond Lully—if, indeed, it be not the case that the alchemical writings ascribed to him are forgeries of the fourteenth and fifteenth centuries. The present revival of the Catalan tongue undoubtedly gives an admirable opportunity for the revival of the study of science in Catalonia. May the opportunity be seized!

I am, Sir, yours faithfully,
HISPANICUS.

spin got to approximate to that which is absolutely correct in order to keep it steady and point foremost during its flight as well in the air as in other media such as the body This explains the much greater frequency with which the pointed bullet is found to have turned over and thus produced lacerated wounds, than was the case with the old round nosed bullet

I am, Sir, yours faithfully,
FRANCIS H KELLY, M B , B S ,
Resident Medical Officer, King George Hospital
June 1st, 1915

THE TREATMENT OF GAS POISONING

To the Editor of THE LANCET

SIR,—When the effects of asphyxiating gas on our soldiers were first reported I suggested to an eminent surgeon at the front the use of oxygen by subcutaneous injection for those with much obstruction in the respiratory passages He was so good as to send a reply as follows "We have tried oxygen subcutaneously in several cases as you propose It has seemed to be useful and we shall continue to try it, for it is right to try everything one possibly can "

As we may, from bomb dropping, have to deal with similar conditions in this country, I hope the method may be borne in mind It has been used for some years in France and Canada[1] in many forms of dyspnœa, including those in which inhalation is impeded mechanically The technique is simple, all that is needed being a cylinder of oxygen, a piece of rubber tubing, and a hypodermic or small aspirating needle If the tube is not clean a little wool or gauze might be put as a filter into the end near the needle The disconnected needle is inserted anywhere into loose subcutaneous tissue —e g , in the flank If it have entered a vein, as shown by blood issuing, it should be taken out and inserted elsewhere Oxygen is turned on at low pressure and the cylinder joined up to the needle When a swelling such as would be produced by 300 c c (10 fl. oz) of normal saline has slowly appeared the proceeding is repeated in another place, the first swelling being gently massaged to aid diffusion. 1 5 litre (say 54 oz) has been injected altogether and repeated twice in the same day It is, however, not necessary to measure the amount No ill effects have been recorded, nor even inconvenience, whilst in many cases immediate and considerable relief is stated to have occurred

I am, Sir, yours faithfully,
J D MORTIMER, M B , F R C S
Anæsthetist, Royal Waterloo Hospital &c
St John s Wood N W June 3rd 1915

MILITARY HONOURS

To the Editor of THE LANCET

SIR,—Ignorant alike of the legal position of those important gentlemen called coroners, in respect to soldiers who die in England from wounds received in France, and of military etiquette with regard to the funerals of such victims, I shall be grateful for information upon the various points which I raise

A soldier, wounded near Ypres, was admitted into the French Hospital, London, where beds have been placed at the disposal of the War Office Shortly after admission he developed tetanus, from which, in spite of all that we could do, he died The registrar refused to certify the death without the coroner s approval, and this was I understand, only obtained *after* much time, criticism, and correspondence, but before reaching, with apparent reluctance, the happy conclusion that no inquest was necessary, he telegraphed to the only relation the unfortunate man possessed, a sister, a young girl aged 16, in service in Bath, asking if she was satisfied with the treatment received by her brother while in the hospital, a form of "compliment" which *the staff of the hospital*, who did everything in their power for the patient, properly appreciated

Owing to the attitude of the coroner there was considerable delay in arranging the details of the man's funeral At last, all being in order, nearly a week after his decease, a hearse a corporal, and some twelve soldiers, arrived to take him away No Union Jack was provided, but the hospital authorities were able to remedy this omission On arriving at Kensal Green, however, no arrangements had been made for the services of a clergyman, and it was not until three quarters of an hour had elapsed that the unfortunate man's *remains* were buried—without "military honours" in the true sense All the wounded soldiers in the hospital were aware of these omissions—if omissions they were—and their comments were various and free

It would be interesting to know whether other coroners practise similar proceedings and pay such delicate compliments to other hospitals, and whether these are the usual arrangements approved of by the War Office Surely it would be possible for the War Office, the coroner, and the hospital authorities to work in conjunction with one another, so that such a state of things could not occur again

I am, Sir, *yours faithfully*,
W H CLAYTON GREENE,
Surgeon to the French Hospital.
June 5th 1915

THE PULSUS ALTERNANS

To the Editor of THE LANCET

SIR,—In THE LANCET of May 29th Dr C O Hawthorne relates a case in which the pulsus alternans has been present on and off for five years without the manifestation of serious cardiac symptoms The sphygmogram (Fig 6) illustrating this case I believe answers Sir James Goodhart s question in your present issue, "When is a pulsus alternans not a pulsus alternans, so far as its now *accepted gravity of prognosis goes*?"

When interpreting tracings such as this it is important to remember that the respiratory muscles attached to the arm move the arm slightly during breathing if it is at all laboured Unless the arm is kept still by grasping the condyles while the pulse is recorded, and particularly if the wrist apparatus of the sphygmograph is not securely fixed up, the movements of the *arm modify* the force of impact between the spring and button of the tambour, and thus cause variations in amplitude of the pulse curves which are often mistakenly *ascribed to* changes in blood pressure For example, if there are three pulses to one breath an apparent pulsus alternans may be occasioned and with higher ratios the grouping of stronger and weaker beats may be such that one or two low beats alternate with two or three high beats I have a number of tracings illustrating these fallacies, and the seeming alternation in Fig 6 of Dr Hawthorne s paper impresses me as being caused in this way The outline of the curve, as a whole suggests laboured breathing with a ratio of three pulses to each breath and the weaker pulse *of the groups* of three

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[1] See THE LANCET June 22nd 1912 p 1726 (Anoxyhæmia of Altitude) Medical Press and Circular May 1st 1912, and Dec. 23rd 1914 also Practitioner July 1911 p 130

The War.

THE CASUALTY LIST

THE names of the following medical officers have appeared in the casualty lists since our last issue:—

Wounded: Surgeon D. D. Pinnock, R.N. (Armoured Car Division), Captain K. B. MacGlashaw, Lieutenant J. T. Heffernan, Lieutenant J. S. Ward, Lieutenant R. O'Kelly, all of the R.A.M.C.; Captain J. J. Black, Australian Medical Corps; Temporary Surgeon J. R. Kay Mouat, R.N.V.R., Home Battalion.

Missing: Lieutenant J. A. Gillespie, R.A.M.C. (attached 2nd Northumberland Fusiliers).

DEATHS AMONG THE SONS OF MEDICAL MEN

The following name must be added to the sons of medical men who have fallen in the war: Lieutenant R. W. C. Edginton, only son of Dr. R. W. Edginton, of Edgbaston, Birmingham.

THE MOBILISATION OF THE MEDICAL PROFESSION

The continuous increase in the number of medical men engaged with the fighting forces, which, whether voluntarily or by compulsion, will sooner or later have to be augmented to a degree greatly beyond anything that has yet been done, coupled with the considerable casualties sustained by the medical services, must inevitably drain the medical reserves of the country and deplete the ranks of the civil medical profession. Indeed, these results have already ensued to a considerable degree. But the making of doctors cannot be expedited as can the making of munitions, because no two or more processes in the moulding of the raw material can be carried out simultaneously. While 50 operatives could undoubtedly make a shell in less time than five, that is not the case with the making of a medical man. The consequence is that our supply of medical men cannot be expedited to meet the demand. For this reason also not only will the medical assistance required for the needs of the civil population be depleted, but as the war goes on the very strain thereof and the upset of those economic conditions on the stability of which the maintenance of a high state of individual efficiency depends will greatly increase the proportionate need for such assistance. While at all times prevention is infinitely more important than cure, the factors that tend to undermine the public health, and the evolution of conditions favouring the rise and spread of epidemic disease, are enormously increased during a prolonged war, as even a cursory study of history will demonstrate, so that undermanning of the sanitary service, whose duty it is to remove all causes and forestall all conditions that favour the spread of disease constitutes another problem of the first magnitude. A medical correspondent of the *Times* asks whether it may not be possible by a rearrangement of work to meet the demands and secure a margin of safety. Admitting the difficulties, he points out that while in the poorer class districts the doctors are so fully occupied that no rearrangement is possible, in the suburban areas of large towns are to be found a considerable number of young men with comparatively little work who are engaged in the building up of a practice. Such a practice when established represents invested capital but, unlike the capital of an established commercial concern, it is almost purely personal, and is transferable in only a limited degree, tending to evaporate with the departure of the creating personality. Where, therefore, a practice is only in course of establishment it may be presumed that organised effort would have the effect of setting free a considerable number of such young men. The medical work might be centred in the hands of a few selected physicians already established there whose whole energies would be required, and thus a great waste of waiting time, which at present the nation cannot afford, would be obviated. The necessary adequate organisation might perhaps come through State intervention, for, among other things, it is clear that the assurance of some form of compensation on the recurrence of normal conditions would be necessary for those who have been dispossessed of their entire capital, which comprises mainly the time, labour, and money expended in the building up of an intangible and untransferable connexion, consisting of a personal attachment to themselves based on the estimate they have been successful in establishing of their own skill and capacity. Especially is this the case with those whose dependents have absolutely nothing outside of this on which to rely.

THE BRITISH CASUALTIES

On Wednesday afternoon Mr. Asquith informed the House of Commons that the total British casualties in the French and Mediterranean Expeditionary Forces, including the Territorial, Overseas Dominions, and Indian contingents, up to the end of May comprised 10,955 officers and 247,114 non-commissioned officers and men killed, wounded, and missing. Of these, 3327 officers and 47,015 men have been killed. The figures, which do not refer to the navy, are not higher than had been anticipated by those who have followed the course of the war carefully, but they will serve to bring home to the public in a forcible and even heart-rending way the magnitude of the struggle in which the British Empire and our Allies are engaged. They also explain the urgent demand for medical assistance, and the need that this assistance, as it is forthcoming, should be used to the best advantage, every care being taken to see that full value is extracted from the supply.

THE TREATMENT OF WOUNDS IN WAR

In the second number of the recently established *Journal of the Royal Naval Medical Service* appeared a paper detailing the results of a large number of experiments which had been conducted under the superintendence of a committee consisting of Sir William Watson Cheyne, Fleet-Surgeon P. W. Bassett-Smith, and Mr. Arthur Edmunds. The work of the committee dealt with the question of the prevention of the growth of septic organisms in a wound, and a very large number of experiments were made in order to investigate the rate of diffusion of various antiseptic substances through blood clot, agar, and portions of tissue. Many very ingenious expedients were devised in order to test thoroughly the antiseptic value of various substances, and so much care was taken that the results may be accepted with confidence. The object of the investigation was to study the best method of dealing with wounds in the interval between the infliction of the wound and the arrival of the patient at a dressing station or field hospital, where the wound can be properly attended to—an interval not infrequently of several hours and sometimes even of days. The

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

THE CENTRAL COMMITTEE

A MEETING of the Central Committee was held on Thursday, June 3rd, when the members were put into possession of full *details as to the distribution* of relief to medical men, pharmacists, and their families and dependents in Belgium This distribution takes place through the medium of the Aide et Protection aux Médecins et Pharmaciens Belges Sinistrés, extracts from whose recent official reports were published in THE LANCET last week The Belgian Committee works in this way A strongly constituted central committee sitting in Brussels has appointed a subcommittee for eleemosynary purposes, and to this subcommittee inspectors report on the merits of the individual cases which have come under their ken in particular districts, and make recommendations as to what grants should be given Papers are filled up for the information of the subcommittee, and the grants are made on the recommendations of the subcommittee, who are stated, on the whole, to have been less stringent than the actual inspectors Examples of the kind of cases that have been succoured were published in THE LANCET last week, and to these the following four cases may be added —

Dr C—— L——, of T——, is married, and has one dependent son His money is exhausted, his premises are completely burnt, he has no means of daily subsistence, and an elder son with whom he hoped to shelter is now a refugee A grant was made of 700 francs

Dr L——, of V——, has two dependent children, his house and all the contents have been burnt and his economies are exhausted A grant was made of 700 francs

Dr C——, of L——, has also two dependent children His house and all the contents have been destroyed and two other houses belonging to him have been burnt His *clientele* is ruined and dispersed He still has some savings A grant was made of 400 francs

Madame G——, of A——, saw her husband and one son killed in front of her, and her house was pillaged One son aged 15 remains The returns of her late husband s pharmacy have become very small indeed A grant was made of 700 francs

At the séance of the Belgian Committee on April 29th an important departure was made, as it was agreed that monthly grants should be given to families of medical men and pharmacists in want It was pointed out that it would be of great advantage to those who were helped if they had more security and had not always to renew their applications in the face of complete want As a result it was agreed by the Aide et Protection aux Médecins et Pharmaciens Belges Sinistres that allowances should be paid in suitable cases of from 300 francs to 600 francs per quarter Already the distribution of *three monthly allowances is being* made to families of pharmacists Complete accounts were furnished to the British Committee by the detailed reports of the proceedings at the seance of April 29th and the two previous sessions, so that it was possible to judge of two things first, that the resources had been very closely husbanded, and, secondly, that more money is wanted, especially in view of the system of tri monthly grants Sir Rickman Godlee, the chairman of the British Fund, and Dr Des Vœux, the treasurer, were accordingly authorised to send out a substantial sum of money to Belgium through the medium of Mr Herbert Hoover, the chairman of the International Relief Fund The cheque is being accompanied by a letter from the chairman of the British Central Committee, to Dr Péchère, the chairman of the Aide et Protection aux Medecins et Pharmaciens Belges Sinistres, pointing out that the British Committee cannot undertake to send the same amount monthly or even at stated intervals, but that the amount sent must depend partly *on the funds* at the disposal of the British Committee and partly upon the actual necessities of the time In this letter the approval of the British Committee is also expressed of the way in which the relief of distressed doctors and pharmacists and their families has been undertaken by Dr Pechère's committee

THE WEEK'S SUBSCRIPTIONS

The subscriptions received by Dr Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, are as follows —

	£	s	d
Hampstead Division B M.A. (per Dr Coode Adams Chairman and Sec.) ..	21	0	0
Dumfries and Galloway Division, B M.A. (per Dr J Dewar Robson Hon. Sec)—			
Dr R. B Lorraine	1	1	0
Mrs R B Lorraine	1	1	0
Dr Cowan	0	10	6
Dr Robson (supplementary)	0	9	9
Dr W Bramley Taylor	2	2	0
Brussels Medical Graduates Asso (per Dr Major Greenwood Treas) (eighth donation — total £127 15s 6d)	1	1	0
Greenwich and Deptford Division, B M.A. (per Dr C G Wallis Hon Sec) (second donation — total £45 8s 6d)—			
Dr Allan Massey	0	10	0
Dr A Whitehead	0	5	0
Mr F A. Williamson (from weighing machine)	0	6	6
Mr A. Peake ...	2	12	9
Mr J W Reed (per British Drug Houses Ltd)	2	2	0
Mr John Cooper ..	0	10	6
Northamptonshire Division B M A. (per Dr Baxter Hon Sec.)—			
Dr A. W Cooke	1	1	0
North of England Branch of Fund (per Dr James Don and Mr A S Perceval Hon Secs) (thirteenth donation total £709 15s 6d.)—			
Dr E Gofton	1	1	0
Dr J R Mitchell	1	1	0
Dr C Franks	1	1	0
Dr W Misselwhite	2	2	0
Dr W W Stainthorpe	0	10	6
Dr F T Hare	1	1	0
Dr J Danholm	1	1	0
Dr J Malcolm Shaw	4	0	0
Dr J W Weir	1	1	0
Dr W H Bishop	2	2	0
Dr W J Phillips	1	1	0
Dr P F Foster	2	2	0
Dr G R Fortune ..	1	1	0
Dr Craigie Gray ...	1	1	0
Dr A Pain ..	1	1	0
Dr G H Harbottle ...	1	1	0
Dr W Horsfield ..	1	1	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H A Des Vœux, at 14, Buckingham gate, London, S W, and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries begs to acknowledge the receipt of surgical instruments kindly contributed by the following donors since the publication of the last list —

Mr T P Beddoes, Welbeck street W , Mrs W J C Johnstone Weybridge, Mr F W Smallwood *Handsworth*, and Mrs E G Roberts, Uxbridge

Instruments should be sent to the Apothecaries Hall, Blackfriars, E C

CENTENARIANS —*Mr John Mitchell*, a Crimean veteran has died at Navan, county Meath in his 108th year —The death has been reported in the borough of Stepney of a person aged 102.

CLEAN MILK SOCIETY —The council of this society are preparing plans for an infants welfare' station in one of the poorest quarters of London where clean milk can be sold to the poor and where mothers can be educated in the care of their young children on similar lines to the work done in New York. The work of the society will embrace efforts to improve conditions at dairy farms in railway transportation, and at milk shops as well as the methods of distribution to consumers' houses and the care of milk in the home.

Shuford's solution was planned for hypodermic use. Its formula is Sod bibor, acid salicyl. aa ʒi., acid. carbolic ʒiii., glycerin ℥i. This is too strong for a wound application though he has used it when all the conditions apparently (certain soils, toy pistol wounds &c) promised tetanus, but the wound will slough if it is applied more than once, consequently it has been modified to sod bibor acid salicyl., acid carbol., aa ʒiii glycerin ℥iss, aq q s ad ℥iv The wound should be filled with this as it is germicidal, analgesic, and altogether an improvement over iodine

The growth of granulations through the meshes of a gauze bandage renders sticking and tearing off necessary but uncomfortable accompaniments to its removal Sheets of toilet paper (wood pulp) may be folded or rolled into drains or lamp-wick shapes the wound bridged diagonally or longitudinally with these which are to be roofed over with smooth sheets, and then gauze, put outside of and over all, will not stick, as there is a shield between it and the growing granulations, or if the paper does adhere it may be quickly softened and washed away by sponging with warm water and washing soda (¼ per cent). Further attention is facile and agreeable to all concerned because removal has not caused additional trauma

Military Hospitals at Milan —A Swiss correspondent sends us an interesting description of Milan in war time. 'Milan" he says, 'is preparing to receive and to look after the greatest possible number of wounded soldiers Thanks to the generosity of some of the large city institutions and of numerous citizens 20 military hospitals, all furnished according to the requirements of modern medical and surgical science, have been organised one of which, containing 400 beds is installed in the seminary of the archbishopric. All the hospitals are linked up by tramways with the railway stations and since the lines are of the same gauge the wounded will be conveyed without delay or change of vehicle from stations nearest the firing line to the hospital doors Five gradients leading from the Milan railway station have been built and the invalids will be conveyed along one or other of these gradients according to the categories of sick or wounded they belong to The installation of the hospitals has been organised in the same practical manner The principal communes in the neighbourhood have joined in the work with the result that Milan and the surrounding district have placed 25 000 beds at the disposal of the army The problem of personnel has been very easily solved for the population has offered a more than sufficient number of volunteers all of whom readily accept the task allotted be it ever so modest This municipal hospital service has been organised side by side with that of the efficient Italian Red Cross Society Milan has profited by the past eight months to organise a sanitary service based upon the knowledge gained from battlefield experiences. What Milan has done has been done also with equal enthusiasm by other towns in Northern Italy The organisation of the hospitals and the training of the staffs began at the end of last year when well informed and clear-sighted people realised that the participation of Italy in the war was inevitable.'

Vacancy for a Medical Officer.—We are asked to state that a vacancy occurs for a medical officer willing to go on foreign service to be attached to the Royal Engineers, East Anglian Division (T F). Usual pay and allowances for Territorial Force R.A.M.C Apply Medical Officer in Charge Royal Engineers Radlett Herts

Wounded Allies Relief Committee —The committee has received a report stating that the excellence of the French railway system and the improvements in emergency treatment make it possible for men to cover the 400 miles between the trenches and the hospital at Limoges in rather less than 30 hours The Limoges hospital which accommodates 150 patients has received the warmest praise from General Delorme, of the French Medical Service, and the French Government has given 3000 francs for a hut to accommodate 20 more patients Out of 600 cases treated there have been only 16 deaths The hospital is now devoted exclusively to French wounded for owing to the differences in religion the Government has found it advisable to provide special hospitals for native troops The English are splendidly looked after in their own hospitals The administrator appeals for gifts of tea glass cloths, bath and roller towels, and slippers with leather soles, which may be sent to the Wounded Allies Relief Committee, Sardinia House, Kingsway, W C, or to the Hôpital Militaire Anglais, Limoges, France

The committee has opened a Kensington branch at 93, Lexham gardens, Kensington, W, where a spacious house has kindly been lent rent free. The whole output of hospital equipment goes to the committee's hospitals of which there are now three in France and two in the Balkans In its first four days of working the branch has had the daily assistance of 100 ladies, but it can accommodate as many more, and would welcome other workers The officials also warmly invite the public to call and see the work in progress

The Depage Hospital, La Panne —We are informed that a newly finished building containing 300 beds, belonging to Dr Depage's hospital was entirely destroyed by fire on the night of June 6th. No lives were lost

Increased Hospital Accommodation for Wounded Soldiers in Dublin —Through the generosity of Lord Iveagh the hospital accommodation for wounded soldiers in Dublin is about to be increased by 367 beds Of these 200 will be in an annexe to the King George V Military Hospital which Lord Iveagh has promised to build Room for the remainder will be found in unused wards in the several Dublin hospitals

The War and the Canadian Medical Association —A Canadian correspondent writes "The annual meeting of the Canadian Medical Association, which was to have been held this year in July in Vancouver B C, has been cancelled, as also has been the annual meeting of the Canadian Association for the Prevention of Tuberculosis in the same city, about the same time This is on account of so many prominent officers and members being away in Europe The editor of the Journal has taken a medical commission The general secretary of the association is with the McGill University General Hospital. Members of the finance committee and of the executive council are also serving abroad. In the meantime the affairs of the association and the Journal are being conducted by Dr G G Campbell and Dr J W Scane (Montreal). The association will have a strenuous year but in the hands of these two such able men the best possible will be done for the association in the circumstances, and the association is very grateful to them for the proffer of their unpaid help

The British Red Cross and the St John Ambulance Association —It is announced that a public meeting will be held on Wednesday next, June 16th at 3 P M, at the Mansion House in aid of the funds of these institutions. The speakers will include Lord Lansdowne and Sir Edward Clarke.

Lady Wolverton calls attention to the fact that the demands upon the Red Cross Society are very heavy and that house linen and garments, both cotton and woollen, are wanted in large quantities, the garments most urgently needed being shirts and pyjamas—for summer wear,—vests, pants handkerchiefs and socks

The Gretna Railway Disaster A Military Train —Sixty six men of the Royal Scots injured in the Gretna railway disaster were brought to Edinburgh from the hospitals in and about Carlisle, and were taken to Craigleith Military Hospital arriving at the Waverley station about 3 30 They travelled by the North British Railway in a Territorial military train recently fitted up by Mr William Whitelaw, chairman of the North British Railway It consists of seven vehicles two of which contain cots, and has many advantages over the ordinary hospital train. Two tiers of cots are swung from the roof of the carriage in a manner similar to that in use on naval hospital ships, which eliminates vibration. Indiarubber fenders prevent the cots from coming into contact with the sides of the carriage when the train is in motion An excellent feature of this type of train is that from the moment the wounded soldier is put in his cot until he is laid in bed in hospital he never leaves the cot, thus obviating one of the drawbacks of permanently fixed beds The train, which includes a dining car, was in charge of a R A M C officer with two Red Cross sisters and R A M C orderlies, three Red Cross lady cooks prepared the food mere application of a field dressing over the wound, with or without cleansing of the surface or of the skin around, can have little effect on the spread of infection in the interior of the wound, though it will certainly tend to prevent the entrance of fresh infective material It is clearly therefore desirable, if possible, to devise a method of inhibiting the growth of bacteria even in the depths of the wound The material employed must be capable of diffusing through blood clot, and to a certain extent also through the tissues, so that it may be capable of reaching the septic organisms which have invaded the wound In the paper will be found a very full account of the experiments performed, and we need only mention their results The committee decided that on the whole the most suitable antiseptic seemed to be a mixture of salicylic and boric acid, and that the most suitable application was a mixture of salicylic acid and boric acid, and that this was best applied as a powder to be dusted over the wounds thickly, while a cresol paste 20 per cent in lanolin and wax base should be injected into the interior of wounds The cresol paste is contained in paint tubes with nozzles two inches in length, so that it can be injected into the interior of the wound So far the method has been employed only in a few cases in man, but it has been decided to make an extended trial of it, and therefore the material has been supplied to the navy It is clear that it is only by an extended trial that the efficacy of the treatment can be established

In the present issue of THE LANCET appears a rather trenchant criticism of the method by Mr J Godfrey Saner, who points out certain objections to its employment The first objection is that the use of the paste prevents drainage, which is of so much importance in all septic wounds, and the second is that the method is not based on results obtained in actual wounds but on experiments in the laboratory As to the interference with drainage, it may be said that the method does not inhibit the use of drainage tubes, and in fact in one case reported in the paper in which the method was employed a drainage tube was used We fully agree that it is essential that in any deep wound there should be ample arrangement for drainage, otherwise the septic material is pent up and severe septic compli cations may result The other objection, that the method is not based on the results in actual wounds, is puzzling, for the trial is being made, and the results will be examined with the greatest interest. The method has been elaborated with extreme care in the laboratory, and the names of the committee are a guarantee that the procedure suggested is at least based on careful experimental data. We know that Mr Saner s views are not peculiar to himself, and, indeed, we have received communications to the same effect from others, but the probability is that there is not yet sufficient evidence forthcoming to warrant any decision

Modifications in the Iodine Treatment of Wounds

Dr Douglas H Stewart, a New York surgeon, has suggested employing as an agent in the treatment of wounds a combination of calomel and tincture of iodine in the proportion of 1 to 1000 The calomel forms iodide of mercury For washing and dressing wounds 1 drachm of this solution is diluted to 2 ounces in water The wound is cleaned and filled with the solution, toilet paper being employed for swabbing and, when folded and soaked with the solution, for draining The wound is covered with soaked toilet paper, and over this a layer of dry toilet paper is placed and then bandaged with gauze or other material It is claimed that toilet paper answers well for the purpose, inasmuch as it is porous and absorbent, and serves as an excellent draining medium, it does not adhere to the wound, and does not spread, curl, or unravel into threads In aseptic procedure the wound is washed with the iodine mercury solution, and drained with a strip of gauze fried in lard at a temperature of 175 C, and bandaged as usual The following is the author's description of his technique

> The advantage of having the gauze covering fried in lard is that lard can be brought to a very much higher temperature than water, and consequently germs and spores will be more surely destroyed Also the gauze permeated with lard can be stripped off the wounds without causing pain and without injuring the surface of the wound and thereby impeding granulation and healing This mode of treatment is applicable to all wounds which are infected and will be of great value in the present campaign Success in treating wounds by this method has followed hospital practice
>
> The combination intensifies the antiseptic action of the iodine without producing any escharotic effects It appears that at the seat of war in France it is extremely difficult, in many cases impossible, to disinfect wounds thoroughly owing to the presence of anaerobes, such as the organisms of tetanus malignant œdema, and B aerogenes capsulatus In particular wounds have been very frequently infected with the spores of tetanus Most of the antiseptic agents employed are impotent against the organisms of tetanus, and if this combination will destroy the anaerobes it should be of the greatest service There are three points to be considered 1 The combination of calomel and iodine, making an antiseptic of greater strength by far than iodine alone 2 The use of toilet paper as first dressing, it being non adhesive, absorbent, and a good draining medium 3 The practice of employing gauze boiled in lard up to a temperature of 347° F as a first dressing, it being non adhesive, and the temperature to which the lard can be raised being capable of killing germs and spores The application of the ordinary tincture of iodine produces a tanning effect upon living tissue and affords a roof or shelter to anaerobes which may penetrate a little beyond the point of actual contact The character of cases already treated resembles in many respects wounds produced in battle, of course, gunshot wounds being excepted

The same surgeon, Dr Douglas Stewart, referring to the method of treating infected wounds (1) with hydrogen peroxide, (2) with tincture of iodine, and (3) bandaging with gauze pads and strips, says every one of these three steps may be improved upon He uses sodium perborate in the place of hydrogen peroxide

> A saturated solution of this salt (about 2½ per cent) may be quickly made by adding to a cup or other vessel full of water a little greater quantity than can be dissolved, using the residue as an index of saturation and this solution may be poured into a wound in the identical manner or mode that is employed with the use of H O, Effervescence is not synonymous with efficiency, and if the perborate solution yields rather less bubbling its well known bactericidal effects would tend to prove that some of its gas was more profitably expended than merely escaping into the air The solution is alkaline but perishable The powder form is, however, very stable Consequently a small package (say ¼ to ½ ℥) could be easily carried by each soldier Sufficient of this could be dissolved in his cup and the solution poured into the fresh wound by the man himself or one of his comrades and the remainder of the treatment left for more skilful hands The tincture of iodine, when applied to a wound in the same or a similar manner, burns like fire it slows healing and instead of affording protection against anaerobic infections seems rather to roof over and afford them shelter Were our fore bears so very far wrong in expressing approval of 'laudable pus,' because open septic wounds with abundant strepto staphylococcus overgrowth are not ideal homes for the germs of tetanus, but rather unfriendly or unfavourable environments?

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Parliament and the War

ALL the attention of Parliament is now absorbed in matters arising out of the war The Coalition Government has met the House of Commons, and since the resumption of business after the Whitsuntide recess the energies of Parliament have been devoted to passing the Ministry of Munitions Bill

British Casualties in the War

The Prime Minister states that the casualties in the French and Mediterranean Expeditionary Forces (including the Territorial Force and the Colonial and Indian contingents) to May 31st are as follows —

	Officers	Other ranks
Killed	3,327	47,015
Wounded	6,498	147,482
Missing	1,130	52,617
Total	10,955	247,114

The total for all ranks is thus 258,069 The Prime Minister has promised soon to give the complete figures for the Navy and Naval Division

HOUSE OF COMMONS

MONDAY, JUNE 7TH.

Proposed New Sanatorium for Middlesex

Mr NIELD asked the President of the Local Government Board whether, in connexion with the proposed building of a sanatorium by the Middlesex County Council at Mayland, Essex, he was aware that since the outbreak of war the council had decided that, while completing the purchase of the site, it was not desirable to apply for the consent of the Board to borrow a large sum of public money for the building, or to apply to the Public Works Loan Commissioners for a loan, or go to the public in competition with the Treasury at a time like the present when the whole resources of the country were urgently required to be husbanded or employed for the vigorous prosecution of the war in order to bring about its speedy conclusion, and whether such course had received his sanction —Mr LONG replied I am aware of the resolutions passed by the county council at their meetings in January and May last. No sanction on my part is required in the circumstances described in the question, but if the honourable Member wishes to know whether I think that undertakings of this kind should be postponed in the present circumstances I can inform him that I do

Mr NIELD asked the Chancellor of the Exchequer whether he was prepared to sanction the advance by the Public Works Loan Board of the sum requisite for the erection by the Middlesex County Council of a large sanatorium for the treatment of tuberculosis —Mr MCKENNA answered This matter is one for the President of the Local Government Board in the first instance and, having regard to the reply which he has given on this subject to-day I do not think it probable that any application for a loan will come before the Public Works Loan Board or the Treasury for sanction at present

Medical Officers of the Territorial Force

Colonel GREIG asked the Financial Secretary to the War Office whether any steps were being taken to remedy the hardships of medical officers of the Territorial Force who had been mobilised with regard to promotion and the question of a gratuity —Mr FORSTER replied I hope to be in a position to make a statement on this question before long

TUESDAY, JUNE 8TH

Medical Certificates for Sick Soldiers

Sir J D REES asked the Under Secretary for War whether commanding officers had been instructed to accept certificates given by duly qualified medical men to sick soldiers on furlough residing at a distance of over two miles from military hospitals, if so, whether any such certificates had been ignored and the sick soldiers who obtained them punished, and, if so, whether such action was approved by the superior military authorities —Mr TENNANT answered The rule in force is that when a man forwards a civil medical practitioner's certificate recommending an extension of furlough arrangements are made for his readmission to the nearest military hospital where he will remain under treatment until he is fit to rejoin his unit or depôt I am informed that no cases had come to notice prior to the issue of the instructions I have mentioned of civilian medical practitioners' certificates being ignored, either with or without the approval of the superior military authorities, once it had been ascertained beyond doubt that the certificates were genuine

The Eyesight of Recruits

SIR IVOR HERBERT asked the Under Secretary for War whether any arrangements had been made for the special treatment of recruits found to be suffering from defective eyesight caused by the conditions under which they had been industrially employed before enlistment which rendered them temporarily unfit for military service —Mr TENNANT answered Men suffering from the severer forms of defective eyesight should not, of course, be enlisted, and if by any chance they have got into the army they should be discharged Men suffering from the milder forms would receive the same treatment that they would have in civil life—i e , correction of any error of refraction, tonic drugs, rest or modified exercises, and local treatment to the eye

Discharges from the Army

SIR IVOR HERBERT asked the Under Secretary for War whether the attention of the Secretary of State had been drawn to the large number of discharges from the new armies for physical and other causes, and whether any measures were being taken to prevent the enlistment of such discharged men and to retain their services for the industrial or agricultural operations for which they might be fitted —Mr TENNANT said in reply The matter referred to in the first part of the question receives the constant attention of the military authorities Men who have enlisted since the beginning of the war and have once been discharged are not accepted for re-enlistment, with the sole exception of those discharged on purely medical grounds whom the examining medical officer, with full knowledge of the cause of discharge, pronounces to be fit for service at home and abroad

Meat Inspection

Mr WILLIAM THORNE asked the Financial Secretary to the War Office a question to elicit the conditions under which frozen meat for the use of the troops was inspected — Mr FORSTER replied The scope of the inspection is well understood. All meat imported is examined and certified as free from disease at the port of shipment Before issue to the troops it is passed by a board of officers, which includes an officer of the Army Service Corps

WEDNESDAY, JUNE 9TH

Medical Students and War Service

Mr MCCALLUM SCOTT asked the Under Secretary of State for War whether the arrangements previously announced, whereby medical students in their final year of study who had only their final examinations to pass might be released from combatant corps if they applied in order to complete their medical studies and qualify for medical service, had been altered, and, if so, in what respect —Mr TENNANT answered The ruling applied to medical students who were serving in the ranks and has not been altered

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, such information for gratuitous publication*

BARFORD A. M. M R.C S L R C P Lond. D.P H has been appointed Medical Officer of Health and School Medical Officer for Newark.
JOHNSON J M.B C M Glasg has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Birtley District of the county of Durham
JONES PETER M D Edin. has been appointed Medical Officer of Health to the Abergele and Pensarn Urban District Council
RAE, HARRY J M.B Ch.B Aberd has been appointed Tuberculosis Officer for the county of Aberdeen.
ROSS V A. M.B C.M Edin. has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Harris District of the county of Inverness

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)
When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

BIRKENHEAD BOROUGH HOSPITAL.—House Surgeons
BIRMINGHAM CORPORATION CITY HOSPITAL, Lodge-road.—Temporary Female Assistant Resident Medical Officer Salary £250 per annum with board residence and washing
BIRMINGHAM GENERAL DISPENSARY —Resident Medical Officer unmarried Salary £250 per annum with apartments attendance, &c.
BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Junior House Surgeon. Salary £100 per annum, with residence, board &c.

This was the first time the train had brought men north to Edinburgh Hitherto it has been used to remove naval patients from Queensferry to other hospitals, but it is expected that in future greater use will be made of it in bringing wounded soldiers to Edinburgh. After the terrible railway accident the work of getting the men who could walk to the motor-cars was quickly accomplished, but there were others who had to be lifted from the train to the motors, and not a few limped badly Injuries from burns were common There were 26 cot cases

SUPPRESSION OF THE BELGIAN RED CROSS BY GERMANY —At the request of the Belgian Legation in London the Press Bureau has made public the fact that Baron von Bissing, the German Governor General of the occupied provinces of Belgium by a mandate dated April 14th, dissolved the Belgian Red Cross Central Committee and forcibly took possession of the funds and archives of the society, delegating Count B von Hatzfeld to administer the institution. The Governor General had previously demanded the help of the Belgian Red Cross for an institution he proposed to found for aid and protection to working women The Red Cross Society refused on the ground that its objects were not within the scope of Red Cross work, in which they were supported by the International Red Cross Committee at Geneva

OFFICIAL RESPIRATORS —It is announced from the War Office that an improved type of respirator has been adopted on the recommendation of a special expert committee, and that there are ample supplies of this pattern available at the front No unofficial help, therefore, is needed in this matter

REST HOUSES FOR MILITARY NURSES —The Duke of Portland and Lord Plymouth issue a weighty appeal in support of a hostel where nurses can be temporarily lodged while resting from their labours or awaiting orders which it is proposed to establish in close connexion with Queen Alexandra's War Fund for Nurses of the Red Cross and the Order of St John of Jerusalem It will serve as a clearing house also, nurses needing serious attention being sent to hospitals, others undergoing only dental or minor treatment remaining in the hostel, while yet others would be put into communication with the many kind people who are willing to offer them hospitality During the war its advantages should be free When the war is over it is hoped that it will remain as a permanent hostel where nurses can live at a moderate cost in congenial company Subscriptions may be sent to the honorary treasurers at 3, Grosvenor square, W , cheques crossed "London City and Midland Bank "

LIEUTENANT Andrew Philip, who had only recently given up his post as medical inspector of schools for the Keighley district of Yorkshire to take a temporary commission in the Royal Army Medical Corps, was suddenly taken ill after his first parade and fell, fracturing his skull He was removed to the Royal Infirmary, Hull, where he died the following day

PAYMENT OF CIVILIAN MEDICAL PRACTITIONERS FOR ATTENDANCE ON SOLDIERS WIVES AND FAMILIES —A medical correspondent, signing himself "Sine Premio Opifex," writes that seeing in THE LANCET Mr Tennant's remarks about the various duties that medical men might perform in the war and the payments they might expect, he wrote to the War Office that he had attended the wives and children of a good many soldiers and supplied them with medicines, &c , at his own expense, and asking to whom he could render his account He encloses the ensuing correspondence—viz., a letter dated April 14th, 1915 stating that the engagement of medical men for part-time service is in the hands of the local authorities and directing him to communicate with the Deputy Director of Medical Services, Headquarters Southern Command Salisbury , a copy of his letter in accordance therewith asking if he may send his account there and a reply therefrom stating that it is regretted that fees cannot be claimed by him as he does not come under paragraph 495 of the Regulations of the Army Medical Service, which reads "The wives of N C O s and men who are borne on the married roll with their children and stepchildren (under 14 years of age) will when present with their corps or in receipt of separation allowance be allowed medical attendance and medical comforts at the public expense only at stations where there is a medical officer, or when a civilian medical practitioner is engaged for attendance on the troops, and provided in each case that they reside within the prescribed radius (one mile) " It will therefore be seen that civilian medical men cannot claim fees for attendance on the dependents of soldiers unless they have been specially engaged for attendance on troops and then only for visits if the soldier s wife and family live within a mile from the doctor

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND —At the annual election of the Royal College of Surgeons the following were elected for the ensuing year —President Mr F Conway Dwyer Vice President Mr W Taylor Secretary Sir Charles A Cameron Council Mr W Stoker, Sir Charles A Cameron, Sir L H Ormsby, Mr R. D Purefoy, Mr H G Sherlock, Sir Charles B Ball Mr J B Story, Sir Thomas Myles, Sir Arthur Chance Mr S M'C Boyd, Sir Robert H Woods, Mr R Lane Joynt, Mr R B M'Causland, Mr T E Gordon, Mr E H Taylor, Mr A J M'A. Blayney, Mr R O B Maunsell, Mr T N Smith, and Mr W I Wheeler

LIVINGSTONE COLLEGE —Commemoration Day was celebrated on June 3rd, the chair being taken by the former Principal and Founder, Lieutenant O F Harford R A M O The Principal said that the session had been a successful one, but the call for medical men was now more urgent, and the committee would probably be shortly deciding to discontinue college sessions until the declaration of peace, so as to free those remaining on the staff to help in the national crisis Two members of the staff had already taken commissions It was thought that possibly the college with its beautiful grounds, would be accepted by the War Office as an auxiliary hospital. Lieutenant Harford spoke of how the war affected Livingstone College as a brotherhood—unbroken, even though some who had been trained there together were now technically regarded as enemies—and as a missionary agency Although Livingstone College was an international college, those responsible for carrying it on were British men and women and therefore had national responsibilities, whence it was possible that it might be found necessary to close down for a time The meeting was then addressed very shortly by seven old students of the college. Mr F H Hawkins LL B , secretary of the London Missionary Society in the concluding address, said that in the first ten years of the history of this mission in Central Africa, 11 of their missionaries died and 6 were invalided home, and with one exception were never able to return to their work In the last 12 years they had not had a single death in the mission or a single case of a man being invalided home The explanation was that men had learned what Livingstone College was teaching them—the care of their own health hygienic conditions the need for building their houses in a healthy position, for draining the land round their houses and for taking care of their heads when out in the sun The missionary societies were very grateful to Livingstone College for the splendid services it had rendered

PRIESTLEY MEMORIAL LECTURES —The sixth of these lectures given under the auspices of the National Health Society is announced to take place in the Larnes Hall of the Royal Society of Medicine, Wimpole street W on Wednesday next June 16th The lecturer, Dr A. F Shipley, Master of Christ s College Cambridge will deal with the dangers of flies and lice in connexion with the war Sir James Crichton Browne will preside

THE Board of Trinity College, Dublin has appointed Miss Fuphan Montgomerie Maxwell to the recently established Montgomery lectureship in ophthalmology Miss Maxwell is a graduate in medicine and surgery of the University of Dublin a Fellow of the Royal College of Surgeons in Ireland and holds the position of assistant surgeon and pathologist at the Royal Victoria Eye and Ear Hospital Dublin

Notes, Short Comments, and Answers to Correspondents.

MRS. TIMOTHY BRADLEE'S EXPLOIT: A CORRECTION.

IN the *Boston Medical and Surgical Journal* of September, 1872, appeared the following note:—"On the 21st of August Mrs. Timothy Bradlee, of Trumbull County, Ohio, gave birth to eight children—three boys and five girls. They are all living and healthy but quite small. Mrs. Bradlee has given birth to two pairs of twins. She was a triplet, her mother and father being twins and her grandmother the mother of five pairs of twins." This case in due course found its way into important publications such as Gould and Pyle's "Anomalies and Curiosities of Medicine" and the paper on duplicate twins by Wider in the *American Journal of Anatomy*. Recently Dr. G. H. Parker, of Harvard University, determined to ascertain beyond doubt the authenticity of the case as it was so remarkable. He wrote to Mr. M. B. Tayler, clerk of the courts, Trumbull County, stating that further information concerning it would be gratefully received. The latter replied that on inquiry he found that there was no truth in the statement. It seems that a practical joker went into one of the local newspaper offices and set up an article which he succeeded in having printed in one or two copies of the paper. The article was then taken out and the type distributed. But one of the copies was sent to a New York journal. The consequences probably never entered the joker's imagination. American medical journals of the highest class gave currency to an absurdity which has passed into standard works. We cannot recall any similar instance in comparatively modern times in which an error of so obvious a sort has crept into medical literature. Having circulated so long and obtained such publication, it will probably be further copied. We are pleased to do our part in helping to prevent this.

WHAT IS A CONSULTANT?

To the Editor of THE LANCET.

SIR,—With regard to the case put by "Enquirer" in your issue of June 5th (p. 1214), the customary procedure varies according to locality. In the English provinces no one would feel doubtful. I remember being astonished three or four years ago when a patient told me Sir Blank Dash had attended him regularly during an attack of typhoid. The distance was much greater than from the Cavendish-square quarter to the Langham Hotel, while the fee per visit, since the man was a small publican, must have been considerably under 3 guineas. Indeed, in the provinces the consultant's only perceptible *differentia* is that he does not undertake midwifery, unless that and gynæcology be his main occupation. Even this is by no means an absolute rule, for I know of a recently appointed clinical teacher at a well-known provincial university, a man of middle-age, who does midwifery as a part of his general practice.

I am, Sir, yours faithfully,

June 8th, 1915. ONLOOKER.

THE GERMAN ARMY MEDICAL CORPS.

FOUR years ago the following note was published in THE LANCET on the inadequate supply of candidates for the German Army Medical Corps:—"The younger members of the medical profession in Germany are not as a general rule inclined to enter the Army Medical Corps, and the undoubted advantages which a medical man may obtain through holding a commission in the army are not sufficiently appreciated; the result is that candidates are not numerous, and there is some difficulty in filling the vacancies which arise in the ordinary course of events. The medical officers of the army have for the most part received their professional education in the Army Medical School, and for each year of gratuitous instruction in that establishment they are required to serve two years in the army; some of them, however, but these are a minority, study as civilians and afterwards join the Army Medical Corps. The civilians who become medical officers on active service are continually diminishing in number, so that many appointments which would properly be given to medical officers on active service in the junior grades have to be filled by civilians accomplishing their half-year of compulsory military service." The causes of this state of things were considered to be insufficient remuneration of the junior grades, a feeling of personal independence not compatible with the requirements of military discipline, restriction of private practice through being so much away from home on military duties, and monotony of practice in garrison towns. To provide the army with trained specialists assistantships in hospitals and clinics were reserved for army medical officers exclusively, but the officers in many cases who had been trained as specialists at the expense of the army left the service and settled as specialists in the towns.

The medical officers also complained that with respect to position and privileges they were at a disadvantage as compared with regimental officers of equivalent rank. As regards this question of rank we announced in THE LANCET of March 14th, 1914, that General von Falkenhayn, the Minister for War, attended a meeting of the Berlin Society of Army Doctors and informed the assembled medical men that the Emperor by a stroke of the pen had put an end to the sharp distinction between army doctors of whatever rank and the youngest combatant officer who has received a commission. This order gave them disciplinary rights—rights to ceremonial salutes, the right to wear the officer's scarf, and the right to be buried with military honours. The delicate question of precedence remained unsettled. The position in Germany, as with the Allies, has no doubt been altered since the above information was published, but it illustrates the evolution of the Army Medical Service in all lands, and its necessary recognition as an integral part of any army which must be recognised as such, and not as an arm which may be attached or detached and fostered or neglected as merely mechanical exigencies seem to dictate.

A TESTIMONIAL TO VACCINATION.

THE following extract from a letter recently received in England from a newspaper reporter in Calcutta has been sent to us by his mother. The letter gives many details as to the cases of small-pox in the hospital which have no particular medical significance, but his advocacy of vaccination is particularly forcible:—

"I suppose you would like to hear something about my attack of small-pox. Well, there is an epidemic of it in Calcutta just now, and a lot of Europeans (and tons of natives) are down with it. I must consider myself very lucky in having it in a mild form—so mild that I was convalescent in a few days after being admitted. After that it was simply a question of waiting until there was no possibility of anyone catching it from me. Jove! it was like being in gaol. Before I was attacked I was one of the silly fools (they can be called by no other name) who scoffed at vaccination, but after seeing what I have seen this past fortnight my views on that matter have entirely changed. There is not the slightest doubt that the two vaccination marks on my arm saved me from—well, perhaps the worst. In every instance the bad cases were those in which the patient had either never been vaccinated at all, or else not for many years."

SILVER PAPER FOR CHARITY.

THE fact that there is money in unconsidered trifles is made plain in a recent issue of the *East Ham Echo*, which states that some time ago the sons and daughters of the readers of that paper were enrolled into a league to show the young idea how to combine. It appears that about 18 months ago it was suggested that the members should collect silver paper which could be sold and the money sent to the East Ham Hospital. The advice was taken and the young people set about collecting the silver paper. Since then members have sent in their collections on three separate occasions, with the result that the sum of £8 15s. has accrued to the hospital.

A PORTABLE SHOWER-BATH.

THE tonic and exhilarating effect of a cold shower bath on the person whose circulation reacts is well known. There is experienced a shock, the cutaneous vessels at once contract and send the superficial blood supply inward, while respiration is momentarily arrested and then slowed and increased in depth. The return of the blood in increased volume to the surface is the reaction which gives a sensation of warmth and general well-being. The stimulus is greater when a shower bath with some force is used. To meet those instances in which the luxury of a shower bath is not a part of the domestic bath equipment Messrs. Bostel and Sons, of Ebury-street, London, S.W., have introduced a portable shower bath which answers the requirements very well. It consists of two containers 10 inches in diameter and 4 inches deep fitting within each other, one a plain round metal vessel and the other a similar appliance, but with its bottom perforated. The first container is filled with water at any

Bolingbroke Hospital, Wandsworth Common S W —House Surgeon Salary £100 per annum with board residence

Bradford Children s Hospital.—House Surgeon Salary £120 per annum with board residence and laundry

Bradford Education Committee.—Assistant School Dentist Salary £300 per annum.

Bristol Royal Infirmary —Throat Nose and Ear House Surgeon for six months Salary at rate of £120 per annum, with board apartments and laundry

Buenos Ayres British Hospital.—Senior Resident Medical Officer unmarried Salary £275 per annum Also Assistant Resident Medical Officer unmarried Salary £250 per annum, with board, lodging &c.

Bury Infirmary —Senior and Junior House Surgeons Salary £175 and £150 per annum respectively, with board residence, and washing

Buxton Derbyshire, Devonshire Hospital.—Assistant House Physician for six months Salary £100 per annum with apartments board and laundry

Cardiff Welsh Metropolitan War Hospital, Whitchurch near Cardiff —Pathologist and Bacteriologist Salary £1 per day with board apartments and washing

Carlisle Non Provident Dispensary —Resident Medical Officer Salary £200 per annum with apartments (not board)

Cirencester Glos 1st South Midland Mounted Brigade Field Ambulance.—Two Medical Officers to complete 2nd Line (Territorial)

Coventry and Warwickshire Hospital —House Surgeon Salary as arranged Also Third House Surgeon Salary 6 guineas per week with board and residence.

Croydon Union —Assistant Medical Superintendent of Infirmary and Assistant Medical Officer of Workhouse and Children s Homes Salary £225 per annum

Evelina Hospital for Sick Children Southwark S E —Clinical Assistants in Out patient Departments

Folkestone Royal Victoria Hospital —House Surgeon Salary as agreed with board residence and laundry

Great Northern Central Hospital Holloway, N —House Surgeon for six months Salary at rate of £60 per annum with board residence and laundry

Guildford Royal Surrey County Hospital —House Surgeon Salary £150 per annum with board residence and laundry

Hartlepools Hospital - House Surgeon Salary £125 per annum with board washing and lodging

Hereford County and City Asylum —Locum Tenens Assistant Medical Officer Salary £7 7s , with board

Hospital for Consumption and Diseases of the Chest Brompton —House Physician for six months Salary 30 guineas Also Assistant Resident Medical Officer Salary £100 per annum with board and residence

Inverness, Northern Infirmary —House Surgeon Salary £150 per annum with board, &c.

Leamington Spa Warneford Leamington and South Warwickshire General Hospital.—Second Resident Medical Officer Salary £200 per annum with board residence, and laundry

Liverpool, Walton Institution Rice lane Walton —Assistant Resident Medical Officer unmarried Salary at rate of £300 per annum with board &c

Macclesfield General Infirmary —Resident Medical Officer Salary £150 per annum with board and residence

Manchester Corporation Baguley Sanatorium —*Superintendent* Salary £400 per annum, with house coal light and washing

Manchester County Asylum Prestwich —Assistant Medical Officer unmarried Salary £250 per annum, with board apartments, attendance and washing

Manchester Northern Hospital for Women and Children Park place Cheetham Hill road —House Surgeon Salary £120 per annum with apartments and board

Metropolitan Ear Nose and Throat Hospital, Fitzroy square W —House Surgeon Salary £150 per annum Also Honorary Anæsthetist and Honorary Clinical Assistant.

New Zealand War Contingent Association 25 Victoria street London S W —Resident Medical Officer for New Zealand Auxiliary Hospital Walton on Thames Salary at rate of £7 7s per week with board

Norwich City of —Assistant School Medical Officer Salary at rate of £400 per annum

Nottingham Children s Hospital —Female House Surgeon Salary at rate of £150 per annum with apartments board, and washing

Nottingham General Hospital.—Senior House Physician and Assistant House Physician Salary at rate of £300 and £250 per annum respectively with board residence and laundry

Oldham County Borough —Assistant Schools Medical Officer Salary £325 per annum

Poplar Borough Council Bow Maternity Centre.—Medical Practitioner for two and a half hour session every Thursday afternoon Salary 21s a session

Portsmouth Royal Hospital.—House Surgeon for six months Salary £150 per annum with board &c

Rochester Kent St Bartholomew s Hospital.—Assistant House Surgeon unmarried for six months

St Mary's Hospital for Women and Children Plaistow E —Assistant Resident Medical Officer Salary at rate £90 per annum with board residence and laundry

Salford County Borough —Medical Officer for Maternity and Child Welfare work Salary £300 per annum

Salisbury General Infirmary —House Surgeon and Assistant House Surgeon unmarried Salary £150 and £100 per annum respectively with apartments board lodging and washing

Scarborough Hospital and Dispensary —Senior and Junior House Surgeons Salary £100 and £80 per annum respectively with board residence &c

Sheffield Royal Infirmary —House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

Southampton Parish Infirmary Shirley Warren —Resident Assistant Medical Officer Salary £200 per annum with apartments rations washing and attendance

Southwark Union Infirmary East Dulwich grove S E —Assistant Medical Superintendent Salary at rate of £250 per annum with board apartments and washing

Stockport Infirmary —Senior House Surgeon Salary £200 per annum with board washing and residence

Swansea General and Eye Hospital.—House Physician Salary £125 per annum with board apartments and washing

Throat Hospital, Golden-square W —Resident House Surgeon

Tingwall, Whiteness and Weisdale Parish —Medical Officer and Public Vaccinator Salary £45 per annum

Ventnor, Royal National Hospital for Consumption and Diseases of the Chest Isle of Wight —Assistant Resident Medical Officer

Walsall and District Hospital.—Assistant House Surgeon and Anæsthetist Salary £150 per annum, with board residence and laundry

West Bromwich and District Hospital —House Surgeon and Assistant House Surgeon unmarried Salary £150 and £120 per annum respectively with residence board and laundry

West Ham and Eastern General Hospital.—Resident Medical Officer Salary £160 per annum Also House Physicians Salary £120 and £100 per annum with board residence and washing

Wigan Royal Albert Edward Infirmary and Dispensary —Junior House Surgeon Salary £150 per annum with board apartments and washing

The Chief Inspector of Factories Home Office London S W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Milngavie in the county of Dumbarton at Charlestown in the county of Mayo and at New Quay in the county of Cardigan

Births, Marriages, and Deaths.

BIRTHS

Cane.—On June 3rd at Orton Longueville Peterborough to Captain (R A M C) and Mrs L B Cane a daughter

Hodges —On June 5th at Queen Anne terrace Plymouth Barbara wife of Lieutenant G M Hodges, R A.M C , of a daughter

Teichmann —On June 5th at Sitka Chislehurst the wife of Captain O Teichmann, R A M C (T) Worcestershire Yeomanry of a son

MARRIAGES

Braham—Wiborg —On June 5th in London Lieutenant Noel Braham R A.M C to Ruth daughter of the late Ludvig Wiborg of Brevik Norway

Carmichael—Hepworth —On June 3rd at the Parish Church Morley Yorks Donald Livingstone Carmichael Ch B M D to Constance Margaret eldest daughter of Dr and Mrs George Hepworth of Clarence Lodge Morley

Dainty—Lockhart —On June 5th at Holy Trinity Brompton Lieutenant Ralph George Dainty R A.M C to Marjorie Kathleen youngest daughter of the late William Castleton Lockhart

Wilson—Whitwell.—On June 1st at St. Stephen s Church Enfield Lieutenant (temporary) Cecil William Wilson R A M C to Mary Dorothy daughter of Mr and Mrs Henry Whitwell of Winchmore Hill

DEATHS

Dane —On June 7th at Bournemouth Harold Dane M R C S L R C P Lond

Rose.—On June 2nd at a Nursing Home in London Deputy Surgeon General H J Rose formerly in the 2nd (Queen s) and West Yorkshire Regiments, aged 82 years

N B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

BOOKS ETC , RECEIVED

Bale John Sons and Danielsson Limited London
A Guide to the Use of Tuberculin By Archer W R Cochrane M B Lond F R C S Eng Major I M S and Cuthbert A Sprawson, M D B S Lond M R C P Major I M S Price 5s net
Dental Directory 1915 *Enlarged edition* Price 3s 6d net

Butler and Tanner, Selwood Press Frome England
Brazil (1913) By J C Oakenfull Price 7s 6d net

Hilton and Co Calcutta Simpkin Marshall and Co London
Treatise on Materia Medica and Therapeutics By Lakhaldas Ghosh L M S Cal Univ Edited by Lieutenant Colonel B H Deare F R F P S Glasg I M S with the assistance of Birendra Nath Ghosh Sixth edition Price 7s 6d net

Hoeber Paul B New York
Cancer Its Cause and Treatment By *L. Duncan Bulkley* M D Senior Physician New York Skin and Cancer Hospital Price $1.50 net

Macmillan Company The, New York
The Body in Health By M V O Shea and J H Kellogg Price 3s 6d

Shaw and Sons London Hoeber, Paul B., New York
Lectures on the Heart comprising the Herter Lectures (Baltimore) Harvey *Lecture* (New York) and an Address to the Faculty of Medicine (Montreal) By Thomas Lewis M D F R C P D Sc. Physician to the City of London Hospital

University Press Cambridge
Infant Mortality By Hugh T Ashby B A M D B C Camb M R C P Lond Visiting Physician to the Manchester Chil ren s Hospital *Price* 10s 6d net

Wright John and Sons Bristol
The Medical Annual A Year Book of Treatment and Pra *Index* 1915 Price 10s net

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY Burlington House London W

Thursday —Papers:—Mr W L. Balls and Mr F S Holton Analyses of Agricultural Yield. Part II The Sowing-date Experiment with Egyptian Cotton, 1913 (communicated by Dr P F Blackman) —Mr E J Russell Soil Protozoa and Soil Bacteria (communicated by Mr H. T Brown) —Prof W M. Hicks: On the Enhanced Series of Lines in Spectra of the Alcaline Earths.—Prof H F Baker On Certain Linear Differential Equations of Astronomical Interest.—Prof. K. Pearson On the Partial Correlation ratio —Mr S Skinner and Mr F Entwistle The Effect of Temperature on the Hissing of Water when flowing through a Constricted Tube (communicated by Sir W N Shaw) —And other papers

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street W

Thursday

Section of Dermatology (Hon. Secretaries—S E Dore A. M H Gray): at 5 P.M.

Exhibition of Cases (at 4.30 P M):

Dr G Pernet (1) Morphoeic Scleroderma (2) Extra genital Primary Chancre.

Dr Parkes Weber Blue Tattooing of the Skin from Hypodermic Injections in a Morphinist.

Dr E. A. Cockayne (introduced by Dr Parkes Weber): Congenital Scleroderma with Sclerodactylia.

Dr G F Stebbing (introduced by Dr Parkes Weber): (1) Case for Diagnosis (2) Case for Diagnosis (3) Lichen Planus of Long Duration.

Dr D Walsh: Case for Diagnosis with microscopical sections

Mr Laming Evans (introduced by Dr Phineas S Abraham) Acute Atrophoderma.

Dr Phineas S Abraham: Case of "Oriental Sore" (after treatment) with microscopical sections.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE 11, Chandos-street, Cavendish-square, W

Friday —8.30 P.M., Annual General Meeting Paper —By the late Dr R. M. C Linnell Some Observations on Malaria on Rubber Estates Discussion —Quinine Prophylaxis in Malaria.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON Pall Mall East.

Thursday —5 P.M. Croonian Lectures —Surgeon-General Sir David Bruce C.B.: Trypanosomes causing Disease in Man and Domestic Animals in Central Africa. (Lecture I)

POST-GRADUATE COLLEGE West London Hospital, Hammersmith road, W

Monday —10 A.M., Dr Simson: Diseases of Women. 2 P.M. Medical and Surgical Clinics. X Rays Mr D Armour Operations. Dr Pritchard: Bacterial Therapy Department. Mr B Harman and Mr Gibb: Diseases of the Eye.

Tuesday —2 P.M., Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Davis: Diseases of the Throat, Nose, and Ear Dr Pernet: Diseases of the Skin.

Wednesday —10 A.M., Dr Saunders Diseases of Children. Dr Davis: Operations of the Throat, Nose, and Ear 2 P.M. Medical and Surgical Clinics X Rays. Mr Pardoe Operations. Dr Simson: Diseases of Women. Mr Gibb: Diseases of the Eye.

Thursday —9 A.M., Dr Bernstein: Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr D Armour Operations. Mr B Harman: Diseases of the Eye.

Friday —10 A.M Dr Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr Baldwin Operations. Dr Davis Diseases of the Throat, Nose, and Ear Dr Pernet: Diseases of the Skin.

Saturday —10 A.M., Dr Saunders: Diseases of Children. Dr Davis: Operations of the Throat, Nose, and Ear Mr B Harman: Eye Operations. 2 P.M., Medical and Surgical Clinics X Rays. Mr Pardoe: Operations.

NORTH EAST LONDON POST-GRADUATE COLLEGE Prince of Wales's General Hospital, Tottenham N

Monday —*Clinics*:—10.30 A.M. Surgical Out patients (Mr R. Gillespie) 2.30 P.M. Medical Out patients (Dr T. R. Whipham) Gynæcological Out-patients (Dr Banister) 3 P.M., Medical In patients (Dr R. M. Leslie)

Tuesday —2.30 P.M., Surgical Operations (Mr Carson) Clinics —Medical Out patients (Dr A. G Auld) Surgical Out patients (Mr Howell Evans) Nose, Throat, and Ear Out-patients (Mr H. D Gillies) Radiography (Dr Metcalfe) 3.30 P.M., Medical In-patients (Dr A. J Whiting) 4.30 P.M. Clinical Demonstration —Dr A. J Whiting: Selected Medical Cases

Wednesday —Clinics —2.30 P.M., Throat Operations (Mr Gillies) Children Out patients (Dr T R. Whipham) Eye Out patients (Mr R. P Brooks) Skin Out patients 6.30 P.M. Eye Operations (Mr R. P Brooks)

Thursday —2.30 P.M., Gynæcological Operations (Dr A. E. Giles) Clinics:—Medical Out patients (Dr A. J Whiting) Surgical Out patients (Mr Carson) Radiography (Dr Metcalfe) 3 P.M., Medical In patients (Dr R. M. Leslie)

Friday —2.30 P.M., Surgical Operations (Mr Howell Evans) Clinics:—Medical Out-patients (Dr A. G Auld) Surgical Out-patients (Mr R. Gillespie) Eye Out patients (Mr R. P Brooks)

THE THROAT HOSPITAL, Golden-square, W

Monday —5.15 P.M., Special Demonstration of Selected Cases.
Thursday —5.15 P.M. Clinical Lecture.

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of The Lancet should be addressed *exclusively* "To the Editor," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of The Lancet *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

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Will Subscribers please note that only those subscriptions which are sent direct to the Proprietors of The Lancet at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach The Lancet Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to The Lancet Offices

Subscribers, by sending their subscriptions direct to The Lancet Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The Colonial and Foreign Edition (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from The Lancet Offices, have been reduced, and are now as follows —

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One Year	£1 1 0	One Year	£1 5 0
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(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs 50 per month.)

Subscriptions (which may commence at any time) are payable in advance Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager Mr Charles Good, The Lancet Offices, 423, Strand, London W C

TO COLONIAL AND FOREIGN SUBSCRIBERS

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

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desired temperature The perforated container with the perforations upward is then placed over it, which it encircles like a telescopic tube On now inverting the appliance so that the perforated disc is underneath the water is discharged in a smart shower It is important that the shower should be smart and not a dribble, as otherwise the effect on the system is depressing rather than stimulating This is done by four air tubes fixed in the perforated container so that the air freely entering at the top allows the water to escape with a rush It is very neatly made and moderately priced While it is correctly described as portable it incidentally serves as a receptacle for articles of toilette as, for example, a sponge, comb and brush, so that the space it occupies can be utilised in the travelling kit It is suggested that its use in a campaign would be much appreciated, and no doubt it would Many will be glad of it, however, as an adjunct to the domestic bath equipment

RHUBARB POISONING

F W (London) writes With reference to the letters on this subject which have recently appeared in THE LANCET, everyone knows of cases where the eating of rhubarb has caused severe diarrhœa and sickness and a sensation of having been poisoned One old gentleman, after some uncomfortable experiences, refuses to eat the "forced" rhubarb, but always waits for what he terms the "field" rhubarb He had been informed that a good deal of forced rhubarb was grown in coal mines where it was warm and the dung of the pit ponies was used as manure I do not know whether there is, or ever was, any truth in this, but it is the reason of his abstinence

AN INDEMNITY POLICY FOR THE MEDICAL MAN

A NOVEL feature of insurance is introduced by the Norwich Union Fire Insurance Society, whereby a policy can be taken out which provides, in addition to the usual benefits for accidental loss of life, limbs, or sight, complete indemnity against financial loss incurred by accident or sickness, including diminution in earnings or salary, and the cost of employing a locum tenens The amount of the indemnity is decided upon by the assured, and he pays the premium accordingly Under the scheme there is no question of getting a certain weekly allowance, be the temporary disablement trivial or severe, the definite amount of indemnity is stated on the face of the policy, and that is the amount upon which the assured can draw, as and when required, for medical fees, nursing home charges, travelling and other expenses of convalescence, additional household expenses, and payment of locum tenens, irrespective of the period of disablement The common sense of this arrangement suggests that it might have been made a regular feature of insurance years ago Full particulars of benefits and premiums can be obtained on application to the society at St Giles street, Norwich

SCOPOLAMINE

MANY notices have lately been appearing in the lay press with reference to the use of scopolamine anæsthesia, or so-called "twilight sleep," in obstetrics A few years ago the Council on Pharmacy and Chemistry of the American Medical Association came to the conclusion that scopolamine and hyoscine are synonyms for the same alkaloid. THE LANCET of Feb 10th, 1906 (p 393), contained an annotation entitled "The Danger of Using Scopolamine as an Anæsthetic," in which it was stated that the anæsthetic was losing favour in France, and warnings were also given regarding the dose and administration of the drug Apparently since then little has been published concerning the dangers, if we may judge from the recent campaign in the lay newspapers in its favour It may not be generally known that "scopolamine" owes its name to G A. Scopoli (1723-1787), a naturalist and chemist who was born at Cavelese, Tyrol, and whose name Linnæus gave to a genus of solanaceous plants resembling *hyoscyamus*, thence termed Scopolia

THE HARRIS GAS FIRE

Mr Reginald P Harris, of the Commercial Gas Company, Poplar London, E , has introduced an interesting novelty in the design of a gas fire Instead of the radiants consisting of the ordinary upright clay tubes they are curved, so that the front of the fire, viewed from the side, is shaped thus C The effect of this is to concentrate more radiant heat downwards, and this is obvious inasmuch as when a person stands a short distance from the fire he soon finds his boots and feet getting warm That, of course, presents certain advantages particularly as people so often sit near the fire with their feet close to the fender We were inclined to believe at first that this arrangement would interfere with the hygienic working of the fire, as this particular construction, which means that the radiants bulge well in front of the fire, seemed likely to result in the escape of combustion products into the room On applying, however, the test for hygienic efficiency, described in our issue of Feb 7th, 1914 this fire showed no escape of combustion products into the room whatever even when no elbow or flue was attached to the exit nozzle This fire, therefore, may be added to the list we have published of those gas fires which have satisfactorily passed THE LANCET test The Harris gas fire is made by the Vulcan Stove Company, Exeter

SOMALILAND STATISTICS

A REPORT on the affairs of this Protectorate (established in 1884) for the year 1913-14 has been presented to Parliament It states, *inter alia*, that no reliable information is forthcoming as to the Somali population of the country at the present time, though 300 000 is given as an approximation A census taken in 1911 of the alien community in the three coast towns of Berbera, Bulhar, and Zeyla showed the following results —Europeans, 26, Indians 741, Arabs, 1857, mixed, 789 There is a general hospital at each of the three towns named At Berbera there is accommodation for 42 beds, at Bulhar for 4, and at Zeyla for 6 There is a dispensary attached to each of the hospitals and in the aggregate there were 38 937 attendances during the year The climate of the Protectorate is chiefly remarkable for its very dry character In the interior it is healthy, generally speaking throughout the year, but the same can scarcely be said of the coast belt Here during the "Kharif"—i e , the months of June, July, August, and not infrequently half of September—the atmospheric conditions are very trying for Europeans and the effect on the nervous system is most pronounced Terrific gales of sand laden wind are then prevalent and the heat is intense, with the thermometer registering 105°-115° F in the shade at mid-day and seldom falling below 100° at night Most of the sickness however, occurs during the months immediately preceding and immediately following the "Kharif" During the months of November, December, January, and February the climatic conditions of the coast greatly improve

THE REMINGTON "J"

THERE has recently been put upon the market by the makers of the well known Remington typewriter a new model known as the Remington "J," with visible writing, which will do all the work of its predecessors, and has the advantages of being about half their weight and half their price A practical trial of this new member of the Remington family convinces us of its utility for the medical man, who will find it to be a neat handy, and, in its specially designed carrying-case, a very portable machine, capable of being set up anywhere at a moment's notice by merely throwing back the cover and as speedily removable when desired The Remington Typewriter Company, 100, Gracechurch street, London, E C , will send a booklet to those interested, on application

COMMUNICATIONS not noticed in our present issue will receive attention in our next

METEOROLOGICAL READINGS

(Taken daily at 9.30 a m. by Steward's Instruments)

THE LANCET Office June 9th 1915.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks.
June 3	30·022	S W		103	65	52	60	53	Cloudy
" 4	30·178	S W		114	74	53	57	59	Overcast
" 5	30·190	S W	..	118	73	65	57	60	Overcast
" 6	30·160	S W	..	120	76	58	61	64	Cloudy
" 7	30·070	S W	..	121	81	56	57	59	Fine
" 8	29·830	S	..	127	69	59	67	73	Fine
" 9	29·900	E		116	76	63	59	65	Cloudy

The following magazines journals &c., have been received —
Journal of Laryngology Rhinology and Otology British Journal of Children s Diseases Edinburgh Medical Journal St Bartholomew s Hospital Journal British Dental Journal Tropical Diseases Bulletin Proceedings of the Pathological Society of Philadelphia, Report on Researches on Sprue in Ceylon, Medical Review South African Medical Record Cornell University Medical Bulletin [illegible] Dublin Journal of Medical Science Charing Cross Hospital Gazette,

An Investigation
OF
CERVICAL GLAND TUBERCULOSIS

BY A. STANLEY GRIFFITH,
M D VICT, D P.H,
LATELY SCIENTIFIC INVESTIGATOR ROYAL COMMISSION ON TUBERCULOSIS

THIS investigation of cervical gland tuberculosis was undertaken as a result of the isolation of atypical strains of human and bovine tubercle bacilli from cases of lupus which had developed in the skin of the neck after excision or ulceration of tuberculous cervical glands The object of the investigation was to ascertain whether or not tubercle bacilli raised from tuberculous cervical glands ever diverged from the standard in the same way as these lupus tubercle bacilli

Up to the present time strains of tubercle bacilli with the aberrant characteristics pertaining to the majority of lupus tubercle bacilli have been demonstrated very infrequently in internal varieties of human tuberculosis or in animal tuberculosis The clearest example of the occurrence of atypical tubercle bacilli of lupoid order in lesions of human tuberculosis other than those of the skin is recorded by Weber and Steffenhagen[1] These observers isolated atypical bovine tubercle bacilli on three separate occasions from the tuberculous metacarpal bone of a child * This result is of special interest, because two years previous to Weber and Steffenhagen's investigations Oehlecker[2] had isolated from the same lesion in this child a fully virulent bovine culture This case and others which have yielded atypical tubercle bacilli will be referred to more particularly in a forthcoming report on lupus Among animal species atypical tubercle bacilli apparently identical with some bovine lupus strains have been found occasionally in the tuberculous horse[3] and pig[4]

As wider knowledge of the occurrence and distribution of variant strains is desirable, and is, indeed, essential to my study of the etiology of lupus, I am carrying out on an extended scale investigations of the biological characters of tubercle bacilli from as many varieties of human and animal tuberculosis as possible Incidentally, these investigations are giving much needed information upon the relative prevalence of the different standard types of tubercle bacilli in tuberculous animals and man

Examination of a series of cervical gland cases was considered of first importance because cervical gland tuberculosis is the only form of tuberculosis of which lupus has been observed to be a direct sequela. About 12 per cent of the cases of lupus which I have examined have followed tuberculosis of the cervical glands, and in all but one of these cases the lupoid lesions have yielded atypical tubercle bacilli. There was presumption, therefore, that if atypical tubercle bacilli of lupus class are occurring at all commonly in regions of the human body other than the skin, the quest for these aberrant strains should be more successful in cervical glands than in other internal tissues of the human body

Inquiry in this sense began in August, 1912 It is being continued, but I am reporting now on the cases collected up to July, 1914, because for several months after the outbreak of war there was intermission in the supply of material

I wish here to express my grateful thanks to various surgeons and pathologists who have made this research possible by supplying me with material and with notes of the cases In Table I the source of each material is recorded, and for the purpose of future reference I have given also the initials and age of the patient and the date of receipt of the glands

The material examined has been derived from widely separated centres of population, and, while probably not in consecutive series from any of the sources, has been forwarded without any kind of selection

Description of Material

The original material was obtained by surgical operation from 110 persons, including children, adolescents, and adults The material was mainly lymphatic glands. In a few instances it was pus from an abscess or curettings from a tuberculous sinus in the neck

The sets of lymphatic glands were of two sorts The great majority of the sets contained definitely tuberculous glands, which were caseous or caseo-calcareous wholly or in part The rest consisted of glands which were not apparently tuberculous; on section they were found to be composed of homogeneous hyperplasic glandular tissue, or they showed yellow suppurative foci In two of the cases the glands were from the axilla, and in one from the femoral region In all other instances they were from the neck

Methods of Bacteriological Investigation

The glandular material was reduced to a pulp in a mortar, emulsified with sterile physiological salt solution, and filtered through muslin The emulsion was examined microscopically, and then used to inoculate intraperitoneally one or two guinea pigs An attempt was usually made to secure a culture direct from the original material A guinea pig was killed after the lapse of from three to five weeks, and cultures were made from it if tuberculosis had developed Sometimes when the direct culture was assured a guinea pig strain was dispensed with

In a good number of instances the guinea-pig or guinea pigs inoculated with original material did not develop tuberculosis, although that material was macroscopically tuberculous, and in many instances showed tubercle bacilli microscopically Cultures were nevertheless made from the normal organs of many of these guinea pigs, the glands adjacent to the omentum and the spleen being chosen for the cultural experiments It is important when searching for atypical tubercle bacilli to make cultures from guinea pigs which have been inoculated with material presumed to be tuberculous, though their tissues may appear at the post mortem examination to be perfectly normal I have on several occasions cultivated atypical tubercle bacilli from the tissues of guinea pigs which presented no macroscopical lesions of tuberculosis four to six weeks after inoculation with lupus material

All the cultures were raised upon egg medium without glycerine and subcultivated on pure bovine serum. Glycerine egg was frequently used for primary cultures, but solely for the purpose of getting early information as to the type of the tubercle bacillus All tests, cultural and pathogenetic, were made with cultures which had been grown throughout on media free from glycerine

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* On a fourth occasion they obtained from the lesion a culture of typical bovine tubercle bacilli.

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Eugonic Strains

Thirty-seven of the cases yielded cultures which exhibited the cultural characteristics and rabbit pathogenicity of standard human tubercle bacilli. Each one of these strains produced luxuriant pigmented growths on serum and thick, creamy, wrinkled layers on glycerinated potato. Characteristic growths were also produced by each of the strains on one or other of the other glycerine media. Among the strains in this group there has been very little variation in degree of luxuriance. The virulence of one strain from each of the 37 cases has been tested on the rabbit by subcutaneous inoculation. Altogether 60 rabbits have been thus inoculated. In Table II the details of these experiments are set out. The few rabbits which died prematurely are not included.

The pathogenic effects of these eugonic cultures have been very diverse, but the range of variation has not been wider than is usual in any large series of rabbits inoculated with standard human viruses. None of the rabbits died from tuberculosis, the period of observation being from three to four months. While in the great majority of the rabbits the tuberculosis produced was slight, in several it was of moderate and even of considerable severity.

Severe tuberculosis produced by human tubercle bacilli can as a rule be readily distinguished from the chronic forms of tuberculosis which sometimes follow subcutaneous inoculation of standard doses of bovine tubercle bacilli. Disseminated disease set up by human tubercle bacilli is generally limited to the lungs. There may be small tubercles in the kidneys, but these are usually few in number and retrogressive. The glands adjacent to the local lesion may show tuberculosis, but they are seldom extensively caseous. Distal lymphatic glands are almost invariably normal. Besides the difference in distribution of lesions there is difference also in the macroscopical appearance of the lesions, a difference which is at once apparent to those who have had some experience in the examination of experimentally tuberculous rabbits. Exceptions to this rule sometimes occur, and then it is necessary to isolate and test a culture from the suspicious lesion, for the original culture may have contained an admixture of bovine tubercle bacilli. In this series a culture was recovered from one of the most severely affected rabbits (No 320). The recovered culture was eugonic and exhibited very low virulence for another rabbit, thus proving that the exceptionally severe disease in Rabbit 320 was due wholly to human tubercle bacilli.

It will be noted in Table II. that several cultures produced in the rabbit local tuberculosis only. Such limited pathogenic effect does *not necessarily* indicate an abnormally low grade of virulence of the particular cultures, for human viruses of proved standard virulence often produce in rabbits when inoculated subcutaneously no more than a local lesion. On account of this capacity of individual rabbits entirely to resist infection with standard human viruses the rabbit species is not a suitable one for estimating whether or not a culture of human type culturally is *up to standard* in virulence. In order to demonstrate attenuation in a human virus guinea pigs (or monkeys) must be employed.

It is not, however, necessary systematically to test cultures of tuberculous viruses on the guinea pig, because it is possible to judge from the results produced by the inoculation of original material whether the culture from that material is likely to show attenuation.

With one exception (exclusive of one case in which the guinea pig died prematurely) the original material of the 37 human viruses produced typical tuberculosis in the guinea pigs. The exception was Case 57, which produced in six weeks in one guinea pig no tuberculosis, and in another caused tuberculosis limited to one inguinal gland. The culture raised from the latter guinea pig was tested therefore in standard dose (0.1 mg) on guinea pigs as well as on rabbits. It produced in two guinea pigs subcutaneously inoculated typical fatal general tuberculosis in 63 and 89 days. The slight effect in the original guinea-pig must be referred therefore to paucity of living tubercle bacilli in the emulsion and not to attenuation of virulence.

Dysgonic Strains

From the remaining 34 of the 71 cases yielding cultures, the cultures isolated displayed less cultural luxuriance and higher virulence for the rabbit than those in the group just dealt with. The strains of these viruses have exhibited a wide range of variation in degree of luxuriance. In respect to 32 of the 34 viruses the range of cultural luxuriance corresponded exactly with that ascertained by the investigators of the Tuberculosis Commission for tubercle bacilli of bovine tuberculosis.

The two remaining strains have grown rather more luxuriantly than any strain of bovine origin which I have hitherto met with. The increased luxuriance was observed in primary culture on glycerine egg and in subculture on glycerine agar. On glycerine egg the colonies were as numerous as, and larger than on egg alone, but they were not pigmented (bovine tubercle bacilli as a rule grow very sparsely on glycerine egg in primary culture), on glycerine agar the growth ultimately formed was in places dense, wrinkled, and slightly *pigmented*, but the layer was not uniform and the rate of growth was slower than with human tubercle bacilli.

Similar relatively eugonic virulent strains have been isolated by Eastwood and F Griffith from tuberculous children[6] and from the tuberculous lesions of swine[4]. The cultural characters of these two cervical gland strains were found to be stable after animal passage. Each strain was passed through the bodies of three rabbits in succession, and cultures from distal lesions of the last rabbit as well as from those of the two previous ones were identical in cultural character with the original culture. There was therefore no evidence of admixture of human tubercle bacilli.

The cultures from all these 34 cases proved highly virulent for rabbits and produced in them fatal general progressive tuberculosis identical in every respect with that produced after similar interval of time by tubercle bacilli of bovine tuberculosis.

None of the 71 viruses whether of human or of bovine type culturally, has shown any evidence of attenuation. The culture from each virus was either a standard human culture or a standard bovine culture.

[The cultures from three of the cervical gland cases—viz., Nos 53, 88, and 95—were isolated and tested (except the virulence test of Case 95 which was made by me) by Drs Eastwood and F Griffith. Two further cases, macroscopically tuberculous, investigated by them did not produce

The differential media used have been glycerinated potato, glycerine serum, glycerine agar, and glycerine broth The most reliable of these is, in my experience, glycerinated potato

The comparative virulence of each culture has been tested on the rabbit by subcutaneous inoculation between the shoulders

The subcutaneous method was chosen instead of the intravenous mainly because subcutaneous inoculation will bring out slight grades of attenuation in bovine tubercle bacilli which are not revealed by intravenous inoculation The subcutaneous method also differentiates more clearly than the intravenous standard bovine tubercle bacilli from standard human tubercle bacilli which have displayed relatively high pathogenicity for the rabbit Strains of human tubercle bacilli occasionally produce a good deal of tuberculosis in rabbits, and this tuberculosis, attributable either to higher virulence than is usual for human viruses or to specially susceptible rabbits, is apt to be more widespread and severe when the culture is inoculated intravenously than when it is inoculated subcutaneously

The rabbits were inoculated with weighed quantities of moist growth from young serum cultures scraped from the surface of the serum with a platinum spatula and weighed directly without previous drying The particular subcultures used were never more than 20 days old, usually 7 to 10, and except where repeat tests were necessary were in quite early generation, fourth to sixth

The cultures which were bovine in cultural characters were tested on two or more rabbits, the dose in each case being 10 milligrammes, in a few instances the dose was a little more or a little less The eugonic cultures were tested sometimes on two rabbits, sometimes on one only, and the dose given was often larger than 10 milligrammes Rabbits were kept under observation until they died or until the experiment had lasted three or four months, when they were killed

BACTERIOLOGICAL RESULTS

The 110 cases with which I am dealing are divisible into three groups, comprising respectively 10, 29, and 71 individuals, as follows —

Group 1—Ten sets of lymphatic glands which were not macroscopically tuberculous did not produce tuberculosis in guinea-pigs The glands in two of these sets contained small suppurative foci, and in the others were in a condition of hyperplasia. Microscopical examination of five and cultural experiments with four of the emulsions of the glands, including the two with purulent foci, yielded negative results The patients from whom these glands were excised varied in age, five were under and five were over 12 years of age

Group 2—Lymphatic glands from 29 other patients also failed to produce tuberculosis in guinea pigs These glands were, however, definitely tuberculous to the naked eye and contained caseocalcareous or softened caseous material or caseopus In 15 cases tubercle bacilli were found in smear preparations of the emulsions used for inoculating the guinea pigs, in 7 of these 15 emulsions tubercle bacilli were numerous or moderately numerous and were short and well stained Microscopical examination of 11 emulsions was negative, and of 3 was not made Two of the cases were twice investigated, the interval between the examinations being four and a half and two and a half months, and on each occasion the result was negative Fifty guinea pigs in all were inoculated with the material from these 29 cases

In order to ascertain whether the glands from these patients might not perhaps have been harbouring living tubercle bacilli, possessing so low an order of virulence as to be incapable of producing tuberculosis in the guinea pig, many cultural experiments were made Direct cultures were sown in 26 of the cases, and in 21 of these the culture tubes remained sterile, while in the remaining five they grew contaminating organisms Cultures were also sown from the omental glands or from the spleens of 15 guinea pigs, representing 13 of the cases, these experiments were likewise negative The evidence suffices to show that there were in the material tested no living tubercle bacilli either of standard or of attenuated virulence

I fully recognise that these negative results cannot be regarded as demonstrating necessarily the cure of the disease in the patient, but only that the tuberculous process was arrested in the particular glandular material used for experiment Nevertheless they show conclusively that in glandular tuberculosis there is marked tendency to spontaneous cure of the disease In this series of the sets of glands showing definite tuberculous lesions, 29 per cent gave negative results in culture and in animal experiment This tendency to spontaneous arrest of glandular tuberculosis should be remembered when estimating therapeutic effect of specific remedies in these conditions

It is impossible to say what may have been the type of infection in these cases, but if, as seems probable (see below), the presence of numerous short tubercle bacilli is presumptive of bovine infection, 7 at least of the 29 cases were due to bovine tubercle bacilli

There are many other instances recorded in which macroscopically tuberculous material has failed to produce tuberculosis in guinea pigs[5,6] Several of the observers who have investigated cervical gland tuberculosis report such cases Lewis obtained negative results in 2 out of 17 cases of primary cervical gland tuberculosis In both cases the microscopical examination showed the pathological picture of tuberculosis Oehlecker[7] investigated cervical glands from 28 cases in which the clinical diagnosis of tuberculosis was indicated as probable, and in only 14 cases did the guinea pigs inoculated develop tuberculosis Oehlecker makes no statement with respect to the pathological condition of the glands from the 14 negative cases Burckhardt[8] investigated 10 cases of cervical gland tuberculosis and found the material from one to be not infective for guinea pigs One of the 9 cases of cervical gland tuberculosis investigated by *Cobbett* for the Royal Commission on Tuberculosis, which yielded a bovine culture when first examined, gave negative results on two subsequent examinations[5] In striking contrast to the above results are those of Mitchell[9] This observer investigated 72 consecutive cases of cervical gland tuberculosis in children and did not obtain a single negative result

Group 3—In 71 of my 110 cases the original material produced tuberculosis in guinea pigs, and cultures were obtained Altogether 98 strains have been isolated, 33 directly and 65 through the guinea pig

The cultures from these 71 cases fall into two groups

58	J W 5 2 14	Dr Mitchell Edinburgh	M 2¼	Caseous and softened	Moderate number short T B	Direct + Guinea pig +	2 G Ps, K 28 and 42 days Severe G T	Bovine.
59	J F, 5/2/14	,,	F 8	Caseous and softened nodules	No T B	Direct − Guinea pig +	2 G Ps, K 33 and 43 days Former showed slight T; latter no T	Bovine
61	H B 5/2/14	Dr Drummond	F, 17	Hyperplasic	No T B	Guinea pig +	2 G Ps 33 and 62 days Slight G T	Human
62	— 6/2/14	Professor Teacher	F 9	Caseous, softening	Moderate number T B slender majority short	Direct + Guinea pig +	2 G Ps K 29 and 41 days Moderate G T	Human
63	M H 9/2/14	Dr Mitchell	F 6	Caseous breaking down	Numerous T B mostly short	,, ,,	2 G Ps, D 20 and 21 days Acute G T	Bovine
64	— 12/2/14	Dr Sutcliffe	F, 7	Firm caseous	Scattered short T B	Direct − Guinea pig +	2 G Ps 35 and 44 days Severe G T	Bovine
66	A N 14/2/14	Dr Marsh Macclesfield	F 17	Caseous beginning to soften	No T B	,, ,,	1 G P K 34 days Slight G T	Human
67	S 17/2/14	,,	F, 8	Caseo-purulent	Moderate number short T B	,, ,,	2 G Ps, 34 and 38 days Severe G T	Bovine
68	— 25/2/14	Dr Sutcliffe	M 8	Caseo purulent patches	No T B	Direct + Guinea pig +	2 G Ps 27 and 44 days Moderate G T	Human
70	A G, 12/3/14	Dr Mitchell	F, 9	Firm and caseous	No T B	,, ,,	2 G Ps D 24 and 31 days G T not severe	Human
71	J H 12/3/14		M, 8	Slightly caseous	Scattered short T B	Guinea pig +	2 G Ps D 24 and 32 days. Severe G T.	Bovine,
72	G J 12/3/14	,,	M 1	Caseous, softening	Scattered slender rather beaded T B	,,	2 G Ps, 21 and 28 days G T moderate	Human
73	T P 13/3/14	Mr Pybus Newcastle	M 13	Purulent	No T B	,,	2 G Ps D 25 and 36 days Moderately severe G T	Human
74	—, 18/3/14	Dr Robertson Glasgow	F ¾	Granulation tissue scrapings	No T B	,,	2 G Ps D 23 and 39 days Severe G T	Bovine
75	M 21/3/14	London	F 13	Caseous softening	Scattered slender T B mostly short slight vacuolation	Direct + Guinea pig +	2 G Ps, K 33 and 37 days Moderate G T	Human
76	O M 21/3/14	Cambridge	M, 8	Caseous, softened	No T B	,, ,,	2 G Ps, D 24 and 27 days Slight and moderate G T	Human
77	G F 21/3/14	,,	M 41	Caseous softening	Moderate number short T B	,, ,,	1 G P D 32 days Moderate G T	Bovine
79	M D 28/3/14	London	F, 14	Purulent	No T B	Guinea pig +	1 G P, D 30 days Moderate G T	Human
81	V H 15/4/14	Cambridge	F, 9	Caseo-purulent	1 T B	Direct + Guinea pig +	2 G Ps 29 and 40 days Severe G T	Bovine
82	J E, 17/4/14	Mr Pybus	M, 2½	Caseous areas	No T B	Guinea pig +	2 G Ps K 34 and 60 days G T moderately severe	Bovine
83	A M 17/4/14	,,	M 9	Caseous, softening	No T B	Direct + Guinea pig +	2 G Ps K 35 and 60 days Slight G T	Human
84	— 22/4/14	Dr Robertson	F 6	Caseous softened	Scattered short T B	Guinea pig +	2 G Ps K 34 and 45 days Severe G T	Bovine
85	—, 22/4/14	,,	M 11	Scrapings from cervical glands	—	,,	1 G P, K 31 days Moderate G T	Human
86	A B 22/4/14	Cambridge.	M, 13	Caseous	No T B	Direct + Guinea pig +	2 G Ps D 31 and 40 days Severe G T	Bovine
87	McG 24/4/14	Dr Robertson	F 4	Caseous softening	Numerous short T B	Guinea pig +	2 G Ps K 35 and 68 days Slight and moderate G T	Bovine
88	—, 5/12/13	Dr Sutcliffe	F 25	Caseous,	Moderate number beaded T B	Direct +	2 G Ps, K 24 days G T	Human
89	— 29/1/14	Dr Robertson	F, 11	—	1 T B,	Guinea pig +	2 G Ps 33 and 63 days Severe G T	Bovine
90	—, 1/5/14	,,	M, 5	Abscess of axilla.	No T B	Direct + Guinea pig +	2 G Ps, K 41 days Severe G T	Bovine
91	A S, 6/5/14	Dr Mitchell	M, 6	Caseo-calcareous tubercle	Scattered short T B	Guinea pig +	1 G P, K 63 days Severe G T	Bovine
94	P M 15/5/14	London	M 14	Caseous, softening	No T B	,,	2 G Ps, K 31 and 45 days Severe G T	Bovine
95	L P 10/1/14	Birmingham	F, 13	—	A few T B	Direct + Guinea pig +	1 G P D 41 days Slight G T	Human
98	L B 26/5/14	London	F, 23	Caseous softened	No T B	Guinea pig +	2 G Ps, K 43 and 48 days Slight G T	Human
100	W, 29/5/14	Mr Pybus	F, 25	Small caseous areas	No T B	Direct +	2 G Ps 75 days Chronic G T	Human
101	B C, 5/6/14	,,	F, 8	Firm, caseous	No T B	Direct + Guinea pig +	2 G Ps, K 38 and 61 days Moderately severe G T	Human
102	—, 6/6/14	Dr Sutcliffe,	M 11	Caseo-purulent.	3 T B	,, ,,	2 G Ps K 35 and 60 days Slight G T,	Bovine
106	T B, 15/7/14	Cambridge	F, 20	Firm, caseous	2 T B	,, ,,	3 G Ps 27 to 51 days Moderate G T	Human
107	I McD, 12/8/14	Mr Rutherford, Glasgow	F 19	,, ,,	No T B	,, ,,	1 G P, K 84 days Chronic G T	Human

G P = Guinea pig T B = Tubercle bacilli G T = General tuberculosis T = Tuberculosis + = Positive result − = Negative result

I am indebted to Mr Waterhouse for the material from the Victoria and Charing Cross Hospitals, and to Dr Maldon for that from Cambridge

TABLE I.—*List of Cases which yielded Cultures, and Summary of Results.*

No of case.	Designation and date of virus	Source of material	Sex and age in years	Macroscopical condition of glands	Microscopical smear preparations of emulsions	Derivation of cultures, direct or through G P	Results in guinea pigs inoculated with original material	Classification of cultures
1	W, 28/8/12	Mr Kelly Liverpool	M, 23	Caseous, softening	1 T B	Direct – Guinea pig +	2 G Ps K 24 and 30 days Slight G T	Human.
2	M R, 11/9/12	"	F, 23	Caseous waxy	Scattered T B, mostly short.	Direct + Guinea pig +	2 G Ps after 33 and 67 days Severe G T	Bovine
3	N B 11/9/12	Mr Trotter London.	F 21	"	No T B	Direct +	2 G Ps K 55 days Slight G T	Human
4	A S 26/9/12	Mr R Johnson, London	F 39	Caseous, softened	No T B	"	2 G Ps K 47 days Slight G T	Human
5	(S D 2079), 8/10/12	Dr Turnbull London Hosp	F, 30	Caseous waxy	No T B	Direct – Guinea pig +	1 G P, K 31 days Slight G T	Bovine
10	F M, 27/11/12	Mr Kelly	M 27	Firm, caseous areas	No T B	Direct +	1 G P D 27 days Severe G T	Human
11	(S D 2484), 6/12/12	Dr Turnbull	F, 16	Caseous, in places softened	1 T B	Direct – Guinea pig +	2 G Ps, K 28 and 56 days Slight G T	Bovine.
13	(S D 2518) 11/12/12		F 12	Firm caseous and gritty	No T B	"	2 G Ps K 30 and 51 days Slight G T	Human
14	H E 14/12/12	Mr Kelly	F 19	Caseo-purulent.	? 1 T B	"	2 G Ps, K 30 and 54 days Slight G T	Bovine
19	B J, 17/1/13	Victoria Hosp. Chelsea.	M 3½	Caseo-calcareous	Scattered short T B	Direct + Guinea pig +	1 G P K 32 days severe local T Slight G T	Bovine
20	W B 20/1/13	"	M 5	1 calcareous tubercle	—	Guinea pig +	1 G P K 40 days. Moderate G T	Bovine
23	B R 3/2/13	"	M 2	Caseo-calcareous	Numerous T B mostly short.	"	1 G P, D 29 days Acute G T	Bovine
24	A B 6/2/13	Mr Kelly	F, 24	Firm, caseous	—	Direct + Guinea pig +	1 G P, K 27 days Slight G T	Human
25	J W 11/2/13	Mr Johnson	M 6	"	No T B	Guinea pig +	1 G P K 32 days. Slight G T	Human
28	— 20/2/13	Dr H Drummond Newcastle	M 6	Caseous softened	2 T B	Direct + Guinea pig +	1 G P D 25 days Severe local T Slight G T	Bovine
31	—, 27/2/13		F 30	Firm, caseous	A few T B	Direct – Guinea pig +	1 G P, K 32 days. Slight G T	Human
33	—, 6/3/13	Charing Cross Hosp	M 16	Caseo-necrotic patches	No T B	Guinea pig +	1 G P K 58 days Moderate G T	Human
34	—, 6/3/13	Dr Drummond	M 28	Firm, caseous	No T B	Direct + Guinea pig +	1 G P K 26 days Moderate G T	Human
35	K H 10/3/13	Victoria Hosp, Chelsea.	F 8	Caseous and gritty	Scattered T B	"	1 G P, K 25 days Local T only	Human
36	—, 21/3/13	Charing Cross Hosp	F, 18	Slightly caseous	1 T B		1 G P, D 43 days Moderate G T	Human
37	(S D 667) 27/3/13	Dr Turnbull	F 18	Large extensively caseous and softening	No T B	"	1 G P K 41 days Severe G T	Bovine
38	J L 29/3/13	Victoria Hosp Chelsea	F 5	Caseo-calcareous	Moderate number T B mainly short.	"	1 G P, K 60 days Moderate G T	Bovine
39	— 12/4/13	Charing Cross Hosp	F 19	Caseous, softening	No T B	Guinea pig +	2 G Ps, 41 and 63 days. Moderate G T	Human
40	J S 23/4/13	Victoria Hosp Chelsea	F 4	"	Moderate number short T B	Direct – Guinea pig +	1 G P, K 47 days Slight G T, but nearest glands very caseous	Bovine
43	M H 24/6/13	Charing Cross Hosp	F 31	Caseous firm	No T B	"	2 G Ps K 60 days Chronic G T	Human
44	S McM, 3/7/13	Victoria Hosp Chelsea	M 3	Small firm caseous patches,	Numerous T B mainly short	Direct + Guinea pig +	2 G Ps 23 and 39 days Moderate G T	Bovine
46	M M 14/10/13	Mr Johnson	F 17	Caseous softened	No T B	Direct – Guinea pig +	2 G Ps 30 and 42 days Moderate G T	Human
47	M B 16/12/13	Prof Teacher Glasgow	F 14	One gland showed a patch of caseation	No T B	Direct contaminated Guinea pig +	2 G Ps, 25 and 39 days Moderate G T	Bovine
48	J McD 28/12/13	"	M 18	Caseous breaking down	No T B	Direct contaminated Guinea pig +	2 G Ps 21 and 43 days. Moderate G T	Bovine
49	J T 7/1/14	Dr Shennan Edinburgh	F 22	"	No T B	Guinea pig +	2 G Ps K 24 and 29 days Moderate G T	Bovine
52	R W 28/1/14	Carshalton	F 11	Caseous and softened	No T B	Direct – Guinea pig +	2 G Ps K 33 and 37 days Slight G T	Human
53	A P 29/10/13	Birmingham	F 1¾	Caseous softened	—	Direct + Guinea pig +	2 G Ps K 45 days. G T	Bovine
55	— 30/1/14	Dr Sutcliffe Margate	F 14	Material resembled granulation tissue	1 vacuolated T B	Guinea pig +	1 G P K 43 days Slight G T	Human
57	A B, 3/2/14	London	M adult	Firm caseous,	—	"	2 G Ps K 43 days One was healthy The other had a caseo-purulent inguinal gland only	Human

76	Direct	12	1119	1680	2210	119					
		12	1120	1350	1700	119	Caseous nodular	—			
79	Through G P	10	1146	1750	2100	116	Caseous cyst	—	Scattered tubercles.	One tubercle	—
	„	10	1147	1850	2130	116	Caseous	—	Scattered tubercles and superficial and marginal caseating patches	„	—
83	Direct.	10	1129	1540	2210	114	Caseous cyst	—	Scattered tubercles up to 2 and 3 mm	—	—
85	Through G P	10	1158	1770	2150	118	Scar	1 caseo-purulent	—	—	—
		10	1159	1250	1980	118	Caseous cyst.	—	—	—	—
93		10	1272	1860	2050	116	,	Caseous	4 grey tubercles and 4 small grey caseating patches	—	—
	„	10	1273	1580	1870	116	,	„	Scattered caseating nodules and marginal and superficial caseating areas	One tubercle	—
100	Direct	10	1196	1430	2320	119		1 caseous	3 grey tubercles	—	—
	„	10	1197	1310	2120	119	„	1 contained a calcareous focus	Small reddish grey caseating patches	—	—
101	„	10	1237	1940	1970	104		—	6 dozen tubercles	—	—
	,	10	1238	1050	1990	104	Caseous softened	—	—	—	—
106		12 5	1296	1970	2160	107	Caseous cyst	—	Scattered miliary tubercles	—	—
	,	12 5	1297	1370	1730	107	,	1 slightly caseous	Scattered tubercles and small grey patches	—	—
107	„	10 0	1312	1600	2000	107	„	—	Scattered tubercles and superficial and marginal patches	One tubercle and numerous surface pits	—
	„	10·0	1313	1750	1720	107		—	Widespread superficial tuberculosis few nodules in the depth	Two tubercles and numerous surface pits	—
88	,	20 0†	490	1770	1650	100	Small caseous lesion	Caseous foci	A few small caseous nodules	3 tubercles,	—
	„	10·0	471	1670	1450	100	,	—	,		
105		20·0	1102	2260	2850	108	Caseous cyst	—	2 tubercles.	—	

* Those marked with an asterisk died naturally All the others were killed † Broth culture

TABLE III —*Tabular Summary of Subcutaneous Experiments on Rabbits with Dysgonic Strains*

No of case	Derivation of culture	Dose in milli grammes.	No of rabbit.	Weight in grammes. Initial.	Weight in grammes. Final	Duration of life in days.	Result
2	Direct.	10	369	2100	1650	70	G T
		10	360	1590	1200	42	G T
5	Through G P	10	361	1490	1020	41	G T
	„	10	362	1660	1290	61	G T
11	,	10	436	2590	1612	69	G T
	„	10	437	1280	720	38	G T
14	„	10	456	1610	1220	28	G T^1
	,	10	525	2960	2260	72	G T^2
		10	753	1420	1190	50	G T
		10	764	1600	1150	42	G T
19	,	10	519	2060	1470	87	G T
		10	520	2000	1300	68	G T
	Direct	10	542	1890	1600	40	G T
		10	543	1520	1400	32	G T
20	Through G P	11	576	1700	1540	76	G T
	„	10	741	1490	1030	39	G T
		10	742	1410	1100	16	E G T^3
23	,	10	541	1710	1650	38	G T
	,	10	696	1250	960	63	G T^4
	,	10	697	1320	1160	48	G T
28	Direct	9	542	1430	1400	40	G T
		10	543	1520	1400	32	G T
37	Direct	10	608	2160	1630	42	G T
	,	10	609	1510	1150	48	G T
38	„	10	648	2410	1660	50	G T
	,	10	649	2570	1550	61	G T
40	Through G P	10	707	2100	1470	43	G T
		10	708	1700	1170	67	G T
44	Direct	10	755	1970	1100	39	G T
	„	10	756	2070	1430	73	G T
47	Through G P	10	951	2240	1400	69	G T
		15	1021	1800	1420	45	G T
	Rabbit 1021 (spleen)	9	1233	1940	1280	62	G T
	Rabbit 1233 (kidney)	5	1407	1740	1500	44* (111)	G T^5
48	Through G P	10	1022	1660	1040	35	G T
	„	10	1023	1150	870	28	G T
	Rabbit 1022 (portal gland)	5	1234	2340	2040	52*	G T
	Rabbit 1234 (kidney)	5	1408	1620	1450	41	G T^6
49	Through G P	10	986	1810	1520	48	G T
	„	10	987	1310	930	28	G T (mod)
58	Direct.	10	1142	1600	1050	60	G T
		10	1143	1660	1300	86	G T^7
59	Through G P	10	1013	1650	1160	60	G T
	,	10	1014	1640	1770	57	G T
63	Direct.	10	1015	1700	1160	60	G T (mod)
		10	1016	1260	980	39	G T
64	Through G P	10	1054	1240	1040	39	G T
		10	1055	1290	1030	43	G T
66	„	10	1056	1840	1160	71	G T
	„	10	1057	1740	1320	65* (111)	G T
71	„	10	1165	2290	1700	61	G T
	,	10	1335	1860	1260	48	G T
74	Direct.	10	1097	1650	1220	47	G T
	„	10	1098	1900	1150	40	G T
77	„	10	1144	1800	1310	63	G T
	„	10	1145	1850	1245	70	G T
81	„	10	1178	1570	1160	40	G T
	„	10	1179	1670	1070	45	G T
82	Through G P	10	1198	1340	990	33	G T
		10	1109	1440	1070	52	G T
84	Through G P	10	1235	1920	1470	47	G T
	,	10	1236	1900	1800	67	G T
86	Direct.	10	1180	1590	1000	42	G T
	,	10	1181	1420	960	33	G T
87	Through G P	10	1200	1450	1400	54	G T
	,	10	1201	1220	1000	19	E G T
	„	10	1292	2480	1720	30	G T
	„	10	1293	1370	1050	45	G T
89	„	10	1205	1370	1350	35	G T
	„	10	1206	1370	1250	35	G T
90	Direct	5	1166	1570	1050	33	G T^8
	,	10	1167	2000	1890	48	G T
	,	10	1336	1600	1030	68	G T
91	Through G P	10	1294	1430	1170	26	G T
		10	1295	1480	1450	45	G T^9
94	,	10	1207	1320	1000	27	G T
	,	10	1208	1270	1030	32	G T
102	„	10	1263	2130	1650	48	G T
	„	10	1310	1780	1120	28	G T
	,	10	1311	1930	1470	55	G T
53	Direct	10	517	2050	1500	38	G T
	„	10	518	2070	1440	56	G T

Note —* Those marked with an asterisk were killed All the others died G T = General tuberculosis G T^1 = General submiliary tuberculosis of moderate severity G T^2 = General tuberculosis severe in lungs only; kidneys only slightly affected liver and spleen normal popliteal glands contained caseous tubercles but others excluding those nearest local lesion which were extensively caseous were normal E G T^3 = Early general tuberculosis liver peppered with minute grey foci G T^4 = *General tuberculosis of moderate severity only* G T^5 = General tuberculosis (cultures from the portal and popliteal glands of Rabbit 1407 resembled the original culture in cultural characters) G T^6 = General tuberculosis (cultures from the kidney and popliteal gland of Rabbit 1408 resembled the original culture) G T^7 = General tuberculosis (not quite of full severity) G T^8 = General tuberculosis moderate Death from pseudo-tuberculosis of liver G T^9 = General tuberculosis not of maximum severity

TABLE II —*Tabular Summary of Experiments on Rabbits with Eugonic Strains. All Inoculated Subcutaneously*

No of case.	Derivation of culture	Dose in milli grammes	Number of rabbit	Weights of rabbits in grammes		Duration of life	Post mortem results				
				Initial	Final		Local lesion	Adjacent glands	Lungs	Kidneys	Other organs or glands
1	Through G P	50	320	2970	2850	Days 101	Caseous cyst.	Extensively caseous	Numerous firm caseating nodules discrete and confluent (Eugonic culture isolated)	Scattered caseating tubercles (Eugonic culture isolated)	1 caseous tubercle loosely attached to capsule of spleen
	Through rabbit 320 (lung)	10	577	2000	2490	90	Caseous and softened	1 caseous nodule in one	1 hempseed sized caseous nodule	—	—
3	Direct	30	328	2670	2570	98	Caseous cyst.	Partly caseous	Scattered miliary tubercles and 6 caseating nodules up to split pea.	1 submiliary caseous tubercle in one.	—
4	"	37	321	2420	2270	101	Caseous and softened	—	Numerous grey tubercles and several patches of aggregated tubercles containing caseous foci on the surface scattered tubercles in depth	—	—
10	"	25	407	1740	1760	129	Caseous cyst	—	Moderate number caseating nodules up to 2 5 mm mainly on dorsal surfaces, and 2 small marginal caseating patches	Numerous minute surface pits a few minute cortical tubercles yellow focus in one papilla	—
13	Through G P	10	452	2190	2500	127	Caseous, very small	—	—	—	—
24	Direct.	12 5	517	2450	2720	106	Caseous cyst	Enlarged not caseous	Dorsal surfaces covered with superficial grey nodules showing scanty caseation elsewhere scattered tubercles	—	—
25	Through G P	15	566	1900	2190	96	"	1 caseous nodule	Margins tuberculous discrete tubercles elsewhere	2 submiliary grey white tubercles	1 testis and epididymis showed early tuberculosis
31	"	20	567	2800	2960	96	"	—	Scattered caseating nodules and a few small marginal and superficial caseating patches	1 grey white tubercle	—
33	"	10	1048	1570	1580	95	"	—	Moderate tuberculosis superficial nodules and patches chiefly	A few tubercles in each	—
		10	1049	1260	1950	95		—	Slight tuberculosis	—	—
34	Direct	10	568	1340	1840	114	Caseous nodules	—	A few tubercles and small marginal caseating patches	—	—
35	"	10	569	1850	2040	114	Caseous cyst.	—	6 grey tubercles	—	—
36	"	10	576	1810	2600	92	"	—	"	—	—
39	Through G P	10	612	1730	2340	97		—	"	—	—
		10	613	2230	2530	97	"	—	3 submiliary tubercles	—	—
43	"	25	816	1570	1310	118	"	1 caseous.	Scattered tubercles and superficial caseating patches	—	—
46	"	10	878	1640	1710	130		Caseous nodules in 1	About 18 caseating patches up to 1 cm	1 grey tubercle	—
	"	10	879	2050	2100	130	"	—	Scattered submiliary tubercles and marginal caseating patches	—	—
52	"	10	1002	1280	1880	109	Caseous small.	—	A few tubercles.	3 tubercles	—
	"	10	1003	1660	1800	109	Caseous cyst	—	Mainly composed of solid grey, slightly caseous substance	6 submiliary tubercles	—
55	"	10	968	2030	2180	91	"	A caseous tubercle in 1	Moderately numerous caseating tubercles and nodules up to 1 cm (Eugonic culture isolated)	6 to 8 grey white tubercles in each	1 submiliary tubercle in spleen
	"	10	969	1750	2220	91	"	Caseous	About a dozen tubercles and small marginal caseating patches	—	—
57	"	24	1172	2100	2900	117	"	—	A few small nodules and marginal caseating patches	—	—
61	"	10	1004	1280	900	86*	Caseous	Caseous foci in 1	3 tubercles	—	—
		10	1005	1690	2140	106	Caseous cyst.	—	A few caseating patches and tubercles	—	—
62	Direct	10	978	2070	2270	88		—	About a dozen grey nodules up to 3 or 4 mm	—	—
		10	979	1620	1870	88	"	—	2 caseous tubercles	—	—
65	Through G P	12·5	1117	2020	2200	119		—	Caseating superficial and marginal patches and scattered nodules	One caseous tubercle	—
	"	12 5	1118	1620	2030	119		—	6 grey tubercles	—	—
68	Direct.	10	1032	1800	2210	97		—	—	—	—
		—	1033	1400	1860	97		—	—	—	—
70	"	15	1131	1090	1720	114	Caseous softened	—	Scattered tubercles and a few marginal caseating patches	—	—
		—	1132	1270	2100	114	Caseous cyst	—	A few submiliary grey tubercles	—	—
72	Through G P	10	1050	1350	1320	39*	Caseous	Caseous	A few tubercles	A few submiliary tubercles	
		10	1051	1360	2050	95	Caseous cyst	Watery cysts	Scattered tubercles.	—	—
73		10	1072	1660	2330	98		1 caseous tubercle	—	—	—
		10	1073	1660	2270	98		—	1 tubercle.	—	—
76	Direct.	10	1127	1730	2520	114		—	—	—	—
									6 tubercles.	—	—

Table IV shows the relative incidence of human and bovine infections at various age periods in this series of 68 cases

TABLE IV

Age-periods	Number infected with— Human T.B.	Number infected with— Bovine T.B.	T.B. dead in—
Under 5 years	1 (10·0%)	9 (90·0%)	6 (37·4%)
5 to 10 years	7 (38·9%)	11 (61·1%)	8 (30·7%)
10 to 15 years	8 (61·5%)	5 (33·5%)	5 (27·7%)
15 to 20 years	6 (60·0%)	4 (40·0%)	2 (16·6%)
20 and upwards ...	13 (76·5%)	4 (23·5%)	6 (22·7%)
Totals	35 (51·5%)	33 (48·5%)	26 + 3 in which age not stated (30%)

The proportion of bovine infections is highest in children under 5 years of age and lowest in adult life The incidence on adults is not, however, unimportant The percentage of adults over 20 years of age infected with bovine tubercle bacilli is in fact remarkably high, and is higher than has been recorded in any other series of cervical gland cases or in any other variety of tuberculosis in the adult

In the next table (V) the cases are analysed in accordance with the locality from which they were derived.

TABLE V

Locality	Under 5 years H	Under 5 years B	5 to 15 years. H	5 to 15 years. B	15 and upwards H	15 and upwards B
London	—	4	6	3	8	3
Margate	—	—	1	2	1	—
Cambridge	—	—	1	2	1	1
Birmingham	—	1	1	—	—	—
Macclesfield	—	—	—	1	1	—
Liverpool	—	—	—	—	3	2
Newcastle	—	1	3	1	4	—
Glasgow	—	2	2	3	1	1
Edinburgh	1	1	1	4	—	1

H = Human infections. B = Bovine infections.

The figures are not large enough for comparative statistical purposes as between different centres of population, but set out in the above manner they show quite clearly that none of the localities investigated enjoys freedom from risk of infection with bovine tubercle bacilli.

More reliable percentage figures are obtained by combining the cases into three groups, to represent respectively London and district, the rest of England, and Scotland These figures are exhibited in Table VI, and for purposes of comparison the principal American and German figures, the total cases reported in all countries down to July, 1912, and Mitchell's figures for Edinburgh are set out in similar fashion

The American, German, and combined figures are taken from the tables compiled by Park and Krumwiede[11]

The table shows that in my series the proportion of persons infected with bovine tubercle bacilli in London and district and the rest of England is much about the same, while in Scotland the proportion is much higher The Scotch figures afford corroboration of the conclusion arrived at by Mitchell as a result of his investigations of cervical gland tuberculosis that infections with bovine tubercle bacilli in this variety of tuberculosis are very prevalent in Edinburgh Mitchell's inquiries were confined to persons aged 12 years and under My figures suggest the importance of making in Scotland a more extended investigation of cervical gland tuberculosis in adolescents and adults

TABLE VI

Country		Under 5 years H	Under 5 years B	5 to 15 years H	5 to 15 years B	15 and upwards. H	15 and upwards. B
England	London and district	—	4 (100·0%)	7	5 (41·6%)	9	3 (25·0%)
	Rest of	—	2	5	4 (44·4%)	9	3 (25·0%)
Scotland		1	3 (75·0%)	3	7 (70·0%)	1	2 (66·6%)
America ...		6	16 (73·0%)	23*	15 (40·0%)	14†	1 (6·6%)
Germany		7	4 (36·3%)	8*	4 (33·3%)	12†	0
Total cases reported down to July 1912		15	24 (61·0%)	36*	22 (38·0%)	35†	1 (2·7%)
Edinburgh (Mitchell 1914) ...		3	35 (92·0%)	4‡	30 (88·0%)	—	—

* 5 to 16 years. † 16 and upwards ‡ 5 to 12 years

The proportion of bovine infections in cervical gland tuberculosis in England, while less than that in Scotland, is higher than it is in other countries Of the four countries for which there are separate data in Table VI. Germany gives the lowest percentages of bovine infections There is not much difference between the English and American percentage figures (respectively 55·5 and 51·7) for persons under 15 years of age, but for persons over 15 years of age the proportion of cases in which the infection was "bovine" is considerably lower in America than in England

The greater part of the work here reported on was done during my tenure of one of the scholarships of the Grocers' Company and with funds supplied partly by the Grocers Company and partly by Professor G Sims Woodhead In recent months the expenses of the inquiry have been borne by the Medical Research Committee I desire to acknowledge my indebtedness to these sources for the means, and to Professor Woodhead for the use of the Pathological Department of the Field Laboratories, University of Cambridge, to carry out the bacteriological work

Bibliography—1 Tuberkulose Arbeiten aus dem Kaiserlichen Gesundheitsamte, Heft 11 1912. 2. Ibid., Heft 6, 1907 3. F Griffith Royal Commission on Tuberculosis Final Report, Appendix vol iv 4 Eastwood and F Griffith Local Government Board Reports New Series No 91 5 Royal Commission on Tuberculosis Final Report Appendix vol. i 6. Local Government Board Reports, New Series No 88 7 Journal of Experimental Medicine 1910 xii p 82. 8. Deutsche Zeitschrift für Chirurgie, August 1910 9 Brit Med Jour Jan. 17th 1914 10 Journal of Experimental Medicine vol. xi., 1910 11 Journal of Medical Research vol. xxiii., 1910 and vol xxvii, 1912-13 p. 112.

Cambridge

ROYAL NATIONAL SANATORIUM, BOURNEMOUTH.—The committee of management of this institution have under consideration a scheme for forming a "sanatorium colony" in conjunction with the present institution It is proposed that a piece of land about seven or eight miles from Bournemouth, should be acquired on which could be erected simple buildings to accommodate 40 patients To this colony could be drafted all patients who, after careful selection, were considered suitable for employment on various grades of work The advantage of the scheme would be the separation of advanced cases from those only slightly affected. The cost of the scheme will be between £3000 and £5000 but this is less than the accumulated surplus income of the sanatorium during the past three years The result of the deliberations of the committee of management will be submitted to a special meeting of the governors tuberculosis in guinea pigs nor yield cultures I am indebted to them for giving me the details of their experiments and for allowing me to include these five cases in my series.]

(For details of the cases referred to above see Tables I., II, and III)

Of the several observers who have made bacteriological investigation of cervical gland tuberculosis one only (Duval[10]) claims to have isolated atypical tubercle bacilli. Duval isolated cultures from four cases of cervical adenitis of an unusual clinical type Three of his cultures are classified as atypical—respectively human, bovine, and avian—and the fourth as a standard human strain His atypical cultures bear no resemblance, judging from the information given as to cultural characters and virulence, to any of my atypical lupus strains, nor indeed to any tubercle bacilli hitherto described As Duval's results are exceptional and without confirmation it is unnecessary to refer to them more particularly here. The cultures isolated from cases of cervical gland tuberculosis by other investigators who have given details of their experiments are clearly either of standard human or of standard bovine type Whether or not any of Mitchell's cervical gland cultures varied from the standard in respect of virulence I am not able to judge, as this author has not given any details of individual rabbit experiments

Relation of Macroscopic Characters of the Glands and Numbers of Tubercle Bacilli present to the Type of Infection

In each case the macroscopical appearances of the glands on section have been recorded with the object eventually of determining whether or not these presented differences corresponding to the type of infection Careful comparison has not revealed any macroscopical character which is peculiar to one type of infection. On the other hand, microscopical examination would appear sometimes to yield evidence indicating type of infection. When there are numerous short well stained tubercle bacilli the probability is that a bovine infection is being dealt with In the series yielding cultures there were numerous or moderately numerous short tubercle bacilli in eight cases, and in each of these cases bovine tubercle bacilli were isolated In Oehlecker's series[3] of 14 cases there were numerous short tubercle bacilli in the only cases (4) which yielded bovine cultures Bovine infections, however, are not always associated with numerous tubercle bacilli in the lesions Seventeen of the cases from which bovine tubercle bacilli were obtained in culture showed no, or extremely few, tubercle bacilli microscopically In human infections tubercle bacilli are usually very scanty In only 2 out of 33 "human" cases in which microscopical examinations were made were tubercle bacilli found in moderate numbers

Clinical Aspects

The clinical information with which I have been supplied contains some features of interest which are briefly detailed in the abstracts below.

CASE 2.—Aged 23. Bovine infection History of seven or eight years trouble with glands on both sides of neck and in one axilla She had been operated on altogether six times by Mr. Thelwall Thomas and Mr Kelly She stated that she was very fond of cows milk and always drank it unboiled Teeth very carious

CASE 4.—Aged 39 Human infection Twelve years' history She had had five operations, exacerbation leading to operation all following confinement Of four children, one suffered from chest trouble, one from tuberculous wrist, and a third from glands in the neck.

CASE 14.—Aged 19 Bovine infection Four months' history, She had been in the habit of drinking cows milk unboiled and had several very carious teeth There was a large mass of glands beneath the left sterno mastoid Two years after operation she was seen by Mr Kelly, who found only one small gland low down in the neck—not worth operation.

CASE 24.—Aged 24 Human infection Five years history Had had three operations

CASE 46.—Aged 17 Human infection Glands noticed only two months before operation. She had been under treatment for some time with well marked signs of cavity in left apex.

CASE 47.—Aged 14 Bovine infection. Enlarged submental glands for some years, and abscesses had formed and burst three times

CASE 48.—Aged 18 Bovine infection. Three years' history Two operations

CASE 62.—Aged 9 Human infection Chronic enlargement of cervical and axillary glands, both sides for two years Had had three operations Many carious teeth when first seen.

CASE 68.—Aged 8 Human infection Case of old empyema Axillary glands affected on side of operation for resection of rib.

CASE 74.—Aged 6/12 Bovine infection There was also a tuberculous lesion of the hand

CASE 77.—Aged 41 Bovine infection. Five years' history There were enlarged glands in both posterior triangles and both tonsils were enlarged He had been accustomed to drink unboiled cows milk. Eleven months after operation he writes to say that his neck was fuller than ever of glands

CASE 81.—Aged 9 Bovine infection Child said not to have taken milk except in puddings After the operation a small swelling appeared under the site of operation, but after a time this began slowly to dwindle and further operation was considered unnecessary The general health of the child was good There was no family history of tuberculosis

CASE 86.—Aged 13 Bovine infection About six weeks' history Large mass of glands on left side of neck Patient died at end of operation from heart failure. The post-mortem examination showed perihepatitis and perisplenitis, and greatly enlarged caseous mesenteric glands

In a few other cases, both human and bovine, it has been ascertained that the operation was completely successful and that there had been no recurrence Of 11 cases in which it was stated that there was no family history of tuberculosis, 3 yielded human tubercle bacilli and 8 bovine tubercle bacilli Family history of tuberculosis was given in 2 cases, one of these was infected with human, the other with bovine tubercle bacilli

Statistical Data

For the purposes of this section I shall utilise only those cases which yielded cultures and which are believed to be primary in the cervical glands Three of the 71 positive cases must therefore be excluded One (No. 46) was a case of cervical adenitis which was probably secondary to tuberculous disease of the lungs The other two (Nos. 68 and 90) were cases of tuberculosis of the axillary glands, the cervical glands being unaffected There remain 68 cases of cervical gland tuberculosis, presumed to be primary in the cervical glands, of which 35 yielded cultures of human tubercle bacilli and 33 cultures of bovine tubercle bacilli. The case (No 52) in which the femoral glands were the original material is included in the 68 cases, because the cervical glands were also tuberculous examined at 5 years was "tachycardia," and practically all of these are now definitely rheumatic Moreover, this pulse rate persists for years, and is not definitely higher on first taking The variation is often extraordinarily small. I have notes where the variation shown over several years is only two or three beats per minute In addition to the quick pulse rate, such children frequently have continued pyrexia, with temperatures ranging from 99 4° to 100 4° F It will be argued that this is due to "nervousness," but I now have records of some 5000 temperatures, and, as a rule, the second time of taking it is practically the same as the first If the raised temperature were due to nervousness the second temperature would be lower than the first This raised temperature persists for years throughout school life and the small amount of variation is remarkable In work undertaken in collaboration with Professor Karl Pearson and Miss Julia Bell[3] we showed that this raised temperature is not merely due to age Control takings were made at several public schools, both for boys and girls, and these showed that children of richer parents have not such raised temperatures

In a few cases, even as early as 5 years of age, growing pains are already present, but I regard these cases as of a more severe type than when the only signs are pyrexia, quick pulse and nervousness On inspection the heart's impulse is often widely visible, and on palpation it gives to the fingers a sensation of fluttering On auscultation one finds that the common trouble at the bases of the lungs (which occurs at an earlier age and which I believe to be of tuberculous origin) has nearly cleared up, and often far more completely cleared up than in a child of a non rheumatic family There may be high pitched expiration or harsh breathing The apex beat may be outside the nipple line, which is not the case in non rheumatic children At a recent discussion at which various cardiac specialists took part, the ordinary position of the apex beat in children was discussed, and opinions varied as to whether it is within, or without, the nipple line I think that the difficulty came from the fact that in rheumatic children it is often in or outside the nipple line, and there are so many such children in any hospital clinic, recognised or unrecognised, that statistics based on such figures, obtained without definite exclusion of rheumatic children, ought not to be regarded as representing facts concerning healthy children

In some cases the cardiac sounds are altered, a muffling being perhaps the most common change, but I do not often hear bruits indicating actual valvular roughening At this stage I think that the change consists in a weakening of the myocardium, which I believe to be toxic, but which it is possible may some day be shown to be due to actual rheumatic nodules in the musculature of the heart This is the stage when, I believe, further development of rheumatism can be prevented, and, if this occurs, little permanent change remains But unfortunately, except in the children of the rich the existence of the disease is not recognised at this age and hence the later stages are so appallingly frequent

At some age between 5 and 12, a common symptom is abdominal pain, and also, I believe, attacks of appendicitis, almost always labelled "bilious attacks" In 3 out of 7 attacks, of which I have notes, there was a definite rigidity over the appendix In 8 patients whom I questioned directly after they had been operated upon for appendicitis, I obtained, without leading questions, a history of bilious attacks in 7 I do not mean to suggest that the rheumatic germ is responsible for all attacks of appendicitis, but I think that "bilious attacks" in children generally precede recognised appendicitis, that they are, in reality, frequently slight attacks of appendicitis, and that both bilious attacks and appendicitis are more frequent in rheumatic children, or in persons with a rheumatic family history, and that it is at least possible that the same germ which causes the rheumatic nodules in the valves of the heart causes similar nodules in the region of the appendix I gradually became so convinced by the cases I saw of some connexion between rheumatism and appendicitis that it has been a great pleasure to me to realise that other workers are also studying the subject from this aspect In Poynton and Paine's book[4] an account is given of appendicitis produced in rabbits by the intravenous inoculation of diplococci grown from a case which was clinically rheumatic fever The rabbits used were young, and the diplococci were recovered from the joints, the heart blood, and the peritoneal fluid[5] In one case recorded, a patient with appendicitis had also some inflammation of a tonsil, and from both a diplococcus was obtained which appeared microscopically and culturally the same, and which gave rise to arthritis when injected into young rabbits

That children in rheumatic families have frequent sore throats is well known, and many cases in consequence undergo operation on the tonsils I should like to take the opportunity of protesting against enucleation of the tonsils It is often said that guillotining is no good, for the condition recurs For several years I have kept detailed notes of all the operation cases I have seen, most of them done by general practitioners, and I find that in the majority of cases, *if the operation is not done at too early an age*, the result is a cure, and I think whether it is or not, one has no right to remove organs until one is sure that their influence for good is less potent than their influence for evil It is possible that the rheumatic germ grows in the tonsils, but, on the other hand, it has been argued[6] that the tonsils have a protective function They may thus act as a barrier against rheumatism, and may only fail in this duty under repeated and severe attacks of the germ If so, I think some portion should be left for defensive purposes

The question as to whether chorea is or is not part of the rheumatic syndrome has been debated so many times and the positive evidence is so great that I think I need do no more than express my adherence to this view If anyone is interested in working at the question further, I would be happy to afford facilities of studying my records of some thousands of cases which I regard as rheumatic, in regard to each of which is recorded the exact evidence on which the view was formed, and among the data would be found cases of chorea I

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[3] Drapers Company Research Memoirs Studies in National Deterioration IX A Statistical Study of Oral Temperatures in School Children with Special Reference to Parental Environment and Class Differences by M H Williams M B Prof K. Pearson F R.S and Julia Bell M.A.

[4] Researches on Rheumatism Poynton and Paine 1913 pp 366 et seq

[5] Loc. cit p 374

[6] Digby THE LANCET Jan 20th 1912, p 160

NOTES ON RHEUMATISM IN CHILDREN[1]

BY MARY H WILLIAMS, M B, B S LOND,
D P H CAMB,
SENIOR MEDICAL INSPECTOR OF SCHOOLS FOR WORCESTERSHIRE.

IT is hardly possible to read a medical journal of any description without coming across an article on some form of tuberculosis, and recently legislation has even more strongly called attention to its importance Mothers are willing to take much trouble for their children if one tells them the child is tuberculous, so thoroughly are they imbued with terror of this disease But I am inclined to believe that in England as much, or more, misery is caused by the disease we call rheumatism, and each year I live I find cause to study some fresh manifestation of this widespread disease

The laity commonly regard rheumatism as a disease of the elderly, and believe that its chief harm lies in the pain it causes I believe that it is a disease which almost always begins in early childhood, and that in its crippling effects it is second to none It is responsible for a large amount of heart disease and for an infinitely larger number of cases of ill health which are frequently labelled "debility" The common view as regards the sequence of events appears to be that 'growing pains" come before the heart is affected Dr R Hutchison writes[2] "If they [the growing pains] are neglected the child may very easily slide into endocarditis," but I hope to show that the germ commonly first attacks the heart and only later causes symptoms in muscles and fasciæ

The little I know about rheumatism in children has been learnt almost entirely in my work in the schools, for, with the exception of Dr F J Poynton's book, there is not much to be learnt about it from current literature So I have had to formulate my own views, and hence must ask for indulgence if I differ from any of my audience My views have developed as the result of watching given children for long periods, 5, 6, 7, or even more years, and noting how one condition precedes, and passes into, another

I started school work in 1904, believing that there was very little rheumatism in children The first method I used to ascertain if a child was rheumatic was to ask if he ever had "growing pains," and I was absolutely startled to find how many children gave a definite affirmative answer to the direct question A few had volunteered this information before I started asking directly Then came the question as to whether "growing pains" always connote rheumatism, and this forces me to what I should like to avoid—a definition So I will shortly define rheumatism as the disease due to an infection with a specific micrococcus, probably that described by Poynton and Paine or one closely related to it The syndrome of rheumatism includes symptoms due to lesions in the musculature and valves of the heart, pains in joints and muscles, abnormal excitability of nerves and brain shown in some cases by actual chorea, anæmia, with continued pyrexia I regard malignant endocarditis as being commonly a severe form of septicæmic rheumatism, though quite recognising that in a few cases other germs are the primary cause

Taking this definition to work upon, I believe that in young girls aching of the legs, which occurs both by night and by day, is almost always due to rheumatism In boys I am inclined to think that a certain amount of aching can be caused by strenuous games even without rheumatism But true rheumatic "growing pains" are generally worse after exercise, and at first may occur *only* after exercise In many cases they are worse at night, and in such cases the diagnosis is at once clear Also if they occur only, or chiefly, in wet weather they are due to the rheumatic toxin Aching of the legs due to syphilis may occur, but I do not think that it is frequent in children The aching which occurs during or before menstruation also needs mention, but can easily be differentiated by a few questions Apart from these forms of aching there also needs to be differentiated a somewhat uncommon condition, aching of the joints or muscles due to the tubercular toxin, a tuberculous arthritis So called arthritis sicca, a dry form of tuberculous arthritis, has long been recognised, and this is sometimes, though by no means always, accompanied by pain This condition is most easily recognised in the shoulder, because when auscultating the back one hears a dry crepitant sound, and on placing a hand on the shoulder one feels a creaking sensation The creaking is produced in the muscle and can be lessened, or obliterated, by the arm being drawn backwards Later there may be grating in the joint, but the early sounds are, I believe, distinct in origin I believe this condition is practically always due to a tuberculous infection and not a rheumatic one

The "growing pains" are the symptom most commonly recognised as due to rheumatism, but they are by no means the earliest or the most important The typically rheumatic child can be differentiated by the age of 5, and, for all I know, far earlier The reason why I name this age is because I see far more children at 5 than earlier, and I also find that the examination of children grows gradually more and more difficult as we come to deal with them at the earlier ages At 5, such a child is often well nourished, perhaps somewhat thin, but one in regard to whom no complaint is made by the mother unless she says either that he is nervous or is "mincing" with his food On examination, one obtains a history of rheumatism in the relations When one takes the child on one's knee in order to count the pulse, one at once notices that he is not for one moment at rest, some part of his body is in incessant movement The hand is not kept still long enough to make it possible to count the pulse for 60 seconds consecutively, one has to count it in successive quarter minutes The hand is constantly making little, quick, jerky movements And, without questioning, the parent will often remark that he is never still Teachers complain that he fidgets Then, on counting the pulse, one finds that it is above the rate of the child who has not acquired the rheumatic infection. So little work has been done on the pulse rate that I carefully avoid the expression "the normal rate," but I have now many hundreds of records of five year old children, and the children we are considering have a pulse rate above that of tuberculous children, the rate often reaching 100 or over Lately I have been seeing, for the second or third time, older children, in regard to whom the only note of abnormality made when they were first

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[1] A paper read at a meeting of the Registered Medical Womens Association London on May 11th 1915

[2] Lectures on Diseases of Children 1913, p 170

A CASE OF TETRAGENUS SEPTICÆMIA

By HENRY ROBINSON, M A , M D CANTAB ,
TEMPORARY LIEUTENANT, R A.M C

A PRIVATE soldier of three years' service and 23 years of age was admitted to hospital on March 18th, 1915, complaining of pain in the feet of about six days' duration, with steadily increasing malaise, weakness, and anorexia He had also a slight headache and a very slight cough There had been some abdominal pain at the commencement of the illness, but this passed off before the man came under observation On admission he was constipated, as is not unusual in men who have been a long journey on an ambulance train He had not vomited, and there had been no nose bleeding or sore throat

The only account of previous illness was a fever of some kind in India about a year before The patient had never had rheumatism He had been three times inoculated against enteric fever, the last time nearly a year previously

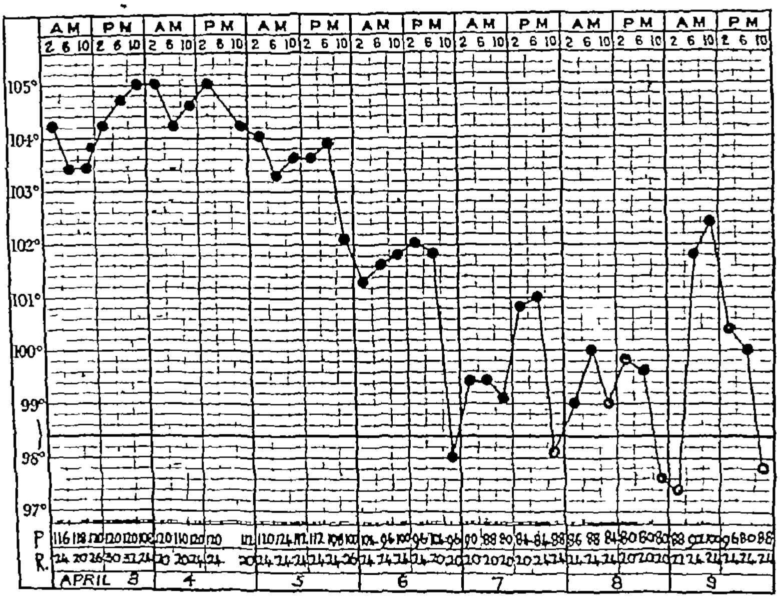
On admission he looked fairly comfortable, not flushed, no herpes He was rather deaf, and in view of a subsequent occurrence it is regrettable that no inspection of the ears was made The tongue was red at the edges and furred in the centre Temperature 103°F The pulse rate was 120 on admission, but it dropped soon afterwards to under 100, regular, low tension, skin moist, no rheumatic smell

On examination nothing abnormal was found in the lungs The heart's apex was just internal to the nipple in the fifth interspace A soft blowing apical murmur was present, heard also at the basal region There was no abdominal distension, gurgling, tenderness, or rigidity, no spots The spleen was doubtfully palpable There was no swelling or redness of the feet, though they were tender when handled A diagnosis of acute rheumatism was made, and 20 grain doses of salicylate of soda with equal amounts of bicarbonate were given four hourly, together with a brisk purge On the off chance of the case being one of enteric fever blood was withdrawn from a vein for cultivation. It was submitted to Lieutenant M K Acheson, R A.M.C , bacteriologist, who found it sterile

Under treatment the temperature fell rapidly, and became absolutely normal after six days On March 22nd the man was much better in every way, and it is noted that the apical first sound was then almost normal, but still slightly impure On the 26th the murmur was once more in evidence, though in other ways the patient had improved On the following day salicylate treatment was discontinued altogether, the dosage had already been cut down as the symptoms ameliorated The diet was cautiously advanced and absolute recumbency was maintained On March 31st there was a slight nocturnal rise of temperature, and next morning a sudden return of pain in the legs and malaise occurred, together with a temperature of over 103° Soon afterwards a condition of apathy almost verging on coma set in There was no swelling or redness of the joints Large doses of salicylate were once more exhibited, but this time without the slightest effect The cardiac murmur was still present On April 3rd the man complained of pains in the ankles, shoulders, and spine, but nothing abnormal was detected on examination of those regions The temperature was 104°, the pulse rate was 128, and the cardiac murmur had entirely disappeared No petechiæ or abscesses were present A diagnosis of infective endocarditis was arrived at, a further sample of blood was taken for culture and the salicylate was discontinued

On the following day (April 4th) the patient, who had originally been admitted into a surgical ward, was transferred to the medical division of the hospital, and until my own transfer about three weeks later I lost direct touch with him During this time he was under the care of Lieutenant A T Todd, R.A.M C , with whom I saw the man occasionally in consultation The case notes were carried on by Lieutenant Todd, and I am indebted to him for the particulars of this part of the illness

On April 4th, on taking over the case, Lieutenant Todd's notes state that the man was slightly cyanosed He complained chiefly of pain over the pericardium and base of the left lung A double mitral murmur was heard at the apex, which was tender A cough began on this day, and patches of broncho pneumonia were found in both lungs The spleen was enlarged. Pulse 120, very weak and dicrotic, temperature 105° The patient was very delirious Quinine sulphate in heroic doses was ordered On the 5th there was a distinct improvement The cardiac murmurs were unchanged, but the temperature was lower, the pulse less weak and dicrotic, and the cyanosis had disappeared On the 6th the improvement continued, though there was still some nocturnal delirium On the 7th he felt better, though the pulse tension was still



Four hour chart from April 2nd to April 9th have no case of chorea as occurring in any but a rheumatic child, and I dissent from the view urged by Professor Poncet that the ordinary type of chorea is often caused by the tubercle bacillus.

The mention of the tubercle bacillus brings me to a point at which I can state a theory which I have worked out—viz., that rheumatism and pulmonary tuberculosis are antagonistic and not active at the same time in the same child. Predisposition to rheumatism is strongly hereditary, and the figure based on my investigations has worked out at 0.46. I may say that the figure[8] for inheritance of stature is 0.51, for length of arm 0.5, and for insanity 0.47. Hence our heredity figure for rheumatism is strictly comparable to figures for other inherited characteristics. But, in addition, rheumatism in the parent appears to protect the child in a definite degree from pulmonary tuberculosis.[9] The antagonism between rheumatism and pulmonary tuberculosis has also been noticed by Sir Dyce Duckworth[10] and by Dr. R. H. Miller,[11] of Paddington Green Children's Hospital, and I have now thousands of records supporting this view.

But to come back to our rheumatic boy. By the time he is 12 he is probably in fair health but too thin, perhaps pale, and too easily out of breath. Also football or long walks cause leg aching. The apex beat is very likely to be found in or outside the nipple line. The impulse is very visible, far too diffuse, and on feeling it one is sensible of a kind of fluttering sensation. There may be a definite bruit with unmistakable involvement of the mitral valve. For many years I worried myself because at hospital it always seemed to me that everybody heard murmurs before I did, and I feared that I missed important lesions. Later, I had opportunities of comparing what I heard with what was heard by skilled auscultators, and so gradually learnt to know more. But for the consolation of any of the younger practitioners who may still feel as I did, I would say that, in children, not being able to hear murmurs does not matter. If there is enough wrong to need any degree of care the fact will be learnt more surely by the use of eyes and fingers than by the aid of the stethoscope. And if we trust more to our eyes and our fingers we shall, I hope, soon cease to talk of "functional" disease of the heart. The only definition of "functional" disease of the heart which I am willing to accept is the following: 'A disease whose pathology I have not yet ascertained." The fact that the conditions, possibly the murmurs, in a child's heart are constantly changing is no reason for calling it "functional." If a sound is present one day and not the next it probably shows exhaustion of the muscle or activity of the rheumatic germ. So long as we call disease "functional" the inference is that it does not matter.

The sooner that we recognise that heart disease in a child is practically always due to rheumatism the sooner we shall get sufficient care taken to prevent the condition getting worse. In many congenital cases also I have obtained so strong a rheumatic family history, including disease in the mother, that I believe that here, also, rheumatism is often responsible.

Rheumatism is one of the commonest diseases of children and the most crippling in later life. But the disease does not now figure among those scheduled by the Board of Education, in spite of repeated attention being drawn to it by many doctors working in the schools. Heart disease is in the schedule, but not the disease of which heart disease is only a prominent symptom.

It does not yet appear to be sufficiently recognised that the rheumatic toxin is as capable of causing anæmia as the germ of tubercle or syphilis, and that in young people it is one of the commonest causes. In a recent interesting work, when writing of the anæmia of adolescence,[12] Dr. Stacey Wilson separates "the anæmia definitely secondary to diseases such as phthisis and chronic nephritis" from "those which occur in the simple anæmia of adolescence" because "the cardiac phenomena are usually different." But I am gradually becoming convinced that the primary cause of many such "simple anæmias" is the continuous action during the years of childhood and adolescence of small doses of the rheumatic toxin, and environmental conditions supposed to be responsible for these anæmias are merely the causes which so increase the action of the toxin that symptoms are produced.

So far I have said nothing of treatment, and in regard to this matter I much hope to learn from those who have more practical experience of it than I. To my mind the riddle is unanswerable. The large proportion of the children in our schools have constant pyrexia; in rheumatic cases it is due to the rheumatic toxin, which at this age acts mainly on the heart. The first order I should like to give is, "Rest"; the second is, "Keep warm and dry"; and the third, "Good food." Yet I am in doubt which order is most hopeless.

The law compels the children of the poor to attend school in all weathers unless they can be proved to be definitely ill. Many of the country children have to walk two or three miles over fields or along wet muddy lanes, and then sit in cold schoolrooms. The cost of flannel makes the desirable form of clothing almost out of reach, and the small knowledge of cooking possessed by the women makes nourishing food a rarity. The wonder to me is not that a large number of our adults end their lives crippled with rheumatism, and a further large number die from heart disease, but that any of the poor escape the disease. I believe that we have something to thank tuberculosis for in that it renders some families more resistant to that disease which I consider the more deadly.

As regards the distribution of rheumatism, my figures show that rheumatism (as distinct from rheumatic fever) is more common in rural districts. So far as rheumatic fever goes, I have not found a greater frequency in urban than in rural areas.

When writing of valvular disease due to rheumatic fever, Dr. Harrison says[13]: "There is a special tendency to valvular disease in towns," and I have wondered if the frequency of slight rheumatism in children in the country districts is *the cause* of the comparative rarity of rheumatic fever in adults—i.e., is the early rheumatism an immunising process which protects from the more dangerous effects in the majority of cases? We often see it debated why mitral disease is so rarely found in post-mortem examinations on those dying from pulmonary tuberculosis. But if rheumatism and pulmonary tuberculosis are antagonistic, and mitral disease is generally due to rheumatism, then this absence of mitral disease would be bound to occur.

Colwall, Malvern.

La Tuberculose Inflammatoire, par A. Poncet et R. Leriche, 1912, p. 240.

[8] A Statistical Study in Oral Temperature, loc. cit., p. 45.

[9] Loc. cit., p. 52.

[10] Practitioner, January, 1912.

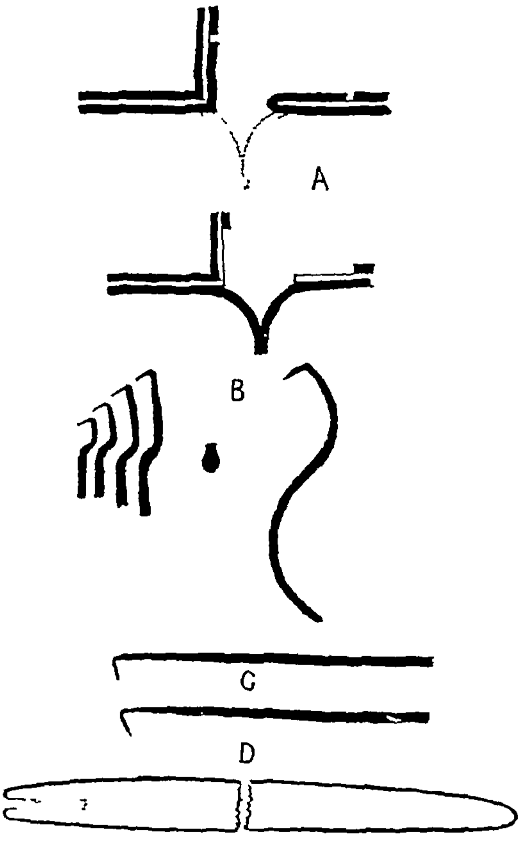
[11] Medical Diseases of Children, 1911.

[12] The Early Diagnosis of Heart-failure, Dr. Stacey Wilson, p. 228.

[13] Journal of the R.A.M.C., August, 1914.

By this operation I think it can be claimed that the palatal blood supply is not impaired as is the case with the lateral section method, that important phonatory muscles are scarcely interfered with, that tension is obviated, and that apposing surfaces, more promising of union than edges, are obtained And although the involved surfaces may be only half the thickness of the ordinary ones, yet this is more than compensated for by the fact that the arteries of supply are all intact, no tension prevails, and the gross trauma to the parts from the ordinary operation is avoided, all of which advantages favour union

The diagrammatic illustration renders clear the method (A) Should the septum reach the palate the flap on that side is obtained therefrom B shows the graduated knives and raspatory in profile, with screw disc on the latter for varying and maintaining the distance from the blade so as to render it adaptable for any width of flap C indicates the knife and raspatory required for the septum, whilst D is the universal handle The shape and size of the blade of knives and raspatories are also indicated, the knife having a cutting edge all round The shafts are about 3 inches long, the handle 6 inches



I would commend this nasal flap operation to surgeons, particularly in the case of the hard palate which gives the chief trouble The operation, if desired, can be performed in two stages

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DIPHTHERIA AT LARBERT —A serious outbreak of diphtheria has occurred at Larbert, Stirlingshire, and the central school has been closed

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COMPLETE HEART-BLOCK WITH HIGHER VENTRICULAR THAN AURICULAR RATE

BY EDGAR LEA, M D VICT, M.R C P LOND,
HONORARY PHYSICIAN, ANCOATS HOSPITAL, MANCHESTER

A CASE of complete heart block is here reported which presented the following unusual features 1 An abnormally high and persistent idioventricular rate of 50 to 60 beats per minute, with occasional irregularity of rhythm not wholly due to premature ventricular contractions 2 A period of sinal bradycardia of frequency 51, during which time the ventricular rate exceeded this 3 Auricular tachycardia of frequency 200 per minute following the injection of 1/50 gr atropine sulphate 4 An unusual relationship between the auricular and ventricular beats during an apparent 3–1 block

Clinical Description

The patient, a man aged 38 was admitted into hospital under my care on Sept 24th, 1913, having suffered recently from fits and dyspnœa The family history was good He was a married man with children. As to past history and habits, he had always had good health, no serious illness He was a total abstainer and a non smoker His work had been healthy but laborious No rheumatism, syphilis denied

Present illness —He was quite well up to a month before admission When going for a walk one afternoon he suddenly lost consciousness and fell down He regained consciousness so his friend who was with him told him, in about a minute, and walked home Another fit occurred at 11 30 that night and another at 4 o clock the following morning The next day he had four more fits on his road home from work, falling in the road each time His doctor saw him that day For the next three weeks he remained at home During this time he states that he had three or four fits daily Since Sept 21st the attacks had been slighter in severity

Condition on admission (Sept 24th) —The patient was a well built man of more than average height His complexion was sallow and he looked rather ill He said that since June he had lost weight, "pounds and pounds" There was considerable œdema of the legs, and the abdomen was a little swollen and felt tight On examination the pulse was slow, regular, and of good tension, frequency 35 5 per minute There was fairly well marked venous pulsation in the neck. Heart No apex beat was visible, no thrill The deep limits of cardiac dulness were as follows right limit, 1¼ inches, left limit, 5 inches from mid sternal line, upper limit, third rib On auscultation there was heard at the apex and at the lower end of the sternum a well defined but not loud systolic murmur which replaced the first sound The second sound was normal at all areas At the base of the heart the sounds were less definite, but the impression was conveyed of intermediate, slighter sounds, probably of auricular origin, occurring between the ventricular contractions The lungs were normal Nervous system normal The patient was intelligent and of a sanguine temperament The liver was slightly enlarged and rather tender A trace of albumin in the urine Blood pressure arm 130 mm.Hg, leg 122 mm Hg At a later date Dr W J S Bythell s X ray report showed evidence of much enlargement and dilatation of the whole heart. The separate movements of auricles and ventricles could not be satisfactorily demonstrated

Progress and treatment —On Sept 25th the patient had a "fit" at 4 A M The nurse on duty stated that the pulse was absent during the fit (she had been warned to expect this feature), immediately afterwards the pulse rate was at 100 On Sept 27th a second slight fit not associated with loss of consciousness occurred. The pulse was not stated to be stopped This was the last fit which the patient had during his stay in hospital to Nov 11th, 1913 On Sept 29th potassium iodide, gr 10 thrice daily, was prescribed, and this was continued till his discharge During his stay in hospital his general condition improved The œdema very low, there was copious mucopurulent expectoration Lieutenant Acheson reported that the blood contained the micrococcus tetragenus By the 10th the temperature was normal and the præcordial pain was much less, there was some blood mixed with the mucopurulent expectoration On the 14th a general quinine rash was observed, and also a purulent discharge from the right middle ear, but the general condition was much improved and the cardiac murmurs were no longer heard On the 16th pleuritic pain was present on the left side, and examination showed a small patch of consolidation, with crepitations and blood stained sputum and a temperature of 100° Quinine was once more freely pushed This attack soon subsided, though the sputum was still stained six days later, when the patient was feeling much better and asking for food

About this time Lieutenant Todd left for the front, and the patient came once more under my care I found the heart sounds normal, the cough practically gone, and, apart from weakness, hardly any morbid signs except aural discharge From this pus Lieutenant Acheson had cultivated a coccus which grew both in pairs and in fours He was inclined to regard it as the same organism (tetragenus) as that which he had already recovered from the blood On April 27th the patient developed slight femoral thrombosis on the left side On May 5th it is noted that the ear had ceased to discharge and the heart sounds were normal, but there was still tenderness, and a hard cord was still palpable along the line of the femoral vein A few days later the patient was transferred convalescent to a hospital ship

The exact sequence of events in the pathology of this case is not absolutely certain The original attack seemed to respond satisfactorily, though not immediately, to salicylate treatment It may have been true acute rheumatism, alternatively it is arguable that it was really even then a tetragenus infection When the first relapse took place the diagnosis of infective endocarditis supervening on a simpler rheumatic lesion seemed inevitable, and a bad prognosis was formed The temperature chart alone would suggest a pneumonia, but it was only after two or three days of high pyrexia that cough and pulmonary signs developed The middle ear abscess may have been pyæmic in nature It would have been of great advantage in deciding this point if the ears had been examined for old perforations on the patient s first admission

Fortunately Lieutenant Todd had had experience of tetragenus pneumonia at the Royal Victoria Hospital for Sick Children, Edinburgh, where he had found quinine of great value He had already adopted the same drug in this case before the bacteriological finding was known, and in view of the upshot it would be certainly worth while to treat any future case in the same way Such textbooks of bacteriology as are available on the spot here are practically silent on the pathogenicity to man of the micrococcus tetragenus, and I was very fortunate to find in Lieutenant Todd a colleague with first hand knowledge of the tetragenus pneumonia, which occasionally attacks children. Even he, however, had not met with a case of blood infection by this organism, so I have thought it worth while to place this case on record in spite of the fact that I am not in a position to give any references to similar cases that may have already been published

I tender thanks to Lieutenant Todd and Lieutenant Acheson for their valuable help

NASAL FLAP AND MODIFIED LANGENBECK OPERATIONS FOR CLEFT PALATE

BY G S THOMPSON, F R C S ENG

ONE of the commonest and most annoying sequelæ of palate operations is the yielding of the line of union, partly from infection, more especially when tension is present, the absolute and universal elimination of tension still being a desideratum that has not yet been realised By the following operation and technique this defect, particularly in the case of the hard palate, which is the chief offender, can, I think, be satisfactorily overcome in most or all cases The principle of the operation is the elimination of tension, the reduction of trauma and interference with the blood supply by the use of flaps obtained from the upper aspects of hard and soft palates, which being turned down into the mouth are united in a V shaped manner The raw surfaces of the flaps are apposed, as well as the line of section, thus affording a firmer and more certain bond, and therefore reducing the likelihood of mal or non union A graduated series of knives and raspatories make any width of flap desired to be obtained, moreover, the width is thereby maintained the same throughout The width of flap required having been decided on the requisite knife is inserted from the mouth through the cleft, then drawn with some force through the muco periosteum, from end to end, the shaft of the knife being kept in contact with the bony edge of the cleft The flap thus demarcated is then separated from the nasal surface of the hard palate, drawn inwards and turned down through the cleft into the mouth The raw surfaces are apposed and united by a few vertically placed mattress sutures and the edge by a continuous catgut suture, the mattress sutures being placed vertically and not horizontally so as not to interfere with the transversely disposed blood supply to the flap margins By this device the lateral paradontal incision and separation of palatal muco periosteum with its involved danger to the blood supply, not to mention trauma, can be avoided, but for those surgeons who prefer to combine this, the muco periosteum may be raised through a small puncture near the teeth So much for the hard palate

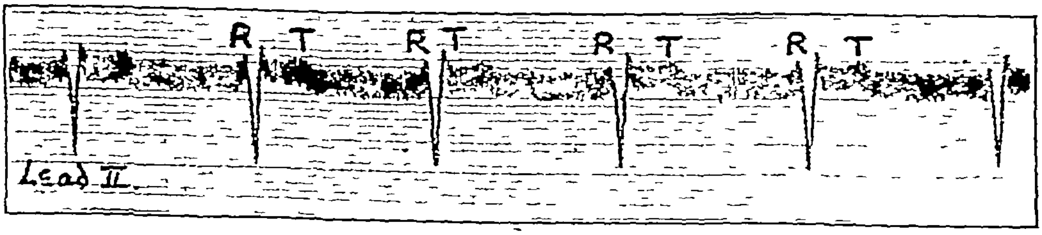
With regard to the soft palate, at the present time a very necessary but most defective step in these operations is the inevitable section of the tensor, and even levator, palati as well as the separation of the nasal portion of the soft from the hard palate, these two factors probably accounting for some or most of the common after trouble with phonation I have endeavoured to overcome this cardinal defect in the case of the soft palate in the same way as the hard, but whether as successfully it is at present rather too early to state owing to small experience of these operations To this end the tip of the soft palate is drawn forward on to the hard, and a longitudinal incision is made on its naso pharyngeal surface through half its thickness, this incision follows the same line as the intra nasal section for the hard palate The flap so marked out is raised, turned into the cleft and down into the mouth, so that later what was part of the upper surface will face the tongue The two palatal incisions are then united at the posterior edge of the hard palate by curved scissors, thereby giving one long incision and flap from the upper aspect of hard and soft palates from end to end of the fissure and phasic variations related to Cheyne Stokes respiration Cullen and Tribe[4] found in the cat inconstant acceleration following accelerator stimulation. Increased ventricular rate has followed digitalis (v Tabora,[11] Erlanger,[5] Hare[6]) When, however, we come to clinical instances, and if we confine attention to those cases where the acceleration is due to causes other than occasional and irresponsible extrasystoles, the number of instances is at present limited. A careful perusal of the literature has resulted in the following list of cases —

Name	Ventricle, rate and rhythm.	Remarks
1 K. F Wenckebach.	54 regular	Block itself due to digitalis
2. J D Windle.	66, ,	No digitalis.
3. J Mackenzie.	70,	Block itself due to digitalis
4 Meyer	54, slightly irregular	" ,
5	54 regular	, , ,
6. Neuhof	54 slightly irregular	No digitalis.
7 T Lewis.	90 regular	Complete block due to digitalis auricles fibrillating
8. E H. Hunt	64 ,	No digitalis
9 Hewlett and Barringer	103, regular but only brief phases	Strophanthus poisoning Auricular rate only 95 Shortly before death.
10 C E Lea.	60 regular	Organic block. No digitalis
11. ,	75 regular	Block due to digitalis auricles fibrillating (Fig 5)

References —1 Engelmann's Archiv Suppl. 1906 p 53. 2. Heart, 1910 vol. ii. p 2. 3. Brit Med. Jour 1911 vol. ii p 872 4 Deutches Archiv für Klinische Medizin 1911 p 16 5. Ibid 6. American Journal of Medical Sciences, 1911 p. 515 7 Heart 1912, *vol* iii., p 279 8. THE LANCET May 2nd 1913. 9 Archives of Internal Medicine February 1910 p 93. 10 and 11 THE LANCET (present cases)

It will be clear from this list that the large majority of instances of high idioventricular rate are due to digitalis That this drug can also influence the ventricular rhythm in other ways than simple acceleration has been shown in a few cases recently published,[2 8 10] in which, though the rate was not affected, the rhythm and the form of the ventricular complexes were modified Such facts bring into relief the unusual feature in the case here reported, in which no drug influence was present

FIG 5



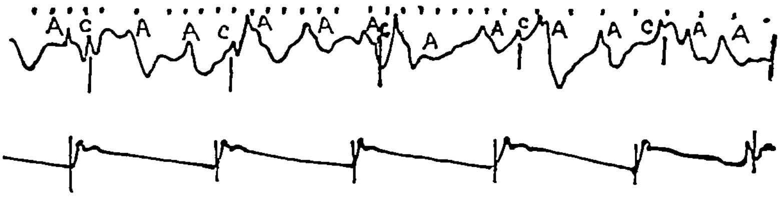
Complete heart block with auricular fibrillation (from the Electrocardiographic Department Ancoats Hospital) Ventricular rhythm is regular at rate 75 per minute. Patient a man aged 78, on full doses of digitalis

(*b*) *The auricular rate* —The slowing of the auricle over the brief period noted was due to sinal bradycardia. There was no sino auricular block, as the rhythm was quite regular, and atropine caused acceleration without any modification of the rhythm I have only been able to find two other clinical cases where, in complete block, the ventricular rate exceeded the auricular One was Meyer's case, where digitalis had induced a 3–1 sino auricular block, causing an auricular frequency of 18 per minute Case 9 in above list is the second instance The marked auricular acceleration to 200 following atropine represents, I think, the maximum effect from this drug so far recorded. These two observations suggest a high degree of vagal tone over the auricles, and possibly such tone may have been exerted upon the ventricle in this case, for it is unusual for vagal pressure *in the neck* to affect the ventricular rate, when there is complete block, whereas *left* vagal pressure here showed the ventricular rate 38 per cent

(*c*) *Synchronous A V contractions* —Reference has been made to the tracing (Fig 3) in which an apparent 3–1 A. V rhythm was due, in reality, to each ventricular contraction falling synchronously with each third auricular beat That this was not merely an accidental relationship is shown by the fact that on more than one occasion a ventricular contraction fell exactly with a second auricular beat (as at ×, Fig 3) Whilst this event was often noted on this day, other parts of the tracings showed an occasional typical ventricular extrasystole, and in such instances there was no relationship between such premature beat and the auricular contractions The time interval separating the premature beat from the preceding normal contraction was exactly a second, the interval where the ventricular beat fell with the second auricular contraction was 1 2 seconds It is, of course, possible to explain the synchronous A. and V contractions on the basis that the ventricular contraction was also here a premature beat which happened to fall with the auricular beat, but the increased time interval which separates it from its preceding normal beat as compared to the instances of undoubted extrasystole makes one hesitate to accept this fully As it happens, too, there is an apparent precedent for this observation in a case reported by Herrick.[14] In his case there was an exact 5–2 A. V ratio, ventricles 33 6, auricles 84 Here each second ventricular contraction coincided with the auricular beat One is content here simply to place this observation on record without offering any explanation of its possible cause

Conclusions —1. A clinical case of complete heart block, of organic nature, is recorded which showed (*a*) persistent high idioventricular rate of 60, (*b*) a period of sinal slowing to 51, during which time the auricular rate exceeded the ventricular, (*c*) an unusual auricular tachycardia, following atropine, to 200 per minute, and (*d*) synchronous auricular and ventricular contractions during an apparent 3–1 block, such synchronism being maintained even when some degree of ventricular arrhythmia was present 2 Digitalis seemed to have no effect upon the rhythm or rate 3 Consideration of the hitherto reported cases of and the albuminuria quickly cleared up There remained, however, throughout his stay, and subsequently, dyspnœa on exertion, and there occurred, following the first allowing of the patient up, a slight return of the œdema in the legs This again subsided with rest From Oct 24th to Nov 4th tincture of digitalis, ♏ 5 t d s, was given This did not appear to have any influence upon the ventricular rhythm or upon the degree of block, which as will be seen, remained complete throughout

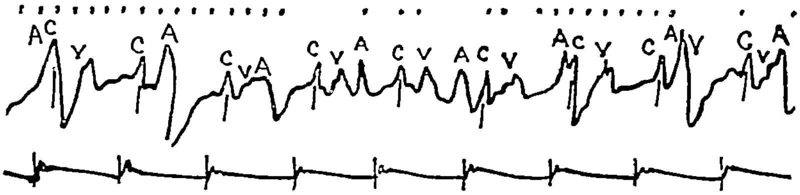
FIG 1



Tracing Sept. 24th Complete heart-block. Auricles 84 per minute; ventricles 35 2.

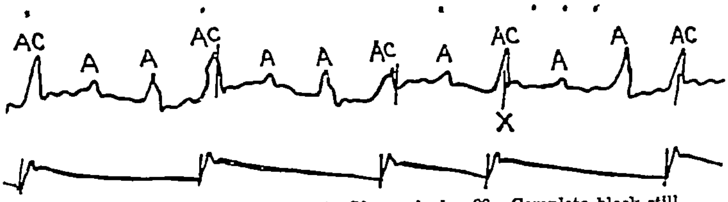
Polygraphic curves —Complete heart-block was present throughout On admission (Sept 24th) the auricular rate was 84 and the ventricular 35 2 per minute (Fig 1) Both rhythms were regular Five days after admission during which time the patient was not taking any drugs, the curve shown in Fig 2 was gained. It shows that the ventricular rate had accelerated to 59 per minute, whilst the auricular rate had slowed to 51. Both rhythms continued regular That the slow auricular rate was due to vagal influences was suggested by the fact that it was accelerated to 88 per minute after the hypodermic injection of atropine 1/60 gr (20 minutes) This drug, however, neither on this occasion nor on any subsequent occasion had the slightest demonstrable effect in lessening the degree of A -V block Whilst the atropine thus caused an auricular acceleration of 72 5 per cent, there was an associated ventricular decreased rate, a decrease of 15 7 per cent, for now the ventricular rate came down to 51 per minute Three days afterwards (Oct 1st) the auricular rate was at 96, the ventricular 34 The next day (Oct 2nd) there appeared to be an exact 3–1 ratio auricles 90, ventricles 30 Complete block, however, was still present There was also a slight degree of ventricular arrhythmia present although the auricular rhythm remained regular Nor was such ventricular arrhythmia due merely to premature beats, a common finding, for it can be seen that the shortened ventricular cycles are due in nearly but not all instances to the ventricular contraction falling synchronously with an auricular contraction (Fig 3) This event will be subsequently referred to It may also be noted that the auricular beat which immediately succeeds such a synchronous contraction is smaller than that which precedes it, showing presumably, a more forcible emptying of the auricle with the synchronous contractions From about Oct 10th the ventricle seemed to "settle down," as it were to the rhythm which it maintained with but little variation during the rest of the patient's stay in hospital Its frequency remained from 55 to 60 per minute The auricular rate, too, maintained an average frequency of 88 per minute The effect of vagus pressure in the neck was tried on Oct 10th No result followed right vagal pressure, but left vagal stimulation slowed the ventricular rate from 54 to 33 per minute After this observation had been made 1/50 gr atropine was injected In 20 minutes it was found to have induced an unusually rapid auricular rate of 200 per minute (Fig 4) The ventricle was not affected No subjective symptoms were associated at any time with the vagaries of auricular and ventricular activities

FIG 2.



Tracing, Sept 29th. Ventricular acceleration to 59 auricular slowing to 51 per minute.

FIG 3



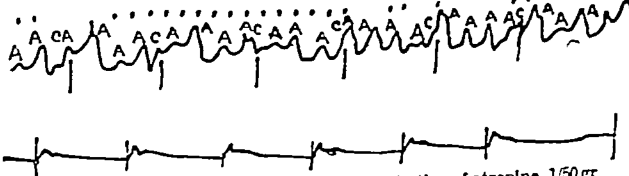
Tracing Oct. 2nd Ventricular rate 30 auricular 90 Complete block still present. Note that at × there occurs a ventricular beat which is premature but which coincides with a second auricular contraction The auricular beat which precedes the synchronous A. and V beat is larger than that which succeeds same Though in this strip of tracing the auricle and ventricle seem throughout to fall together this was not so when seen over longer periods.

Some weeks after patient's discharge from hospital his doctor rang me up to say that the man had died suddenly whilst lifting some forms at a public institution, and he was good enough to forward to me the heart The organ was large and of normal shape There was a little atheroma around the aortic valvular orifice. In the interventricular septum however, there was a dense, hard, yellowish thickening This reached its maximal extent in the upper part, just in the region which the A. V bundle traversed The nature was almost certainly syphilitic The other valves and the myocardium were apparently healthy

Remarks

(*a*) *The ventricular rhythm* —Mackenzie[9] states "there are now on record a number of cases in which the ventricular rate [in complete block] has been as high as 60" It is true that there have been several instances in which the idioventricular frequency has been stated to have been markedly accelerated for a brief period following a fit In the case here recorded this fact was noted. And similar quickening of temporary character has been recorded by Hay and Moore,[7] Carrion,[1] probably Hoffmann,[8] also Earnshaw[12] and Laubry[13] Two similar cases have been recorded by Dr. Byrom Bramwell in the *Edinburgh Medical Journal*, March, 1915 But in these instances such quickening has been associated with arrhythmia, and has often been due to frequently recurring ventricular extrasystoles Again, experimental instances of increased idioventricular rate have been plentiful Thus, Erlanger's and Blackman's experiments[4] showed that during complete block there occurred paroxysms of ventricular tachycardia at frequency 141, and in one instance even at 210 per minute Lesser degrees of acceleration were noted by them following exercise, sympathetic stimulation,

FIG 4



Tracing Oct. 10th Twenty minutes after injection of atropine 1/50 gr Auricular rate 200 per minute ventricular 53 Both rhythms regular granular appearance The edge of such a colony, and of similar colonies in subculture, showed an arrangement similar to that of the anthrax colony

Microscopical examination showed cylindrical rods, with sharply defined ends (not, perhaps, quite so square cut as the typical anthrax bacillus), Gram positive, and spore bearing, the spore being central or nearly central The bacilli were arranged in long chains In the agar culture most of the bacilli appeared to be non motile, but a certain number showed movement In bouillon at 37° C an abundant growth occurred in 24 hours A certain amount of filmy growth was present in the supernatant fluid, but the bulk of the resulting mass fell and formed thick white flocculi at the bottom The bacilli occurred here also in chains In the 24 hours' culture they were distinctly motile

Gelatine surface culture at 20° C showed pin point colonies in 24 hours, liquefaction in three days Gelatine stab culture at 20° C (using 7½ per cent gelatine) produced a typical spiking growth similar to that of the anthrax bacillus The surface growth on blood serum was similar to the stroke culture on agar, the edge of the growth showing the same furry appearance No liquefaction of the medium occurred.

Dr F W Andrewes, of St Bartholomew's Hospital, kindly examined a culture of this bacillus and inoculated a mouse with it He reported that the bacillus was motile and therefore could not be the anthrax bacillus The mouse inoculated with 1 c c of a 24 hours' broth culture under the skin of the back died in 24 hours In the dead mouse the chief difference from anthrax was that the intestines were distended with turbid fluid, while the spleen was enlarged and dark, and a film from it showed fairly numerous bacilli like anthrax, but the majority of them were quite actively motile

The bacillus above described, therefore although resembling the anthrax bacillus in some particulars, is not identical with it It belongs, in all probability to a class of organisms which have been described and termed "anthracoid", one at least has been found which has some degree of virulence Bainbridge has described such an organism as *B anthracoides* Dr Andrewes has cultivated such a bacillus from horsehair

Clinical Notes

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

◆

STOMACH V HEART IN RELATION TO PRÆCORDIAL PAIN AND SUDDEN DEATH.

By C J SORTAIN HANCOCK, M D DURH, M R C S, &c

In connexion with the letters which have recently appeared in your columns on the above subject, the following case may be of interest

A man aged 60 years and looking much younger recently sought advice for attacks of angina. The nature of the attacks is as follows After any severe exertion, such as walking up hill or if any ordinary walk is taken directly after food severe pain commences in the upper part of the thorax, spreading to the neck, shoulders and down both arms, it rapidly increases until it is impossible for him to move The moment, however he stops still the pain quickly begins to pass away, the duration of it being only from 30 to 60 seconds If he starts walking again directly the pain returns, but after a short time he is able to walk slowly without pain If the stomach is empty he can do ordinary walking as well as any man of his age These attacks have occurred for the last two years with the same characteristics

The previous history of his case which has a direct bearing on it dates from 1880, when, living in India, he suffered frequently from intermittent fever and also had severe attacks of acute gastritis, which continued in spite of treatment until he took change of air on the Brahmapootra. Then all the stomach symptoms disappeared in 24 hours, and he was able to resume his ordinary diet He led an open air life, and was in the saddle practically all day long He spent in all 25 years on the plains of India, with only two holidays of ten months each In 1885 he had bronchopneumonia which laid him up for nearly three months and left him with a damaged lung and severe daily attacks of asthma After these had lasted for 2½ years the paroxysms, in the middle of a hot rainy season began gradually to subside and in a few weeks ceased, and he has never had any since

The anginal pains came on two years ago, as above described, and do not appear to have varied in character He has always been a total abstainer from spirits and has never had syphilis The gastric symptoms also recurred, and he is now liable to periodic attacks of acute dyspepsia, any food at first causing severe pain, but this phase passes off and the hunger syndrome ensues In addition to this he has occasional slight glycosuria. The heart on physical and X ray examination presents no abnormal signs whatever, and the aorta appears normal The arteries show no signs of sclerosis Blood pressure 124 systolic, 80 diastolic

For this case it would appear that if the hyper sensitive segmentary centres are in any way responsible for the attacks they must occupy a secondary, not a primary place—for no surface pains or points of tenderness on the chest wall are complained of during the attacks, and no relief is afforded by eructation of gas, although the attacks seem to be in the large majority of instances secondary to gastric disturbance At the same time it must be remembered that the lung trouble he complained of in 1885 resulted in frequent attacks of asthma which persisted over a space of 2½ years and then suddenly left and have never returned. I would therefore suggest that if the angina is in any way connected with the "spinal segments' the connexion is of a reflex rather than of a direct character

Leytonstone, N E

POISONING BY "SPIRITS OF SALTS"

By H. FAIRFAX, L M S S.A LOND

I REPORT this case, although it occurred in my practice nearly five years ago, because circumstances have made it topical

On the morning of August 31st, 1910, I was called to see a patient, and was told by his wife that he had taken about two ounces of spirits of salts I found that he had swallowed nearly two ounces of "partially killed spirits of salts" with suicidal intent The whole of the inside of the mouth and throat as far as one could see was corroded and discoloured by the action of the acid I administered bicarbonate of soda in milk and water and ordered the patient to take as much milk and water, with a pinch of the powder in it, as often as he could be induced to take it Sickness and diarrhœa continued the whole day On the next day I gave a mixture of tr chlorof et morph and liq bismuthi to quiet the stomach and stop the diarrhœa, raw eggs and milk being the food ordered The patient's condition improved considerably high idioventricular rate, relatively few in number, shows that the great preponderance of such instances are due to digitalis, whether or not the auricles are acting normally Even where the rate is unaffected digitalis may influence the type of ventricular complex.

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Manchester

A CASE OF WAR WOUND INFECTION BY AN ANTHRACOID BACILLUS,

THE WOUND BEING CAUSED BY A SHATTERED TRIGGER GUARD

BY A W SHEEN, M S LOND, F R C S ENG,
LIEUTENANT-COLONEL ROYAL ARMY MEDICAL CORPS (T F)
With Pathological Report by Temporary Lieutenant B G KLEIN, R A.M C

THAT the routine examination of the germ infections of gunshot wounds may sometimes yield unusual results is shown by the following case It was thought at first that the infection was by the anthrax bacillus, but more detailed investigation showed that the organism was of the variety known as anthracoid The mode of infliction of the wound —by a shattered trigger guard—is also of interest

Private A G——, aged 24 years, was wounded by a bullet on Dec 15th, 1914, at 8 15 A.M, in the palm of the left hand and in the right index finger He estimates the range at about 30 yards When wounded he was advancing across a turnip field with a clay soil and was holding his rifle, prepared to fire Both hands were wounded at the same time He dropped the rifle at once and does not know to what extent, if any, it was damaged Because of heavy fire he lay out after being shot for about ten hours and then crawled back to his trench, getting the wounds all smeared with soil The first field dressing was applied, and he proceeded to the base, his wounds being cleaned and dressed (apparently painted with tincture of iodine) several times He was admitted to hospital on the afternoon of Dec 17th

On admission his right index finger presented an extraordinary appearance, well shown in the photograph (Fig 1) taken four days later The finger was stiff, nearly extended, and very much swollen round its centre, with over the dorsal surface of its middle part a protuberant ulcer, the base of which was partly covered by an adherent black slough, and partly glazed pink, with adherent fragments of grey slough and of lymph The swelling was hard and not tender When the photograph was taken most of the black slough had come off Proximal to the ulcer was a "gutter" wound in the line of the finger as if the bullet had passed there On the back of the hand were a number of linear black scabs of varying lengths suggesting small superficial wounds The whole hand was slightly swollen Above the wrist the limb was normal There were the entrance and exit wounds of a bullet through the palm of the left hand The temperature was normal and continued so, and there was no constitutional disturbance throughout

The X ray appearances are shown by the photograph (Fig 2) The proximal phalanx is fractured It seems as if the bullet, after passing through the palm of the left hand, hit the trigger guard and pulverised it, the tiny fragments being carried into the right index finger behind the trigger guard

FIG 1

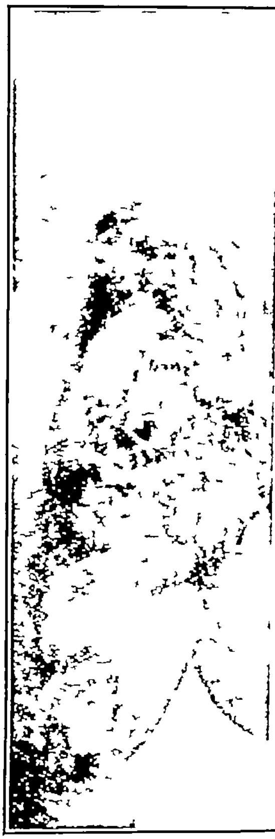
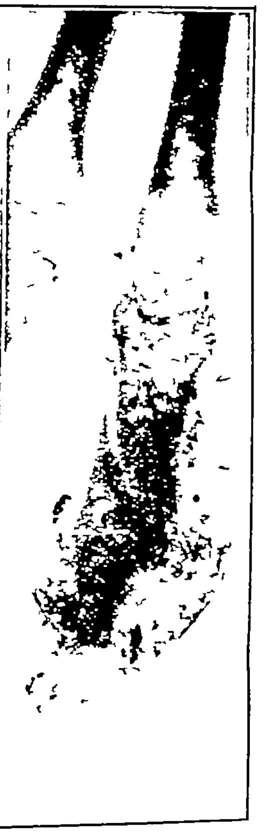


FIG 2



Under boric fomentations and hot iodine baths the swelling subsided, healing took place rapidly, and the use of the finger was to a large extent restored A sinus on the dorsal surface, where the ulcer was, persisted, and this was scraped by Lieutenant J S Rowlands on March 29th, and subsequently healed, the man leaving the hospital on April 20th The left hand gave no trouble, cultivations from it showed the usual pyogenic organisms

Pathological Report by Lieutenant KLEIN

Dec 19th, 1914 Scrapings examined from the necrotic area on the back of the forefinger of the right hand (*a*) Smears direct from the material showed, in addition to a very large number of streptococci, some thick straight bacilli, staining by Gram These occurred separately, in pairs, and in short chains The ends were nearly square The length varied, being greatest in the single forms, in which it measured more than the diameter of a blood disc The thickness of the rods varied from one third to one quarter of the length. No sporing forms were seen (*b*) Cultures Anaerobic culture in milk yielded no result (heated to 80° C for 15 minutes after inoculation) Aerobic culture at 37° C in 24 hours showed, in addition to streptococci and B coli, a few opaque white colonies partially confluent, of irregular outline and of œdema, in the former almost limited to the internuclear layer Rods and cones were almost entirely absent but this may be attributable to post-mortem changes In the large retinal veins there was pronounced thickening of the adventitial coat He had found it difficult to group his cases. The rule had been for good recovery of vision to ensue, with the disappearance of all acute manifestations in the retina, thus differing absolutely from cases of ordinary renal retinitis In cases in which defects of vision were permanent, this seemed to have been because changes had been produced in the walls of the arteries or an atrophic condition of the nerve A recurrence of the retinitis was not necessarily seen when subsequent pregnancies occurred, even though the albumin did not quite disappear in all. One of his patients died after an interval of six years from cardiac failure, another after eight and a half years from cerebral hæmorrhage into the left corpus striatum In this case the kidneys were found to be of the typical red granular type It seemed clear from his cases that albuminuria of pregnancy was not sufficient alone to set up the typical retinitis of pregnancy —In the ensuing discussion Mr HOSFORD speaking of retinitis, reported having carefully observed 16 cases during the last 15 years, only three of those patients were now alive All but two ultimately developed a star shaped spot on the macula a sign which he regarded as of fatal omen Many patients seemed quite to recover from the initial attack, a relapse occurred later In a series of 132 cases in Dr S Fenwick's wards 81 were in females, 51 in males, the onset among single men and single women seemed to be about equal Much of the renal trouble seen fairly late in life might have started, in females, in pregnancy Only 3 of the 132 cases had myopic eyes Since the Wassermann reaction was introduced he had had all the cases he saw tested, but none was syphilitic.—Mr W C ROCKLIFFE related a case in which retinitis occurred in the first pregnancy, but the defect of sight seemed to be quite recovered from after premature labour was induced A subsequent pregnancy brought on a repetition, but though labour was again ended prematurely, sight became progressively worse and ended in blindness The patient died four years later from heart failure.—Mr J B LAWFORD alluded to the far reaching effect of the toxæmia In some of his cases although there was no recrudescence of retinal change during subsequent pregnancies toxic effects showed themselves at a later date and eventuated fatally It was a common belief that one of the safeguards in this condition was the avoidance of further pregnancies in the patient In one case which he had under care over 20 years ago the lady developed retinitis in her first pregnancy and had great defect of sight. This disappeared after delivery and, acting on the advice of her medical attendant and himself, she had no further pregnancies Her sight remained good for a number of years, but ultimately she developed advanced changes in the retinal vessels and succumbed to chronic nephritis Another patient, older developed the condition in her third pregnancy and recovered The advice to bear no more children was disregarded and in her next pregnancy there was a great aggravation of her toxæmic condition and she died from nephritis. He asked whether obstetricians were aware of the reason for the persistence of the toxic effects of the first attack, even though some subsequent pregnancies did not seem to be accompanied by the symptoms There seemed to be need for a revision of the view as to the comparative innocuousness of the retinitis of pregnancy —Mr LESLIE PATON regarded the paper as important in that it gave a broad view of a disease not apparently due to a microbial poison but to a cytotoxin, and he tentatively suggested that such conditions as the irido-cyclitis seen in women at the period of the climacteric would possibly be brought into the same category The seriousness of the disease seemed to be directly proportional to the extent to which the vessels were injured at the time of the attack. One case though presenting silver wire" arteries remained still well eight years after the attack. He was much interested in the statement of Mr Fisher that subsequent pregnancies need not necessarily cause a recurrence of the retinitis for it touched a matter on which advice was frequently asked —Mr FISHER replied suggesting combined investigation by obstetricians and ophthalmologists concerning the diseases attributable to the toxæmia present in pregnancy

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF SURGERY

Exhibition of Cases —Bridge Method of Skin Grafting

A MEETING of this section was held on May 14th, Dr F CONWAY DWYER, the President, being in the chair

Mr D KENNEDY showed a girl who some nine or ten months ago, injured her elbow by a fall. Since then there was complete ankylosis When first seen about a month ago, X ray examination showed that the humerus was not normal, but somewhat battered. It was decided to perform an arthroplasty or whatever treatment was suggested by the condition found. A projection was found on the inner side of the articular end of the humerus The projection was removed off the ulnar aspect of the humerus and the end of the humerus was put level. A flap was then taken partly from the lateral aspect of the arm, and almost entirely consisting of fat and turned over the humerus, leaving the ulna and radius as they were —The PRESIDENT and Mr H. DE L CRAWFORD discussed the case and Mr KENNEDY replied.

Mr H. DE L CRAWFORD showed photographs of four cases of Congenital Syphilis of the Hands and Feet The skiagrams were brought forward, as congenital syphilis of the hands and feet was considered a rather rare condition The first was in a boy aged 11 years, with a very large swelling on the outside of the left foot and a good deal of thickening in the soft parts The patient had well marked Hutchinson s teeth When the photographs were taken the condition had spread to the proximal phalanx of the big toe. The X rays pointed to the condition being gummata underneath the bone He suggested that what appeared to be small sinuses were really pieces of dead bone Under continued treatment with mercury and iodide of potassium the gummata healed up The second case was that of a boy who had also well marked Hutchinson s teeth. The patient was the only living child in the family and there was a history of six miscarriages The thumb was very swollen, and the phalanges showed small areas of rarefaction. There was no pain, so the condition was not looked upon as tuberculous There was no sign of ordinary or syphilitic rickets. The third case was that of a baby aged 1¼ years The child was an adopted one, and no definite family history was forthcoming There was much metacarpal thickening The child had a typical syphilitic forehead, and the absence of increased heat, tenderness, or pain made it positive that the case was not one of tuberculosis The fourth case was that of a child with swollen ring finger on the left hand Amputation of the finger was advised On cutting down to the periosteum the extensor was found to be involved and a soft gritty substance apparently new bone, was seen. The wound healed A week later there was slight enlargement of the other hand The case was considered syphilitic. Family history was bad showing three previous miscarriages This condition he said appeared to be more common than was expected, and he had decided in future not to label any of these cases as tuberculous until they had been well examined.

Mr CRAWFORD also showed skiagrams of old Traumatic Dislocation of the Hip in a child aged 9 —The PRESIDENT said that the point raised in connexion with these cases was of much importance as they were all likely to diagnose them as tuberculous instead of syphilitic.

Mr CRAWFORD afterwards read a paper on the Bridge Method of Skin Grafting After describing the technique in detail, he emphasised the following points (1) That asepsis must be perfect, (2) that the size of the graft must be as small as possible and that it was better to operate twice than use a very big graft, and (3) that the graft and limb must be very carefully immobilised during the first week. (The paper was illustrated by lantern slides)—The PRESIDENT expressed the indebtedness of the section to Mr Crawford for bringing forward this effective method of treatment This method of grafting which left the graft on the exposed raw surface evidently yielded good results He considered the technique described one that ought to be followed.—Mr KENNEDY considered the Bridge method

On Sept 7th I removed with the forceps a traumatic diphtheritic membrane from the uvula and palate, which was considerably interfering with the breathing Had I not known the history of the case and only seen the patient for the first time on this occasion I should have had no hesitation in stating that it was a very bad case of diphtheria I took some of the membrane to Dr John Biernacki, the medical superintendent of the Plaistow Fever Hospital, who said it looked like an ordinary case of diphtheria until I gave him the history of the case He kindly had the specimen examined for me with negative results An ordinary gargle of biborate of soda removed the false membrane and the mouth was quite clear and in its normal condition by the tenth day The patient was decidedly better, but was complaining of intense pain all over the region of the stomach, with a sensation of choking and suffocation The temperature and pulse were normal Four days later (Sept 11th) he felt sick and said he had a lump coming up in his throat, and he thrust his fingers as far down as he could to bring it up What he brought up frightened him This vomit appeared to me from its shape to be a complete cast of the whole of the œsophagus and stomach. After floating it out in water and examining it, I told his wife to save it and place it in a small glass jar She unfortunately let the basin fall on the floor and smashed it, but gathered it up as well as she could, and I have placed it in spirit On the next day vomiting again set in, the vomit being mixed with bright arterial blood Iced milk, sugar dissolved in cold water, and minim doses of dilute liq ferri perchlor were given three or four times daily The patient had very little sickness subsequently, and seemed to be in a fair way toward recovery His diet was restricted to milk and oatmeal flour, with other like soft and pulpy foods

On Oct 5th the patient walked to the surgery for the first time since taking the acid, and stated that he was feeling quite himself again, and that he hoped shortly to resume his ordinary work He asked if he might have a little more substantial food I gave him permission and told him to be very restricted in his diet On the 7th he called again, stating that he had had a relapse and was vomiting everything he took in the shape of food. He also informed me that he had taken a mutton chop, greens, and potatoes I examined the urine, its specific gravity was 1035 and it was acid in reaction, no sugar or albumin being present The heart sounds were normal and the pulse rate was 84 and regular in force and rhythm There was hyper resonance over the upper part of the left lung

The patient expressed a desire to go to a hospital and see if anything further could be done for him. He was admitted to Charing Cross Hospital, an operation was performed on Nov 2nd, and he unfortunately died from shock

Plaistow, E

A NOTE ON PLAGUE BACILLI IN AN UNUSUAL SITUATION IN THE BODY

BY J H SHELDON, M B LOND, &C,
DISTRICT MEDICAL OFFICER BURMA RAILWAYS INSEIN BURMA.

AT 8 30 A M on Nov 29th, 1913, I received information that an adult Burman male was in a dying condition, after an illness of 36 hours only, and that during the past hour convulsions and head retraction had been present The sub assistant surgeon was sent to see the man, and instructed to obtain slides of the cerebro spinal fluid in addition to those of the blood, as it seemed possible that the case might be one of epidemic cerebro spinal meningitis He arrived at 9 A M to find the patient dead A superficial examination of the body failed to discover any bubo or other gross lesion

Specimens of peripheral blood were stained with gentian violet and of the cerebro spinal fluid with carbol fuchsin, and examination of the slides revealed the presence of typical plague bacilli in small numbers, the slides of the cerebro spinal fluid simply swarmed with them

I have to thank the chief medical officer of the Burma Railways for his permission to publish the case

Insein, Burma

Medical Societies.

ROYAL SOCIETY OF MEDICINE

SECTION OF OPHTHALMOLOGY

Exhibition of Cases —Retinitis of Pregnancy

A MEETING of this section was held on June 9th, Mr PRIESTLEY SMITH, the President, being in the chair

The following cases were shown —

Mr A. C HUDSON A case of Sympathetic Ophthalmitis treated by salvarsan and neosalvarsan. It was regarded as an undoubted case of the condition, and seemed a genuine cure

Mr J S HOSFORD Two cases of the Albuminuric Retinitis of Pregnancy

Mr C N ATLEE Coloboma of the Iris in mother and child

Mr CHARLES WRAY Bony Growth in the Frontal Sinus In cases of retrobulbar neuritis suspected to be of sphenoidal origin, he advocated making the patient spend some time with the face downwards, with a view to facilitating drainage from the sphenoidal and posterior ethmoidal cells —Mr W T HOLMES SPICER discussed the case.

Mr J HERBERT FISHER read a paper on Retinitis of Pregnancy He had not included in the title the term "albuminuric," as he wished to lead his hearers away from the idea that the acute retinal changes were the results of the kidney disorder Obstetricians now no longer explained the albuminuria of pregnancy as the result of obscure reflex effects of the gravid uterus upon the kidneys, or by mechanical pressure on the ureters They attributed it, with eclampsia and pathological vomiting of pregnancy, to toxæmic products in the circulation Eclampsia could not be predicated by any examination of the urine, the effects were especially seen in the quality of the blood and in the blood vessel walls In fatal cases of eclampsia, hæmorrhages of brain and necrotic changes in the liver were often found, and albuminuria was an effect of the disease on the kidney, not the cause In the retinitis of pregnancy the condition of retina was different from that in albuminuric retinitis, as also was its sequel Syncytio-toxins—products of the disintegration of the syncytium cells—had been found in these cases, and these cells immediately connected the fœtal with the maternal structures Mr Fisher proceeded to give particulars of a series of typical cases of the condition which had been under his care In one fatal case Mr A. C Hudson made a pathological examination on the day after death, and found the coats of the eye *in situ* There was some œdema of the nerve head, and in the nasal quadrant of the retina were two large hæmorrhages The microscope showed the sclera and nerve sheaths to be normal, the chief pathological changes being in the large choroidal arteries many of which showed gross endarteritis causing in some instances obliteration of the vessel lumen Some of the choroidal arteries were normal Similar pathological changes were found in sections of posterior ciliary arteries surrounding the optic nerve behind the eyeball Bruch s membrane was everywhere intact and the retinal pigment normal The retina and optic nerve head showed evidence

We do not wish to intimate that we consider that the administration of tuberculin is useless, but merely to express our opinion that the series of cases recorded in this volume have not proved that tuberculin is superior to the other methods of treatment of pulmonary tuberculosis which are now being employed

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A Text book of Practical Therapeutics

By HOBART AMORY HARE, M D , B Sc , Professor of Therapeutics Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia , Physician to the Jefferson Medical College Hospital Fifteenth edition London Henry Kimpton 1914 Pp 998 Price 21*s*

THE fact that 15 large editions and many reprintings have been called for since this book first appeared in 1890 leaves little room for question that the author's effort to write a trustworthy and useful text book on therapeutics has proved successful Dr Hare points out that the present time is an era of therapeutic rationalism, when remedies are given, not because they are recommended or their value is proclaimed by some authority, but because their use appeals to the medical practitioner who has a knowledge of the physiological, pathological, and therapeutic problems to be faced, and therefore judges for himself what remedy is best suited to a given case Dr Hare has therefore studied how best to give an account of remedial measures for disease and their employment upon a rational basis

As in previous editions the work is divided into four parts The first deals with introductory matters, the second with the action of drugs, the third with remedial measures other than drugs, and the fourth with the treatment of individual diseases, whereby the employment of the remedies discussed in the earlier part of the book is directly applied, as at the bedside

The book has been brought thoroughly up to date, and certain articles have been added or rewritten In the discussion of the use of tuberculin as a remedial agent preference is given to the method of employing infinitesimal doses, so that no febrile reaction is produced A good account is given of the therapeutics of salvarsan, and the modes of its administration are clearly described

The book continues to be found a most useful one for reference, its vast amount of valuable information is steadily sifted and increased by recurring issues

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A Laboratory Manual and Text book of Embryology

By CHARLES WILLIAM PRENTISS A M Ph.D , Professor of Microscopic Anatomy in the Northwestern University Medical School, Chicago With 368 illustrations (many in colours) London and Philadelphia W B Saunders Company 1915 Pp 400 Price 17*s* net

IF this text book represents the actual course on this subject given in the Northwestern University Medical School of Chicago, then it is evident the medical students of that University obtain a fuller and more practical course on this subject than falls to the fortune of our students at home It represents an attempt to combine descriptions of vertebrate embryos which are studied in the laboratory with an account of human embryology especially adapted to the medical student The emphasis in this sentence is clearly on the word laboratory as opposed to mere descriptive lectures or demonstrations The author appeals for a greater attention to the study of embryology because it affords a comprehensive understanding of gross anatomy of the adult, and also because it explains the occurrence of many anomalies as well as certain pathological changes in the tissues We quite agree with him, but in a medical course already overburdened with various subjects our wonder is how the average medical student can find time to carry out the many manipulations required for the dissection of pig embryos which are so carefully described and well illustrated in the text The chapters on human organogenesis are partly based on Keibel and Mall's "Human Embryology"

The following is the arrangement of the subject matter the germ cell, segmentation and formation of the germ layers, study of chick embryos, fœtal membranes and early human embryos, pig embryos and methods of dissecting them, the development of face, palate, tongue, salivary glands, entodermal canal and its derivatives, urogenital and vascular systems, histogenesis, morphogenesis of the central and peripheral nervous system

A list of about a dozen of the newer principal text books is given for reference The illustrations are numerous, bold, clear, and well printed. Some are borrowed and their sources duly acknowledged Careful descriptions are given of the various sections of embryos which are inserted in the text, and rather full descriptions of them necessarily occupy a considerable part of the text itself Moreover, the magnification is carefully stated Some of the illustrations are more or less semi diagrammatic "reconstructions" of embryos in various stages of development A very readable account is given of early human embryos and their membranes About 70 pages are devoted to the study of pig embryos and their organs

This is a lucid, comprehensive, and yet not too extensive text-book, which we cordially recommend as an attractive, practical, and succinct presentation of the main facts of vertebrate embryology The illustrations are admirably drawn and really instructive

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LIBRARY TABLE

An Ethical Problem, or Sidelights upon Scientific Experimentation on Man and Animals By ALBERT LEFFINGWELL, M D New York C P Farrell 1915 Pp 369 —The purpose of this book is set forth in the preface as follows "An ethical problem exists It concerns not the prevention of all experimentation upon animals, but rather the abolition of its cruelty, its secrecy, its abuse" In a postscript to the preface the author goes out of his way to comment on the horror of the present great struggle between the nations, and expresses the hope that "the insolence which deems the promise of a nation to be no better than a 'scrap of paper' shall meet its due recompense ' As he has dragged in the war, we may be permitted to call attention to the fact that speaking in the Reichstag on May 28th the German Chancellor Dr von Bethmann Hollweg, referring to Italy's joining the Allies, had the effrontery to say 'Italian statesmen have no right to measure the trustworthiness of other nations in the same proportion as they measured their own loyalty to a treaty Germany by her word guaranteed that the concessions would be carried through. There was no occasion for distrust" The application of this parable will be found in the following words taken from Chapter XI of the book before us a most ingenious one, and if the difficulty of covering a large area could be overcome he would be glad to hear how it could be done —Mr M'CONNELL said he had treated one case by this method—viz , a very extensive formation of scar tissue on the thumb The result pleased him very much, and the patient had very good abduction in the thumb afterwards Skin grafting seemed to be absolutely different in the hand from elsewhere, as in other parts a good blood supply was to be had, whereas the supply in the hands was bad In all cases of grafting about the hands and feet he looked upon the Bridge method as the only one He suggested that all methods might be used in their proper places —Mr CRAWFORD replying to the remarks, said that the method which should be used entirely depended upon the site on which the graft was to grow

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SECTION OF MEDICINE

Exhibition of a Case of Leprosy —The Use of Vaccines in the Treatment of Respiratory Diseases

A MEETING of this section was held on May 21st, Sir JOHN W MOORE being in the chair

Dr C M O BRIEN showed a patient suffering from Leprosy of the tuberculated form The patient was a retired soldier who had offered himself for service but was refused on account of a rash on his skin He had served in the Leinster Regiment in Malta, Bermuda, Halifax, Jamaica, and South Africa He had had colic in Malta and gonorrhœa in the year 1898, but had never had syphilis He left the army in 1906 apparently perfectly well and had worked as a farm labourer In 1913 he was in hospital for five months with boils on the face and neck The disease was first diagnosed in August, 1914 The face as a whole was unusually broad, the chin being prominent, the skin on the forehead lumpy and shiny, the nose flattened, the lips thick, hair, other than on scalp falling out, the hands swollen and cushion like on back, ash grey in colour, thenar and hypothenar muscles flat and flabby, inguinal glands shotty, reflexes normal, no anæsthesia Mucous membranes free No reaction with alt-tuberculin injected subcutaneously nor by von Pirquet s method Positive Wassermann reaction Sections from a nodule, prepared by Mr T T O Farrell, were exhibited showing the bacilli in numbers, a few in cells, the majority extra cellular Dr O Brien gave an interesting résumé of the history of leprosy, and dealt especially with recent investigations into its bacteriology and transmissibility —Sir JOHN MOORE, Dr H C DRURY (who reminded the meeting that such names as Lazarus Hill and Leopardstown, marking leprosy stations, showed the former presence of the disease in Ireland), Professor METTAM, Dr W M CROFTON, and Dr F C PURSER also spoke

Dr ROBERT J ROWLETTE read a paper on the Use of Vaccines in the Treatment of Respiratory Diseases, which will appear in THE LANCET

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN (UNIVERSITY OF LONDON) —The Queen has announced her intention of attending the special matinée at the Palace Theatre on June 29th, at 2 30 P M , when the proceeds will go to the London School of Medicine for Women —The presentation of prizes will take place on Thursday next, June 24th at 4 P M , by Her Royal Highness Princess Alexander of Teck, when academic dress will be worn Intending guests should communicate with the secretary, 8, Hunter street Brunswick square, London W C The company is asked to assemble at 3 45 P M after which time admittance will be only to the garden by the entrance in Handel street

GLASGOW CORPORATION AND THE TREATMENT OF PHTHISIS —The Glasgow Corporation have under discussion a proposal to convert the tramway depôt at Ibrox into a temporary hospital for the treatment of tuberculosis The scheme, which will involve an expenditure of £8000 provides for the accommodation of 240 patients many of whom have had to be removed from other institutions taken over by the military authorities The proposal has met with strong disapproval from the inhabitants of the district and from the Govan school authorities on the grounds that the health of the children will be jeopardised

Reviews and Notices of Books.

The Dispensary Treatment of Pulmonary Tuberculosis

By HILDA CLARK, M B , B S Lond , late Honorary Medical Officer Street Tuberculin Dispensary, and Tuberculosis Medical Officer to the County Borough of Portsmouth London Baillière, Tindall, and Cox 1915 Pp 279 Price 15s

IN this volume Dr Hilda Clark describes in detail a complete series of cases for whose examination and treatment she was responsible for the three years from June, 1910, to June, 1913 She explains that the investigation was carried out with three main objects in view 1 To estimate the value of tuberculin treatment by two consecutive series of cases 2 To estimate the position of tuberculin treatment in a scheme designed to deal with the special problem of tuberculosis in the working classes 3 To estimate the incidence, course, and response to treatment of tuberculosis in the population of Street, a manufacturing village in Somerset, where peculiar opportunity offered for such an investigation

It is in regard to the first two of the above propositions that the chief general interest arises Dr Clark has evidently expended a vast amount of time and care in the investigation of the cases and the collection of results, but owing to three main reasons, in our opinion, she fails to establish the fact that tuberculin is such a valuable therapeutic preparation as has been claimed by some observers In the first place the classification she has adopted of the various types of cases is so involved that it is difficult to follow Secondly, she has not contrasted her results with those obtained by other means of treatment Thirdly, the time during which the patients were under observation was too short to enable a reliable opinion to be formed as to the permanency or otherwise of the arrest of the disease On the other hand, however, the careful description of a large number of cases tends to show that with due care in the administration of the remedy harmful sequelæ rarely occur

Needless to say, the best results were obtained in those cases in which tubercle bacilli were not found, and in connexion with this fact it is interesting to note the statement that the discovery of the tubercle bacillus in the sputum is considered by Dr Clark to be the only certain proof that the lungs are infected, with this view the large majority of physicians who have had an extended experience in connexion with the disease will be cordially in accord We also commend the opinion that the occurrence of either a general or a needle track reaction after the subcutaneous injection of tuberculin indicates that infection of some part of the body has occurred at some period But if a focal reaction can be detected it is considered that active mischief must be present at the spot where it was observed These views are perfectly in accord with modern research

In discussing the value of tuberculin as a remedial agent, Dr Clark is not convincing Her words cannot be considered to carry much weight when she says 'In studying the cases with a view to obtaining evidence as to the action of tuberculin the first general impression must certainly be that the remedy has been of use,' and the subsequent remarks by no means add force to this statement

THE LANCET.

LONDON: SATURDAY, JUNE 19, 1915.

The Weapons of Chemistry

METHODS of warfare have advanced enormously in technique though not in design, for the return by the Germans to the stink pot of savagery, although elaborate scientific machinery is employed, remains a manifestation of primeval barbarity. Since the days of bows and arrows and battering rams we seem to have made vast strides, but, as recent history clearly shows, the radical change has been chiefly a transition from physical to chemical resources. Improvements of mechanical transport and means of intercommunication, coupled with the growth of populations, have led to the formation of far larger armies, and the weapons of destruction have developed as the work required of them has grown immeasurably. And to a great extent the chemical activity has been modern. The gun itself is not a very archaic weapon, and there are still preserved amongst us early specimens of it in the shape of the flint lock musket, with its attached ramrod for driving home the powder. It is only comparatively recently, too, that the machine gun has succeeded the cannon. Gunpowder was the only explosive known for a long time, and it was not until about 30 years ago that it was gradually replaced by the cartridge still with gunpowder in it, but later with a smokeless explosive. The introduction of the smokeless explosive or of nitro compounds in general was the beginning of a rapid advance in firearms and artillery. It made possible the machine gun and the leviathan gun which now can project something like a ton's weight of metal to its target at a distance of 18 miles or more. Coupled with the art of the gunner it is chemistry that has made these achievements possible.

It is not difficult to find in other directions proofs that chemistry has very materially contributed to making modern systems of warfare the refinements of terror that they are. Can any more amazing agent for the purposes of war be mentioned than petrol itself? Not many years ago petrol was familiar chiefly as a light gas smelling fluid which effectively removed grease spots from clothing, and outside its small employment in household and industrial affairs it had little application. Now it is the foundation of the gigantic motor industry. While the internal combustion engine has revolutionised the world's methods of propulsion incidentally in peace time, bringing the motor bus and the taxi cab into being, it has made possible the aeroplane, the dirigible, and the submarine, all of which are stern potentialities in modern warfare and are exercising a far reaching influence on the issue of the struggle. The distillation methods of the chemist isolated this readily gasified liquid from the black viscid mass exuding from the oil well. And the submarine demands another chemical service, its crew must be kept alive while the craft is submerged, and chemistry steps in and supplies compressed oxygen to support the lives of the crews. The work of the chemist in these directions is well known to all, but recent events may well lead us to wonder whether the service of chemistry is going to be requisitioned for war purposes unaided by arms or artillery. It would be rash to assume that the future quarrels between nations are likely to be decided by the side which possesses a subtler knowledge of chemistry than the other, to talk of this war, as some are doing, as "a chemists' war" is to lose a sense of proportion and there is little reason to suppose that subsequent events will show, for example, that poisons adroitly used will oust the accurately aimed bullet and shell. Discussion has been busy, since the enemy employed asphyxiating gases as a weapon in the field, in regard to the shapes which retaliation by this method could take. Glib references are made to the possible use of potent poisons, arsenical gases, prussic acid, or some death dealing substance which shall improve upon the chlorine compound adopted by the enemy. It is well to remember that there is evidence that the enemy has seriously and systematically studied this question for some time, and we may be fairly certain that the gas used was decided upon after considerable trials as the most available and practicable for the ghastly ends in view. At all events, such other deadly materials as may be available are as much in the enemy's hands as in ours, and neither side would be likely to gain any permanent benefit by such machinations. We must not dismiss as impracticable the wilder dreams of the chemical poisoner, for in chemistry it would seem that no sooner is a suggestion dismissed as foolish than it at once appears in the form of accomplished fact, but we lean to the belief that the capacities of gas poisoning have been exhibited to the full. The distribution of poisons by means of bombs may add a degree of certainty to the murderous plan. The conveyance of a bank of gas along a definite line by air currents cannot always be depended upon, and it has already happened that the liberated gas has come back in boomerang fashion upon the ranks from which it was projected.

Does the time approach when owing to the high developments of chemical and physical science warfare will become well nigh impossible? The speculation will claim greater attention in view of the new resources of the present war. According to this view the race for supremacy will be won by that nation which is first in making fresh scientific discoveries. Possibly explosives may be rendered useless when invisible means are found to fire them from great distances as might well prove to be the case in these days of wireless entitled "Unfair Methods of Controversy" "One phase of the vivisection controversy is of singular significance It is the peculiar tendency to unfairness which the advocates of unrestricted experimentation seem to display in every discussion regarding the practice, it would seem to be impossible for anyone writing in advocacy of unlimited and unrestricted vivisection to state fairly the views to which he is opposed" Considering the repeated and continuous career of demonstrated misstatement and falsehood that has throughout characterised the crusade against scientific research, of which notable examples were given in Dr W W Keen's book reviewed in these columns recently, this is quite in Bethmann Hollweg's vein.

The Arcana of Freemasonry By ALBERT CHURCHWARD, M D Brux., M R C.P Edin London George Allen and Unwin 1915 Price 7s 6*d* net Pp 326 —This book is dedicated by the author to "all my brother Masons, of whatever clime and whatever creed, who take an interest in Masonic research," and is made up of a series of lectures, some of which have already appeared in the *Freemason* This being so, the general reader will find the book somewhat recondite, but some of the chapters will appeal to those who take an interest in ritual and symbolism Thus, Chapter IV deals with the Divine Name, Chapter IX with the origin and explanation of some Masonic signs and symbols, and Chapter X with Egyptology and Masonry (Masonry, according to Dr Churchward, has its root in Egypt) Chapter XII, the Operative Masons, discusses the various symbols and figures upon which the ground plans of temples and other buildings were founded, an interesting subject, which is treated in a manner more suited to the general reader by Lethaby in his book, "Architecture, Mysticism, and Myth." We have read Dr Churchward's book with interest, and perhaps the best comment upon it is the phrase of that learned member of our own profession, Sir Thomas Browne, who surely would recognise Dr Churchward as a kindred spirit "All things began in Order, so shall they end, and so shall they begin again, according to the Ordainer of Order and Mystical Mathematicks of the City of Heaven."

Index Catalogue of the Library of the Surgeon General's Office, U S Army Authors and Subjects Second Series, Vol XIX U—Uzielli Washington Government Printing Office 1914 Pp 674 Price $2 —The present volume of this storehouse of all the literature of medicine—not of books only, but of pamphlets and individual articles in the medical press of the world—opens with six pages of additional abbreviations for the titles of medical periodicals to which reference is made Among the important headings which embrace references to a wide area of literature are United States (70 pages), Unna (4¼ pages), Urethra (41 pages), Urinary and Urine (105½ pages), and Uterus (292 pages) As a reference work to the medical literature, ancient and modern, of the entire world this laborious compilation stands unequalled

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MISCELLANEOUS VOLUMES

UNDER the title of *Leper Houses and Mediæval Hospitals* (London H K Lewis Pp 47 Price 1*s* net) has been issued a reprint of the FitzPatrick lectures delivered by Dr CHARLES A. MERCIER before the Royal College of Physicians of London on Nov 5th and 10th 1914, a full abstract of which appeared in our columns on Jan. 2nd and 9th, 1915 The first lecture is devoted to a historical survey of leprosy up to the middle of the seventeenth century, by which time it had practically disappeared from Europe, and Dr Mercier concludes by suggesting that tuberculosis as at present existing is a modified form of the ancient and mediæval leprosy "I venture to put forward the hypothesis that the bacillus of leprosy has changed in the course of time into the tubercular bacillus" The second lecture mainly deals with the constitution and management of leper and other hospitals Our forefathers were generous in many ways to "Christ's poor," but they were also thrifty Thus Henry IV confirmed to the hospital of St. Giles, near Maldon, in Essex, that the master thereof was to have towards the maintenance of the leprous burghers of the said town the forfeitures of bread, ale, and fish that was not good Some years before Henry IV—i e. in 1384—the Parliament of Scone had provided that "gif ony man bring to the merkit corrupt swine or salmond to be sauld they sall be taken by the bailies and inconteinent without any question at all sall be sent to the lipperfolke, and gif ther be no lipperfolke they sall be destroyed uterlie." Dr Mercier s lectures naturally give only an outline of the important subject with which he deals Mediæval hospitals were so bound up with mediæval life that their history, foundation, life, decline, and fall form a very large matter for treatment Any reader of Dr Mercier s lectures who may desire to go further into the matter will find in Miss Mary Clay s "The Mediæval Hospitals of England" an excellent book dealing with a general view of the subject and a copious bibliography containing references to many books and papers dealing with details

Two new volumes have been added to the "Pocket Guide Series," published at 1*s* each by The Scientific Press The first is *The Muscular System*, by HAROLD BURROWS, M B, B S Lond, F R C S Eng, in which the most important features of the anatomy of the skeletal muscles with their functions and nerve supplies are summarised The second is *Notes on the Nervous System*, by EDWIN L ASH, M D Lond, which contains a similar summary of the elementary anatomy and physiology of the human nervous system These are specimens of a class of books which appeal to medical students and nurses With regard to the students, we repeat the warning to which we have had occasion so frequently to give utterance—that such condensed guides as these can be serviceable only if properly used for reviewing knowledge acquired practically and by study of fuller works if they are used as substitutes in either direction they are likely to be pernicious rather than useful

The publication of the new Pharmacopœia of 1914 has been naturally followed by new editions of Pocket Prescribers and Summaries of Materia Medica. *A Conspectus of the Principal Changes of the British Pharmacopœia 1914*, by J H WILLIAMS, F C S (London Corbyn, Stacey, and Co, Limited 1915 Price 1*s*) contains an alphabetical list of the preparations in the new Pharmacopœia with their doses in Imperial measure, as well as in the decimal measures adopted by the Pharmacopœia and new preparations or those which have been altered from the old Pharmacopœia are indicated by a marginal letter Preparations of the preceding Pharmacopœia which have been omitted in the present one are given in italics in their alphabetical order There is a useful critical introduction ——*Husband s Students Pocket Prescriber and Guide to Prescription Writing* in its fifth edition, by Dr DAVID MITCHELL MACDONALD (Edinburgh E and S Livingstone. 1915 Pp 122 Price 1*s* 6*d* net), also has been revised in accordance with the new Pharmacopœia, and so has the *Posological Tables, Appendix on Poisons, Index of Diseases and Medicines arranged according to their Actions*, fourth edition, by Dr WILLIAM CRAIG (Same publishers and date Pp 132. Price 1*s* net) Both these booklets are too well known to need any detailed description ——Yet another is the *Supplement to the British Pharmaceutical Codex, 1911*, published under the Direction of the Council of the Pharmaceutical Society of Great Britain (London Pharmaceutical Press 1915 Pp 75 Price 1*s* net) which contains particulars of important additions and alterations which have become necessary since that work was published, including new monographs, galenical formulæ a series of formulæ for test solutions and microscopical stains, a list of the chemical equivalents of substances known under proprietary trade names, and alterations in the text of the Codex that have been rendered necessary by the 1914 revision of the *British Pharmacopœia* There is also a table of corrigenda for the Codex of 1911.

Annotations.

"Ne quid nimis

HOLIDAYS AND HEALTH

IN normal times the advent of June brings with it thoughts of holidays But these are not normal times Owing to the great war but little, if any, consideration is being given to the annual vacation. The possibilities of the continent are gone for the time, the withdrawal of all cheap facilities on the railway will check the traveller at home, and with a sovereign only buying the same quantity of food as 15s bought a year ago everyone has less money to spend. And as the days, the weeks, and the months of the war roll on so the demand for labour everywhere increases in every phase of our national life Yet those who badly feel the need of some respite must be advised to take it, if they can get it, however ill attuned they may feel, for otherwise the period may be shortened during which their work will be of any value, and especially is it the town dweller who needs a new environment if only for a few days The practical question, of course, is whether it would be possible to combine two sets of circumstances in some way that might be productive for the nation There is a great deal of work to be done throughout the countryside, and a large number of urban amateurs should be available for such work from now onwards To these the employers of labour might look for some of the help that is needed in the busy agricultural season, when even in normal times there is a difficulty in securing the required hands Thousands of individuals at the end of July—females as well as males—will be "let loose, as it were, from their everyday toil, a very large number with a holiday of varying periods extending from two to four weeks, and many could arrange perhaps to be absent from their desks for a longer period. The suggestions which have been put forward in various quarters that these holiday makers should occupy their time in assisting in the agriculture of the country are heartily to be commended, we should be delighted to hear that the stage of suggestion had passed to that of arrangement We can rest assured that there will be no holidays—in the general acceptance of the term—for our enemy civil populations this summer The Germans, for example, will not, where they can possibly help it, allow their industries to suffer for the want of labour, and it behoves all of us to see that our relaxation period is not wasted As far as is possible the work which many of our fighting men would have been doing at home ought to be carried on by all unoccupied hands, and there is bound to be a great demand for labour in our agricultural industry To those engaged in sedentary occupations and all brain workers a holiday on the land helping the farmer garner in the harvest would be a real holiday both from the mental and physical health point of view The change of occupation, change of environment, change of scene, and change of diet would prove to many an excellent tonic—as beneficial as 'training has been to those who left their offices for a suit of khaki There should be a ready and quick response to any call for help from our holiday makers but the value of such assistance would be multiplied a thousand fold if it were organised and put upon a definite basis The grave error made by all citizens of towns is to regard agricultural labour as unskilled, whereas much of it is of a highly technical quality The assistance of casual holiday makers need not be despised, but if that assistance could be sifted, coördinated, and supplied in regular shifts to meet ascertained shortages, its value would be incalculably enhanced

THE VIABILITY OF THE PLAGUE BACILLUS

THE experience of our Indian plague experts seems to be that the life of the bacillus pestis outside the living animal body is comparatively short, at least under the conditions associated with the climate of India On the other hand, certain American experts and among them Dr Rosenau, express the opinion that the plague bacillus after all is not such a frail organism as was formerly supposed, and that with the help of cold and moisture its life may be prolonged for a considerable period outside the body of an animal host Given, therefore, abundant albuminous material, a low temperature, and a moist environment, the bacillus pestis may remain viable for a long time Such conditions presumably might be found when the body of a plague patient has been buried in suitable soil In the Proceedings of the Medical Association of the Isthmian Canal Zone (Vol V, Part 2), recently published, a paper is contributed by Dr H. C Clark bearing on this subject, and entitled "Note on the Viability of Bacillus Pestis in a Cadaver buried in Quicklime' It appears from this paper that certain excavations were found necessary on Flamenco Island in the Bay of Panama, involving the removal from its grave of the body of a plague patient who had died two years and eight months previously and had been buried in quicklime The opportunity was taken during the removal of the corpse to ascertain if any living plague bacilli were present in the body On opening the grave the corpse was found enclosed in lime except where the body rested on the ground, the bottom of the coffin having become disintegrated The skeleton was perfectly dry, and there was no evidence remaining of visceral tissue or clothing The skull and femur were selected for special examination. A sterile wire with cotton swab was passed up the foramen magnum and applied to the inner table of the cranial vault, then withdrawn, and agar plates were inoculated from the swab The condyle of the femur was split and material similarly obtained from the cancellous bone The agar plates were examined later by Dr L B Bates, bacteriologist to the Ancon Board of Health, who reported that the cultures showed a variety of bacteria, yeasts, and moulds, and that guinea pigs inoculated with the material had remained in good health The results were, therefore, entirely negative Dr Clark is of opinion that though the amount of material infected by plague bacilli in this body was originally large, yet no trace of it remained at the end of two years and eight months Probably the corpse might have been removed from its grave at a much earlier period without danger to anyone No doubt, as he says, the saprophytic organisms greatly aided the quicklime in destroying the plague bacilli It appears to us that the results observed in this instance were only such as might have been expected, for the experiments in this country of Klein and others have shown that with the advance of putrefaction in a corpse all non sporing pathogenic organisms are quickly destroyed, even the most persistent of them disappearing within a few weeks waves or radiations and projections It would be a remarkable outcome of scientific discovery applied to modern methods of warfare if by their precision and certainty the new weapons automatically extinguished themselves Mental subtlety may thus defeat its own ends, and as future struggles are not likely to be decided by a reversion to old-fashioned fighting methods, arbitration should at length succeed But the man of the future in war, as he is in medicine, would seem to be the chemist

Cervical Gland Tuberculosis.

THE frequency with which enlarged cervical lymphatic glands occur renders an investigation in regard to their etiology a very interesting one Much controversy has occurred as to the identity or diversity of the organisms which produce the condition, especially as to whether the human or bovine type of the tubercle bacillus is the more common More recently another point has arisen—namely, whether atypical tubercle bacilli can be isolated in cases of cervical gland tuberculosis We publish this week an investigation by Dr A STANLEY GRIFFITH into the subject, and he mentions that of the several observers who have made bacteriological investigations of tuberculous glands in the neck DUVAL alone claims to have isolated such organisms These cultures bear no resemblance, judging from the information given as to cultural characters and virulence, to any tubercle bacilli hitherto described DUVAL's results are obviously exceptional and require corroboration before they can be accepted The possibility of such bacilli being found in tuberculous cervical glands is, however, of some interest, inasmuch as this is the only form of tuberculosis of which lupus has been observed to be a direct sequela It is further noteworthy that about 12 per cent of the cases of lupus which Dr GRIFFITH has examined have followed tuberculosis of the cervical glands, and in all but one of these cases the lupoid lesions have yielded atypical tubercle bacilli

Dr GRIFFITH gives the results of observations on material obtained by surgical operation from 110 persons, including children, adolescents and adults In the majority of the cases the actual substance consisted of lymphatic gland tissue He divides the cases into three groups In the first the glands were not macroscopically tuberculous and did not produce tuberculosis in guinea pigs Efforts to inoculate guinea pigs from the glands in the second group of patients also proved negative, although the glands were obviously of a tuberculous character, and in many instances tubercle bacilli were found in smear preparations of the emulsions used for inoculation. In the third group, comprising 71 of the 110 cases, the original material produced tuberculosis in guinea pigs, and cultures were obtained It is to this group that special attention may be directed The opinion has been expressed by many observers that the bovine type of tubercle bacillus is chiefly to be found in young life, whilst the human type is more common after 10 or 15 years of age This is well indicated by the statistics submitted by Dr GRIFFITH, for he shows that the proportion of bovine infections is highest in children under 5 years of age, diminishing as age advances But in his cases the percentage of adults over 20 years of age infected with bovine tubercle bacilli is remarkably great According to these figures, there is a marked contrast between cervical gland tuberculosis in the adult and pulmonary tuberculosis in which the bovine type is comparatively rarely found In another table Dr GRIFFITH analyses the cases in accordance with the locality from which they were derived We agree that the figures are not large enough for comparative statistical purposes as between different centres of population, but none of the localities investigated seemed to enjoy freedom from risk of infection with bovine tubercle bacilli

In the second group of cases referred to by Dr GRIFFITH inoculation failed to produce tuberculosis in guinea-pigs, this fact would seem to bear on the prognosis of cervical gland tuberculosis It is recognised that in glandular tuberculosis there is a tendency to spontaneous cure, and probably in the patients belonging to this group arrest of the active processes had taken place It would be of interest to know whether the disease produced by the bovine type of tubercle bacilli is more prone to spontaneous cure than is that occasioned by the human type Dr GRIFFITH makes some reference to this point, but further investigation into the matter is desirable The results of operation on enlarged glands in the neck are well known to be favourable, so are the effects of exposure to pure air and good feeding, but in estimating the comparative results of any therapeutic measures employed in connexion with tuberculous glands the tendency to spontaneous arrest must be remembered, or false ideas on methods of treatment may easily arise Indeed, the same principle applies to the use of remedies in all forms of tuberculosis the development of the natural resistance of the body is of primary importance, and placing the patient under favourable hygienic conditions in every way is the easiest and most practical manner in which the desired effect may be produced The incidence of cervical gland tuberculosis is by no means confined to children or adults in large cities In the towns and villages on the coasts of Devonshire and Cornwall, where young patients are so often sent in order to obtain the benefit of the fresh air, many children who have been born and brought up in the districts are found to suffer from the same condition, and the explanation is forthcoming when these children are seen in the shut up rooms and unhygienic surroundings of their homes The importance of pure air by night and by day, and suitable nourishment is accentuated by such facts in the interests of the child such parting is absolutely necessary and should be regarded as inevitable by both parents The lot of the leper is admittedly a hard one, and whatever can be done, consistent with medical knowledge and science, should be done in order to alleviate as far as possible the hardships of these unhappy sufferers With the indicated reservations, we agree with the Russian Medical Council in their view that the marriage of one leprous person with another is, under certain circumstances, permissible

PNEUMOCOCCÆMIA

SEPTICÆMIA due to the diplococcus has lately assumed a new importance in human pathology, and Banti's idea that the pulmonary localisation might be due to the fixation of the circulating micro organism by some predilection of the lung is acquiring more and more force and consistency with truth Dr T Pontano has just published in *Il Policlinico* three very interesting cases bearing on this subject Without going so far as to affirm absolutely that the diplococcus always enters the circulation in the first instance and that a condition of septicæmia always accompanies the pneumonia, the author considers that these cases show that the diplococcus can enter the circulation by little heeded routes such as the tonsils or lesions of mucous membrane, without leaving any trace of its passage, and may cause septicæmia with pulmonary localisation, or sparing the lung, with other local manifestations The clinical features of diplococcic septicæmia do not differ from those of the ordinary forms, but two are worthy of special attention—namely, the intermittence of the fever with rigors and sweating, similar to suppurative fever, and the intense leucocytosis The first of Dr Pontano s cases is the most interesting There had been an attack of lobar pneumonia a year previously, and the symptoms were those of a pseudo tetanus, painful contractions of the muscles of the vertebral column, trunk, and limbs, with Kernig s sign, there was also a general febrile condition The cerebro spinal fluid was sterile, but a lanceolate capsulated diplococcus was cultivated from the blood which proved fatal to rabbits Another case described by him was one of purulent meningitis with thrombotic endocarditis in which an identical micro organism was cultivated from the blood The lungs were normal

ACIDOSIS IN CHILDREN

IT is suggested that Naunyn was the first to associate the symptoms of acidosis with their cause, an altered metabolism leading to definite blood changes That the entity of acidosis is a very real clinical condition especially in children has been recently emphasised by Dr A A Howard in a valuable paper in the *Boston Medical and Surgical Journal* It is generally supposed to be related to the cyclical vomiting in children, but Dr Howard suggests that this latter condition is extremely rare in absence of certain reasonably definite and immediate predisposing causes He rather suggests, it seems that certain children are predisposed to the condition of acidosis, and are at times especially susceptible to the train of symptoms it causes Usually an immediate exciting cause for acidosis is present and an acute infection is the most frequent of these causes It is necessary to distinguish the clinical cases of acidosis from those which merely show the presence of acetone or diacetic acid in the urine, for this latter phenomenon is not uncommon Acidosis is perhaps commoner in the children of the upper and middle classes Boys and girls seem equally liable It is as common below the age of 2 as above The symptoms are often ushered in by premonitory loss of appetite, restlessness, or irritability Constipation at this stage is frequent Then the mouth becomes dry, acetone appears in the breath, and may be demonstrated in the urine The respiration is rapid and there may be nausea or vomiting Vomiting was a symptom, usually an early one, in 51 out of 64 of Dr Howard's cases It is significant to note, too, that in the 13 cases in which no vomiting occurred treatment directed to the acidosis had been begun early In severe cases of acidosis the child passes on to listlessness and drowsiness, the eyes become sunken, and the breathing may become irregular and Cheyne Stokes like in type There were 3 fatal cases in the series of 64 The clinical impression in many of these cases is that of a degree of illness and exhaustion which cannot be accounted for by the local signs or known lesion present It is important to recognise the condition, as treatment directed to its relief may be life saving in certain circumstances Sodium bicarbonate given, alternately with glucose, by mouth is the best measure Even if nausea be present, after one or two attempts the patient can usually retain the drug given in this way The effects of this treatment are eminently good and often rapid in action All food must be stopped and return to it should not be uselessly hurried The need for seeking the presence of diacetic acid or acetone in the urine in cases of this kind is obvious in its important relationship to treatment

MALARIA ARISING IN A NON-MALARIAL DISTRICT

IN the *Medical Journal of Australia* Dr Sydney Jamieson has reported a case of considerable importance, as it shows the possibility of malaria arising in a non malarial district A "scrub cutter and cleaner, aged 58 years, working in the Gosford district of New South Wales, was admitted into Sydney Hospital on Jan 5th, 1915, complaining of headache, shivering attacks, and lassitude for ten days He was born in Somersetshire, England In 1880 he left Plymouth by a sailing vessel for Sydney, where he arrived without having touched at any other port He worked as a labourer in the Parramatta district In 1884 he went to Broken Hill via Port Pirie and after two months returned to Sydney, since that time he had lived in New South Wales For 30 years he had been subject to slight cough On examination he looked pale and cachectic At the bases of the lungs a few high pitched rhonchi were heard The spleen was not enlarged On the day after admission the temperature rose to 102 8° F at 8 P M, but fell almost to normal after four hours On the following afternoon it rose to 104 8° at 4 P M, but at midnight had fallen to 97 8 On every other day during the next fortnight the temperature rose in the same way, ranging from 101 5° to 104° The attacks were associated with headache and shivering and ended in profuse perspiration They showed an unmistakable resemblance to simple tertian malaria, though the patient had never resided in a malarial district On Jan. 8th the

FRENCH OBSERVATIONS ON THE EFFECTS OF THE IRRITANT GASES USED BY THE GERMANS

AT a meeting of the Académie de Médecine of Paris Dr R D de la Rivière, of the Institut Pasteur, and Professor J Leclercq, of Lille, have now made an important pathological report on the effects of the irritant gases—chlorine and bromine—used by the Germans Its interest is increased by observations that so far have not been recorded by our army surgeons Our *confrères* had under observation in hospital at Calais 112 soldiers who had been exposed to gas at Langhemarck As the distance from the fighting line is short they were able to examine the patients a few hours after the intoxication The *irritation of the* respiratory mucous membrane caused abundant expectoration which was soon tinged with blood Those who could not fly died vomiting blood Others, much prostrated, crawled to the rear vomiting and expectorating blood, and they passed bloody urine On admission to hospital the eyes were watering and the eyelids were swollen. The cheeks and lips were violaceous red, the lips were violaceous, the features were drawn, and the nose was pinched The patients were harassed by dyspnœa and incessant cough Some complained of a stitch in the side There was abundant rosy frothy expectoration, *sometimes frankly bloody* Speech was painful and jerky The *majority of the patients presented* symptoms of inflammation of the whole respiratory tract extending to the finest bronchial tubes In these the condition was not grave But in others the pulmonary lesion was severe and took the form of broncho pneumonia or gangrene of the lungs Two patients presented the phenomena of hæmolytic icterus Another showed hæmoglobinuria for several days Several had persistent albuminuria Most of the patients passed concentrated high coloured urine containing much *biliary pigment* At the onset the sputum was characterised by desquamative elements and some polynuclear cells, but soon it was modified so as to indicate congestion and, in some cases, gangrene of the lung At the onset the microbial flora in the sputum was ordinary, but sometimes anaerobes were found, the bacillus perfringens in particular In the cases of gangrene of the lung the microbial flora was rich in anaerobes (bacillus perfringens, bacillus serpens, and bacillus ramosus) The findings *in a necropsy* in a case of death from *pneumonia confirmed* the conclusions drawn from the clinical phenomena. There were congestion of the whole respiratory tract, injection of the digestive tube, and massive degeneration of the liver, spleen, and kidneys Massive pneumonia of the right lung, with gangrene here and there at the base, was also found

THE TREATMENT OF RICKETS

Dr Giuseppe Carpani, from his pathological and clinical researches published recently in *Il Morgagni*, has formed the opinion that rickets is a disease of bony development, and that four glands—thymus, thyroid, pituitary, and adrenal—have a marked stimulant and regulating influence over this development Any one of these glands may be deficient in its function and produce a dystrophic condition which predisposes to rickets Owing to the correlation existing between these endocrinic glands, a disturbance of function in one of them causes disturbance of function in the *others*, so that the complex dystrophic picture is the result of failure in function of the entire group Hence, the indication is to substitute pluriglandular for uniglandular opotherapy, which has hitherto given somewhat favourable but inconstant results The author gave powdered and dried gland substances *in toto*, in doses suitable to age, in milk daily for 50 days, with the omission of one week after the first month He noticed that improvement was generally *rapid* and striking during the first weeks of the treatment, the *functions of* digestion and assimilation being first influenced, then those of the nervous system In the following weeks the progress was slower, and beneficial results were observed in the blood and osseous system The treatment was always well borne An interesting point observed by the author was that in the cases of children to whom calcium salts were administered at the same time no special rapidity or efficacy of cure was seen, a fact of some importance as bearing on the question of the calcium content in rickety bones, the fundamental fact seeming to be not deficiency of calcium but inability of the tissues *to fix it*.

THE MARRIAGE OF LEPERS

THE Russian Medical Council has *considered* the question raised by the Holy Synod *of the permission* to lepers to marry amongst themselves, and has given the opinion that whilst lepers may not be married to healthy mates there is no objection to lepers marrying lepers The Council thinks that in respect to the possible influence of the leprosy of the parents on their children in the spread of the disease the factor is relatively weak , besides, the birth rate in such cases is very low, and *the percentage of* infant leprosy under such *conditions* is very small —about 5 With *that reply* we are in agreement generally There can be little doubt that the best way of isolating lepers in affected countries is to intern them, under proper medical supervision, in special colonies or settlements where they can, as far as is practicable, lead active and useful lives, engaged in farming and other suitable occupations Leper asylums and *such* institutions are best reserved *for cases* of old and *advanced disease* where incapacity for employment has been brought about by the ravages of the malady In the leper colonies or settlements patients of both sexes have to be isolated, and we would raise no objection under certain conditions to the union of these persons if they desired to marry Young leprous adults of both sexes are more likely *to become* more hopeful, contented with *their lot*, if they have a home of *their own* and a family life, even of a limited extent The fertility of leper marriages is not great, and as the leprosy advances impotence usually develops It is imperative, *however*, that arrangements should be made in *advance*, and the reasons carefully explained beforehand *to* the leprous parents, to remove *at once* any newly born infant from *the custody of* its mother to a distant home *provided* by the authorities where the child *may* grow up without danger of acquiring the infection from its maternal parent Leprosy is not believed to be a hereditary disease, but *close* and intimate contact, such as *that between* a mother and child, is *regarded as* affording the surest means of conveying the infection from one person *to* another We freely admit that the *parting* of the leprous mother from her newly born child would be painful to her, but

IRELAND

(FROM OUR OWN CORRESPONDENTS)

Dispensary Doctors as "Medical Advisers"

THERE is no doubt that a good deal of inconvenience to the sick poor has arisen from the fact of certain dispensary medical officers accepting the office of "medical adviser" to the Insurance Commissioners The duties of the office entail travelling over wide areas, whereas dispensary medical officers are not allowed to leave their districts even for a day without making provision for the discharge of their duties It is impossible for those who are medical advisers to make such arrangements since the profession disapproves of the office, and those who hold it are not assisted in any way by their medical neighbours Some boards of guardians also have considered that the Poor law duties have been neglected by the officers who are medical advisers, and have proposed to dismiss them from their appointments as Poor law officers, but up to the present the Local Government Board has not sanctioned such action Recently, however, a war vacancy having occurred in the Poor-law service of the Newry union, the guardians appointed Dr T Cronin as temporary medical officer The Local Government Board has declined to sanction the appointment on the ground that Dr Cronin is a "medical certifier' to the Insurance Commissioners, and that "the Board is not satisfied that he could attend efficiently to the wants of the sick poor' of the district

A Students' Strike

A certain number of the students at the school of the Royal College of Surgeons in Ireland struck work last week, as far as the department of anatomy was concerned, as a protest against the choice of the Council in the recent election of examiners in anatomy It is usual for the professor of anatomy to be one of the examiners, but this year the professor is absent on military duty, and the students took umbrage at the fact that his deputy was not elected examiner After a few days abstention from work the students returned, pending the Council s considering their protest The Council can hardly assent to the position that the election of examiners should be subject to veto by the prospective candidates

The War Office and the Belfast Scheme for a Base Hospital

A number of Irish medical men, mainly colleagues hailing from Belfast and its immediate vicinity, and, numbering some well known surgeons, physicians pathologists, and sanitarians, recently appealed to the Director General of the Army Medical Department to be allowed to staff a base or stationary hospital at the front The offer was that for periods of six months they would work as a band and succeed each other in relays of, say, 20 to 25 men at a time for half a year In this way the War Office would acquire, they suggested, the help of some of the most experienced surgeons in Ireland, over military age, who, by manning a base hospital would free younger men for other work The War Office has been compelled to refuse this patriotic offer as there are no regulations in force to enable it to be accepted or worked The reply of the War Office is much resented in Belfast As Mr Lloyd George recently said at a public meeting in Liverpool, ' In this tremendous crisis of the empire there is one thing we want less of than usual, and that is red tape It takes such a long time to unwind and we can t spare the time "

Ulster Medical Society

At the annual meeting of the Ulster Medical Society, held in the Medical Institute, Belfast, the following were elected office bearers for the session 1915–16 —President Dr A. G Robb Vice Presidents Mr T A Davidson and Dr W E Hadden (Portadown) Treasurer Dr V G L Fielden Librarian Dr W L Storey Secretary Mr S T Irwin Editorial Secretary Dr C G Lowry Council Dr G A. Hicks, Mr J O'Doherty, Dr J C Rankin, Dr J L Rentoul (Lisburn), Dr F C Smyth, and Mr H. Stevenson

The McQuitty Memorial Exhibition

The McQuitty Memorial Exhibition, given for clinical work to senior students attending the Royal Victoria Hospital, has been awarded to Mr E G B Calvert

June 15th.

SCOTLAND

(FROM OUR OWN CORRESPONDENTS)

A Hostel for Disabled Sailors and Soldiers

AN urgent appeal for help for the crippled men discharged from navy and army hospitals has gone out in Scotland These men are not infrequently under the necessity of returning to their homes, where they cannot have advice or help to equip them for the future It is proposed to keep the crippled and disabled men at a hostel until they are fit for employment, and then to send them to the various institutions where they can be taught trades of suitable kinds Edenhall, Kelso, has, through the kindness of Major Douglas, been taken for the purpose of a hostel, and will accommodate from 35 to 40 patients By permission of the Berwickshire county directors, the hostel will be worked by the Coldstream Voluntary Aid Detachment under a fully trained nurse As the hostel will be supported by voluntary subscriptions help is earnestly requested, and subscriptions should be sent to the treasurer, Mr Douglas, Mansfield, Coldstream. All information regarding the hostel and admittance of patients will be given by Lady Isobel Douglas Home, The Horset, Coldstream, who has issued the appeal Surgeon General G D Bourke, Deputy Director of the Army Medical Service, has given this scheme his support

The Edinburgh Academical Club

The annual general meeting of the Edinburgh Academical Club was held in Dowell's Rooms, Edinburgh, on Friday, June 11th. The Right Hon. Sir J H. A Macdonald, K.C B , Lord Justice Clerk, President of the club, presided The chairman, in moving the adoption of the annual report, referred to various matters dealt with. He said that about 800 Academicals had been serving the King in various capacities since the outbreak of war, and of these over 40 had been killed in action The club has raised £1200 for a motor ambulance fund, and two ambulances of the latest War Office design, which were nearly ready for sending to the front, have been presented to the Scottish Branch of the British Red Cross Society

An Ambulance Car from Linlithgowshire

Under the supervision of ex Provost Gordon, Bathgate, the inhabitants of Linlithgowshire blood was examined and gave a leucocyte count of 10,125 and a negative Widal reaction In the sputum the prevailing organism was the staphylococcus aureus, and there were no tubercle bacilli On Jan 12th a careful search was made for the plasmodium malariæ in the blood without result, but on the 18th the tertian type of organism was found in considerable numbers The disease quickly yielded to quinine Both the anopheles and the stegomyia mosquitoes are present in New South Wales, but no case of malaria of local origin appears to have been reported previously It is known that infected mosquitoes can convey the plasmodium malariæ in non malarial climates The classical experiment in which Sir Patrick Manson's son infected himself in London by means of a mosquito brought from Rome showed this Mosquitoes do not appear to travel very far, but in exceptional instances may be carried long distances by ships and trains A considerable number of soldiers infected with malaria have returned to Australia from New Guinea, but the patient had never been brought into contact with any of them Dr Jamieson suggests the possibility of malaria becoming endemic in Australia.

BRITISH PHARMACEUTICAL CONFERENCE

THE annual meeting of the British Pharmaceutical Conference will be held at 17, Bloomsbury square, London, on July 14th, under the presidency of Captain E Saville Peck, M A In view of the fact that the majority of members of the Conference are directly or indirectly engaged in the prosecution of the war, the Executive Committee has decided to abandon entirely the social side of the meeting, and also to hold no meetings of the Science and Practice Sections It may be remembered that in the ordinary course of things the annual meeting would have been held at Scarborough

FALSE LOCALISING SIGNS IN CASES OF CEREBRAL TUMOUR

THE practitioner familiar with the classical triad of symptoms—headache, vomiting, and optic neuritis—characteristic of cerebral tumour, should be on the look out for cases where one or other or all of these symptoms may be wanting They may fail, for instance, in progressive hemiplegia—i.e, in hemiplegia which is mild in degree at first and becomes progressively more serious, here the clinical type suggests increasing pressure by itself, whatever other signs are present or absent Again, Jacksonian epilepsy is a suspicious symptom, though it occur monosymptomatically Once more, a fair number of cases originally diagnosed as idiopathic epilepsy turn out eventually to be cases of cerebral tumour It behoves the physician, therefore, to keep such cases under close and repeated observation, for as the disease progresses the diagnosis may have to be reconsidered There is another type of case, however, where a diagnosis of intracranial neoplasm is correctly made, but where the localising, or rather the apparent localising, symptoms are misleading Surgical intervention depends for its success on correct localisation, but even the expert is occasionally at fault in his localising diagnosis Some types may briefly be mentioned It is a fairly common experience to find frontal tumours with cerebellar signs and vice versâ As a rule in such cases, also, right frontal tumours are diagnosed as left cerebellar and left as right A probable explanation is that with increase of intracranial pressure there is a tendency for part of the cerebellum to be pushed into the foramen magnum, whence cerebellar pressure symptoms readily arise, and these may obscure the frontal symptoms inasmuch as the latter may be slight and not easy of detection In any case of intracranial tumour, it should be remembered, indirect cerebellar symptoms may be present, and cases of temporal lobe tumour, for instance, have been recorded where the supposed pathognomonic cerebellar tests elaborated by Bárány have been positive Another type of false localising signs is that where Jacksonian epilepsy is an indirect and not a direct symptom. Even strictly motor symptoms may mislead Various instances have been put on record of Jacksonian fits arising from stimuli originating outside the motor area proper In some cases where internal hydrocephalus results from a basal or subtentorial tumour motor symptoms may be present which are secondary and indirect, and therefore apt to confuse Again, paresis or paralysis of one or other external rectus is probably of little localising value by itself, as in almost any case of subtentorial tumour, and in some supratentorial cases too, the symptom may signify only a heightened intracranial pressure and nothing more In fact, it is well never to lose sight of the obvious fact that if a foreign body grows within the cranial cavity it can only do so at the expense of other tissues, and such secondary changes as local evascularisation, œdema, ventricular dilatation, pressure of one or other part of the cranial contents against some bony prominence or into some bony ring may effectually mask the actual lesion and lead to erroneous localisation For this reason minute attention should always be devoted to the earliest symptoms in point of time, however slight or transient they may seem to have been, since they, rather than any of the more prominent but subsequent ones, may really point to the exact site of the disease Another reason is that there may be a direct transference of functional disturbance from one part of a linked physiological system to another through the medium of so called diaschisis, whereby, apart from extraneous causes such as have been enumerated above, symptoms are produced in one area, the morbid condition giving rise to which is, in fact, situated in a different, though physiologically connected, area. Thus in some cases of tumour of the motor cortex, with Jacksonian epilepsy, twitching of the corresponding muscular groups homolateral to the lesion has been noted, by diaschisis from the affected motor area to the motor cortex of the opposite hemisphere Some of these and other important considerations in the diagnosis of cerebral tumours are well illustrated in a series of cases carefully observed by Dr S P Goodhart and Dr H. Climenko, of the Montefiore Home and Hospital, New York, and published by them in the April number of the *Journal of Nervous and Mental Disease*

AN Order in Council, dated June 10th, declares that the Province of Saskatchewan, in the Dominion of Canada, shall be deemed a separate British possession, and that the second part of the Medical Act, 1886, shall be deemed as from the date of the Order to apply to the said Province of Saskatchewan The effect of this is to render medical degrees of that province under certain conditions registrable without examination in the colonial part of the Medical Register camp of Bedouins in the desert, the other in the very centre of the town Among the Bedouins were counted in all 96 cases and 52 in the town The disease was attacked by the ordinary methods of disinfection of the locality and of articles of bedding and clothing And here, too, the procedure of perfumed lotions was put into practice in a systematic fashion, and to bring out its advantage more clearly, washing with hot water and soap was foregone, washing from head to foot with eau de Cologne locally manufactured and of poor quality, but emitting a very powerful and persistent aroma alone being practised Then the epidemic ceased It is evident that these observations cannot definitely prove the efficaciousness of perfumed lotions, but the procedure is new and deserves at least a trial.

The Treatment of Large Wounds by Sterilised Sugared Radio active Mud

Dr Gougerot has obtained good results in the treatment of wounds and intractable ulcers by the use of a mixture of radio active mud with sugar This treatment is simple and inexpensive The radio active mud is sold commercially in boxes containing a kilogramme This mud is diluted with water saturated either with white sugar (saccharum) or glucose, so as to make a thick though fluid paste It is sterilised in little bulbs in the autoclave at a temperature of from 100° to 110° C The wound having been washed with boiled water or sugared water, is coated with a thick layer of the mixture and covered with an aseptic compress that has been sterilised in the autoclave, and is then dressed in the ordinary way If possible the wound is left three, four, or six days without changing the dressing which is removed by moistening the compresses with boiled water It is washed to remove the mud and a fresh mud dressing applied The mud which has been used may be recovered by filtering the wash water through blotting paper and cloth and by sterilising it afresh The radio active mud causes stimulation of torpid tissues, the sugar supplies nourishment to them The ulcers usually granulate (*bourgeonnent*) rapidly, the wound becomes red, vivid, often very congested This treatment should be applied especially to the cicatrisation of large superficial or deep wounds like those of varicose ulcers, but should not be applied to fistulous ones in which suppuration is maintained by foreign bodies or foci of osteitis It is necessary first to suppress these causes and then the dressings of sugared radio active mud begin their utility in promoting cicatrisation

Protection of the Skull against Wounds by a Metallic Headpiece

M Le Dentu and M Devraigne drew the attention of the Academy of Medicine, at the first June meeting, to the use of a metallic headpiece as a preservative against wounds of the head Such wounds have become very frequent and represent 13 33 per cent of all wounds The personal observations of M Devraigne clearly establish the advantage to the soldiers of wearing metallic headpieces Out of 55 soldiers hit in the head and treated by M Devraigne 42 were without such headpieces and 13 possessed one Of the 42 soldiers without, 23 suffered fractures which for the most part were followed by death and 19 presented wounds of the head and scalp Of the soldiers belonging to the second group 5 had simple superficial wounds or scratches or suffered no harm at all

June

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

NEED FOR SURGICAL INSTRUMENTS IN BELGIUM

THE information received from the Aide et Protection aux Medecins et Pharmaciens Belges Sinistres to the effect that a further supply of surgical instruments would be useful in Belgium has now been confirmed by the National Relief Commission, and the British Fund is preparing to send through the offices of that commission a large supply of surgical instruments to Brussels The response to the invitation to supply instruments, which has appeared at different times in these columns, has been very good, but further heavy demands upon the stock in hand would soon deplete it We are therefore renewing the public request for instruments which for a time has ceased to appear, owing to the response seeming to meet the needs of the time Mr Meredith Townsend, Master of the Society of Apothecaries of London, has personally supervised the packing of a further consignment to Belgium, and all the instruments to be sent are of modern type and have been repaired in every way

THE WEEK'S SUBSCRIPTIONS

The week's subscriptions include a further contribution from the North of England Branch Fund, a most energetic body, and a handsome subscription of £168 from New Zealand

	£	s	d
Salisbury Division B M.A. (per Dr L S Luckham)—			
Balance of Private Divisional Fund ..	3	4	7
Mr H Browne	1	1	0
Mr Challoner Clay	1	0	0
Dr E Winbolt Lewis	1	1	0
Mr L D Saunders ..	1	1	0
Dr E F Fison ..	1	0	0
Mr G W Whiteley	1	1	0
Mr J Armitage.. ..	0	10	6
Mr S Ellis	0	10	6
Mr J E Gordon	0	10	6
Mr W Gordon	0	10	6
Mr L S Luckham	0	10	6
Mr J Ogdin March	0	10	6
Mr Arthur Longman	0	10	6
Mr W Stratton... ...	0	10	6
Mr C. Stra ton	0	10	6
Dr W W Ord ..	0	10	6
Mr G E. Thornton ..	0	10	6
Dr F B Butler ...	0	10	6
Dr H P Blackmore	0	10	0
Barnsley Division B.M.A. (per Dr R F Castle) (third donation total £43 11s 6d)	1	1	0
Medical officers serving in 1st Peshawar Division	12	13	4
Major N Rainier I M S	2	2	0
Christchurch N Z. anonymous from (per Bank o N Z)	163	0	0
A. K. " Chiengmai ..	2	2	0
North of England Branch Fund (per Dr James Don and Mr A S Perceval Hon. Secs) (fourteenth donation total £725 1s 7d)—			
Dr W Galloway ..	2	2	0
Dr J W Leech... ..	3	3	0
Dr Thos Boty ..	1	10	0
Dr J P Elliott ...	1	1	0
Dr C R Sutherland	1	1	0
Dr F O Neill ...	1	1	0
Dr John Anderson ...	18	17	6
Dr J W Geddes ..	0	10	0
Dr E M Swanwick..	1	1	0
Dr Arthur Gardner...	1	1	0
Dr R. Brown	0	10	6
Dr W Hall	1	1	0
(Less expenses to date £18 19s 11d)			
Dr J A. Frend Rosario Argentina (per Dr H. Macnaughton-Jones)	5	5	0
Dr Fingland	1	1	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H. A. Des Vœux, at 14, Buckingham gate, London, S W , and should be made payable to the Belgian Doctors and Pharmacists Relief Fund, crossed Lloyds Bank, Ltd

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries will receive and acknowledge with thanks any surgical instruments which are sent to the Apothecaries' Hall, Blackfriars, E C

DONATIONS AND BEQUESTS —By will the late Dr W T Edwards of Cardiff, left £500 each to the Royal Medical College Epsom and the Medical Benevolent Fund In the event of the failure of certain trusts the testator bequeathed £7000 to the University College South Wales and Monmouthshire, towards the maintenance of the Medical School, £6000 to the King Edward VII. Hospital Glamorganshire, and £1000 to the Blind Asylum or Workshop Cardiff.

recently subscribed towards the purchase of an ambulance motor car for the use of the wounded soldiers at the front On the afternoon of Wednesday June 9th, the vehicle, a 16 h p Wolseley, with stretchers and fittings complete, was handed over to the Scottish Branch of the British Red Cross Society at 11, Blythswood square, Glasgow, the headquarters of the Scottish Automobile Fleet After the purchase of the car there was a balance of nearly £80, which was presented to the British Red Cross Society

The Fire at Dunrobin Castle

The modern portion of Dunrobin Castle, the Duke of Sutherland's famous Scottish palace, was largely destroyed by fire on June 13th In the difficult task of combating the flames valuable assistance was rendered by Territorials who were in the neighbourhood, and also by a fire brigade section of the navy from Cromarty All the wounded soldiers were rescued and removed in safety to accommodation that was found for them elsewhere Unfortunately in the work of rescue Lieutenant Wilde, 2/5th Seaforth Highlanders, and two sailors were seriously injured and had to be removed to hospital

The late Dr E W Scott Carmichael

The death occurred on June 12th, at his residence, 42, Palmerston place, Edinburgh, of Edward William Scott Carmichael, Fellow of the Royal College of Surgeons, Edinburgh Dr Carmichael, who was in his forty second year, came of a well known medical family, for his father, Dr James Carmichael, is a consulting physician to the Royal Hospital for Sick Children, and his grandfather was a much esteemed Edinburgh practitioner Dr Edward Carmichael was educated at the Edinburgh Academy and the University of Edinburgh He studied subsequently in Berne, Berlin, Greifswald, London, Paris, and the United States He was formerly senior demonstrator of anatomy in the New School of Medicine and assistant surgeon at the Royal Hospital for Sick Children, Edinburgh, at the Royal Infirmary, and at the Hospital for Diseases of Women He also held the rank of captain in the 2nd Scottish General Hospital, Territorial Force Dr Carmichael was a frequent contributor of articles to the medical press His literary work was stamped with scientific thoroughness, and it is to be hoped that the book upon which he had spent several years of work, and succeeded in completing only a week or two ago, will be published He was an admirable speaker, and had the ability to inspire confidence in those who heard him He leaves a widow and three young children.

The late Lieutenant D G Watson

Lieutenant D G Watson, R A M C, who has died of wounds received while on active service at the front, was the son of Mr John Watson B A, headmaster of Broughton Higher Grade School, Edinburgh He was a graduate of the University of Edinburgh in both Arts and Medicine After graduating in Medicine Dr Watson was appointed to a hospital at Windsor, and on the outbreak of war he joined the Royal Army Medical Corps He had been at the front for several months, and when wounded was engaged in bringing in a stretcher party from one of the trenches under shell fire

June 16th

PARIS

(*FROM OUR OWN CORRESPONDENT*)

Substitution of Hot Oxygen for Hot Air in the Sterilisation of Gangrenous Wounds

M Vignat has endeavoured to replace hot air by superheated oxygen in a large number of cases of septic gangrene following on deep charring He considers this procedure superior to that of hot air Its technique is very simple An ordinary electric apparatus is used, and the source of air represented by the rotary pump is replaced by a cylinder furnished with a stop cock The current of oxygen can be regulated at will by means of this stop cock Certain precautions are necessary The oxygen should never be used with Gaiffe's apparatus, as the oxygen produces with carburetted air an explosive mixture In the passage of oxygen the generator of heat becomes heated more quickly, and in order not to damage it the rheostat which regulates the current intensity should be handled gently and progressively It is necessary to be careful that the field in which compresses are situated in the neighbourhood of wounds is moist, as the action of the superheated oxygen is inflammatory Oxygen seems to dry and sterilise moist gangrene better and more quickly than air The action of heat is added to the action of the oxygen and also to the ozone which is produced, as is known, whenever oxygen is superheated

The Destruction of Lice in Epidemics of Typhus Fever

Dr Delta, in the past Balkan campaigns, had frequent occasion to believe that the action of strong odours was destructive to lice, and he undertook numerous experiments on this subject Living lice were put in the cavity of a piece of glass tubing 2 centimetres in diameter and 15 centimetres in length, plugged by means of two cotton wads loose enough to allow the circulation of air On moistening one of the two wads with strong scent the insects withdrew little by little from the perfumed end and approached the opposite one At the end of a certain time all the lice were dead If the source of the odour was placed outside one of the corks the same phenomena were observed, followed by death, though naturally after a much longer time In the control tubes in which the perfume was replaced by water, the lice remained alive moving freely in all directions In another experiment a large tampon of cotton soaked with strong perfume was placed in the bottom of an upturned microscope shade Above this tampon, but separated from it by a tripod of iron wire, was a piece of flannel a yard square, in the folds of which were a known number of living lice At the end of a quarter of an hour, on the average of four experiments, the first louse was seen to emerge from the folds of the cloth and struggle to reach the open air At the end of an hour four others disengaged themselves in like manner and remained on the surface without attempting to penetrate again into the interior, where the ten other insects were found motionless Left in the open air four of them returned to life after a variable period of time Finally it was shown that when the contact of the perfume and of the insect was made directly, the result was not long in being produced The insect died in one or two minutes In a recent epidemic of typhus fever at Alexandria in February, 1915, two distinct foci appeared, one in a

Frederick Rhodes Norman Tattersall, William Leitrim Clements, Frederick Ernest Chapman, Trevor Hayman Fowler, and Giulio Hamilton

The undermentioned officers of the Canadian Army Medical Corps to be Temporary Lieutenants Dated May 10th Major Norman King Wilson, Captains John Vassie Brown, Robert Werden Tennent, and John Jordon Field, and Lieutenants William Samuel Pickup, William James Morden Marcy, Frank Muir Walker, Herbert Wilfred Kerfoot, John George McLeod, Ernest Victor Frederick, Alfred Hope Macklin Albert Franklin Mavety, Richard Earl Horkins, George Norman Uric, Ross Lester Shields, John Joseph Middleton, John LeKoy Mavety, James Willis Sutherland, Joseph Austin Evans, Murray Hulme Paterson, Frederick Johnson Livingston, George Chambers Anglin, John Nelson Humphrey, Keith Myrie Benoit Simon James Franklin McLay, Richard Henry Bonnycastle, Lionel Montrose Dawson Warren Augustus Dakin, James Edward Knox, Oswald John Day, Kenneth George McKenzie, Victor Howard McWilliams, Frederick James Colling, Henry Crassweller, Oliver William Colbeck, Frank Howard Wheeler, John Harold White, George Walker Manning Smith, Archibald Henderson, Thomas Oswald Hutton, and Charles Goldie Sutherland

The undermentioned non-commissioned officers and men of the Canadian Army Medical Corps to be temporary Lieutenants —Dated May 27th Staff Sergeants William James Deadman and Samuel Alexander Overend, Sergeants Leeming Anderson Carr and Frank Whiting Overholt, Lance Corporal John Thomas Courtice, Privates John Chassels and Harry Arthur Cates Dated May 28th Staff Sergeants Duncan Archie Fletcher, George Murray Shaw, and Charles Lennox Tulloch Arthur, Corporal John Victor Williams, Privates Halstead Graime Murray, Charles Havelock MacLean, Harry Adolph Sharman, Wellington Lekoy Pedlow Otto Van Luven and Ernest John de Beaupré Dated May 29th Sergeant-Major Alfred Clarence Brisco Dated May 31st Sergeant Major Walter James Bolt Brown, Sergeant John Francis Ryan, Corporals George Beatty Burwell and Everett Franklin Garfield Ward, Privates Frederick Walter Diamond, David Archibald Macfarlane, Hector McKenzie, Kenneth Earl Millan, Joseph Stokes Stewart Norman Michael Glace George Sampson Cronk, John Henry Fisher, Warren Fullerton Clark John Howard Box, Arthur George Howson, Kenneth Lorne Mackinnon, and Harry Love Jarman

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

Lieutenant Thomas McEwen to be Captain

The undermentioned Lieutenants (on probation) are confirmed in their rank Robert McKinlay, Douglas Cran, John O Reid William B Postlethwaite, Patrick C MacRae, Robert P S Mason, Gilbert W Rose, Neville H Linzee, Frederick E Fielden William B Cathcart, Raymond F Pinson, Austin B Clarke, Alfred T Logan, James G Wilson, and John F Lyons

TERRITORIAL FORCE

Army Medical Service

Major William Cochrane Murray, from 1st Lowland Field Ambulance to be Deputy Assistant Director of Medical Services, Lowland (Reserve) Division

Royal Army Medical Corps

2nd East Anglian Field Ambulance Lieutenant Frederick G Sharpe resigns his commission on account of ill health

3rd Home Counties Field Ambulance Michael Arthur Curry to be Lieutenant

South Eastern Mounted Brigade Field Ambulance Cholmondeley Webb to be Lieutenant.

2nd West Lancashire Field Ambulance James Pearson Thierens to be Lieutenant

2nd Northern General Hospital James Blacklay Lockerbie to be Captain, whose services will be available on mobilisation

1st Western General Hospital Thomas Porter McMurray to be Captain, whose services will be available on mobilisation

2nd Western General Hospital Howard Buck to be Captain, whose services will be available on mobilisation Edward Albert Williams to be Lieutenant

1st Highland Field Ambulance Captain Peter Howie to be temporary Major

5th London Field Ambulance Captain John Herbert Dixon to be temporary Major

1st Northumbrian Field Ambulance Edward Turton (late Captain 5th (Cyclist) Battalion, The East Yorkshire Regiment) to be Major (temporary)

4th Southern General Hospital Francis Edward Price to be Captain whose services will be available on mobilisation

1st South Midland Mounted Brigade Field Ambulance Frank Smith to be Lieutenant

1st Highland Field Ambulance John Miller Chrystie to be Lieutenant

3rd West Lancashire Field Ambulance Bertram Whewell Hogarth (late Major, 5th Battalion, The King's Own (Royal Lancaster Regiment)) to be Major (temporary)

3rd Scottish General Hospital David Watson to be Captain, whose services will be available on mobilisation

5th Southern General Hospital Captain John H P Fraser is seconded

Notts and Derby Mounted Brigade Field Ambulance Guy Witton Miller to be Lieutenant

Yorkshire Mounted Brigade Field Ambulance Charles Graham Meade to be Lieutenant

1st London (City of London) Field Ambulance Captain Thomas S Worboys, from Attached to Units other than Medical Units, to be Captain (temporary) Captain Donald S Sutherland, from Attached to Units other than Medical Units to be Captain (temporary)

1st West Riding Field Ambulance Charles Suffield Brown to be Lieutenant

2nd West Riding Field Ambulance Alexander Anderson to be Lieutenant

3rd West Riding Field Ambulance William Sneddon to be Lieutenant

2nd London General Hospital Captain Maynard Horne is seconded

1st Northern General Hospital William Arthur Slater (late Cadet, Durham University Contingent, Senior Division, Officers Training Corps) to be Lieutenant

1st Scottish General Hospital Clifford Thiselton Bell to be Captain, whose services will be available on mobilisation Robert Richards to be Captain, whose services will be available on mobilisation

1st Southern General Hospital Thomas Wilson to be Captain, whose services will be available on mobilisation.

2nd London Sanitary Company To be Lieutenants James Mair and Alfred Carlton Williams

Highland Casualty Clearing Station James McLean Macfarlane to be Lieutenant

2nd London Casualty Clearing Station Andrew Tynan Swan to be Lieutenant

Welsh Casualty Clearing Station Major Charles R White, from 2nd Welsh Field Ambulance, to be Lieutenant-Colonel (temporary) Captain Patrick J McGinn, from 1st Welsh Field Ambulance, to be Captain The undermentioned to be Lieutenants Lieutenant John J E Biggs and Lieutenant Charles Nyhan, from Attached to Units other than Medical Units, and John Anderson

Attached to Units other than Medical Units —To be Majors Surgeon-Captain James W Cook, from 5th Battalion, The Lancashire Fusiliers Captain John Leach, Palemon Best (late Captain, Cornwall (Duke of Cornwall's) Royal Garrison Artillery), and Captain Richard T Turner Captain George C Jeaffreson resigns his commission on account of ill health Edmund Percival Isaacs Coke (late Captain, R.A.M C, Territorial Force) to be Captain (temporary) To be Lieutenants Charles Cooper Ling, John Wood, and John Ernest Ransford Captain Lawrence C V Hardwicke is restored to the establishment

DEATHS IN THE SERVICES

Major Arthur Tregelles Pridham, I M S, suddenly, on June 6th He joined the service in 1902, and in 1911–12 took part in operations in the Abor country (medal with clasp)

Surgeon General Thomas Grainger, C B, I.M S, has been appointed an Honorary Surgeon to the King, vice Surgeon-General G F A. Harris C S I, retired.

THE NATIONAL CARE OF MATERNITY —On June 11th a deputation from the Women's Coöperative Guild waited on Mr Walter Long, President of the Local Government Board to urge immediate legislation dealing with the care of maternity and infancy Mr Long said that he would be glad to introduce legislation making the Notification of Births Act compulsory all over the country

THE LATE DR. J P CAMERON —The death of Dr J P Cameron is announced as having taken place on Savage Island on March 13th, where he was medical officer under the New Zealand Government Dr Cameron, who was 29 years old, was a Scotsman, and was educated at Aberdeen University, where he graduated as M B, C M in 1910

NEW BUILDINGS AT THE DURHAM COUNTY HOSPITAL.—On June 12th a new operating theatre and a nurses' hostel were opened in connexion with the Durham County Hospital by the Earl of Durham Only £560 of the £5320 which the buildings have cost remain to be raised, the Ven. Archdeacon Watkins and his wife having given £1000 towards the theatre, and Miss Margaret Brown, of Durham, having made herself responsible for the hostel.

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned have been granted temporary commissions as Surgeons in His Majesty's Fleet Hother McCormack Hanschell and Arthur Toulmin

The following appointments have been notified —Fleet-Surgeons R W Stanistreet to the *Endymion* S Conner to the *Theseus* and E D J O'Malley to the *Maidstone* Staff Surgeon J Thornhill to the *Victorian* Temporary Surgeons W H Kay to the *Theseus*, and S N Toulmin to the *Endymion*

ARMY MEDICAL SERVICE

Colonel Sir B G A. Moynihan relinquishes his temporary commission (dated Feb 28th)

ROYAL ARMY MEDICAL CORPS

The undermentioned Majors to be temporary Lieutenant-Colonels William A Turner, R A.M C (T) (dated May 26th), and Charters James Symonds, R A.M C (T) (dated June 1st)

Major Robert H Mills Roberts, C M G , 6th Battalion The Royal Welsh Fusiliers, to be *temporary* Lieutenant Colonel whilst employed with a Field Ambulance of the 43rd Division (dated Dec 2nd, 1914)

Theodore Mailler Kendall, late Fleet Surgeon, Australian Navy, to be temporary Major (dated May 17th)

The undermentioned are granted the temporary rank of Major whilst employed at the Welsh Metropolitan War Hospital —Dated May 1st Edward Barton Cartwright White Dated June 2nd Howard Davidson Harrison and Charles Henry Geoffrey Ramsbottom

Major Arthur Nimmo Walker 1st West Lancashire Brigade, Royal Field Artillery, Territorial Force, to be temporary Major (dated May 22nd)

Temporary Captain Edward L Gowlland, late Major, Royal Garrison Artillery (T), to be temporary Major (dated June 11th)

The undermentioned to be temporary Captains Dated May 3rd Denis Murphy, late Captain, R.A M C (Special Reserve), and Frank Alfred Amphlett Holmden, D S O Dated May 6th William John Gow Dated May 7th Ralph Bodkin Mahon Dated May 14th Thomas Watts Eden Dated May 15th Victor John Blake

Temporary Lieutenant Percival Wood, late Surgeon Captain, 3rd Middlesex Royal Garrison Volunteer Artillery, to be temporary Captain (dated June 15th)

Arthur Conyers Inman to be temporary Honorary Lieutenant (dated June 3rd)

The appointment to a temporary Lieutenancy of George H Wood is antedated to April 13th

The undermentioned temporary Lieutenants relinquish their commissions —Dated May 14th R F Ferris Dated June 1st James J Keirans

Temporary Lieutenant Ernest C Peake relinquishes his commission on account of ill health (dated May 21st)

The undermentioned to be temporary Lieutenants — Dated Nov 24th, 1914 Walter Amsden Dated April 24th Lieutenant James Burgess Woodrow, Canadian Army Medical Corps Dated May 1st Conrade Loddges Dated May 3rd Alfred Adams, Robert Ferguson Russell, Mark Stewart Fraser, Gerald Holroyde Dallas Gordon Perry, Thomas Ewart Ashley, William Russell, Francis George Macneill Simpson, Rowland Hamer, Henry Edwardes Griffiths, Richard Walton Long and Edward Thomas Larkam Dated May 4th William Harrison MacKinlay, Cyril Rodney Holtz Crawford, Ernest Camden Pratt Alic Phillips, Robert James Bonis, Arthur Hamilton Tovey, James Richardson Spensley, Henry Murray Agnew, George Gardner, Andrew Walker Forrest, John Bruce Baird, and John Dorrington Batt Dated May 5th Robert Spears, John Frederick Broughton, Wyger Harmens, Guy Nasmith Mottram, and Jocelyn Langton Waller Dated May 6th John James Robertson, Charles Broderick Pearson, Hugh Hadfield Carleton, and Stephen Frederick Lynch Dated May 7th William Fraser, Ernest Goodwin Rawlinson, Daniel Kelly, Edward John Morton, Edwin Arthur Cleveland Swainson Cecil Bennett Charles Samson Thomson, John William Innes, Benjamin Jones, Robert Reid Pirrie, Leo Lane, Donald McFarlane Livingstone, John Wilson McCagie, John Brownlee Milne Frank Barney Gorton Stableford, Thomas Geoffrey Elsworth, Gerald Sholto Douglas, John Pole Kitson, Patrick Joseph Murphy, Ernest Haines Walker, Mearns Alexander Milne, James Coutts, Anthony John McCreadie, George Miller, Robert MacNab Marshall, Harold Webb Charles Leslie Grove Powell, James Muirhead Joseph Bernard Dawson, Herbert Maughan Brown, Augustus Joseph Hickey Richard Hubert Mercer, Robert Reid Duncan, Noel Instone, Andrew Serjeant McNeil Ernest Theophilus Roberts, Ronald John Bruce, and Joseph Michael Morrissey Dated May 8th Philip Cyril Powter Cloake, George Norman, Charles Putnam Symonds, Archibald Guelph Holdsworth Smart, Henry François Vandermin, Albert William Duncan Coventon, and Ernest George Douglas Pineo Dated May 9th Percy Knowles Muspratt Dated May 10th Guy Alfred Wyon, Sydney Charles Hillyard Moberley, Denis Gratwicke Halsted, Charles Richard Verling-Brown, Oswin Shields, Henry Yellowlees, John Coffey, Austin Threlfall Nankivell, Richard Henry King, George Pollock, Robert McLaren Wishart, William Wallace Wood, Charles Harold Bloxsome James Todd Dickson John Melville Elliot John Munro Campbell, John Buchanan, D'Arcy Irvine Hamilton, Harold Ernest Pierpoint Yorke, John Miller Young Kenneth John Aveling, Leopold Ernest Valentine Every Clayton George Henry Russell, Sydney Waddell, John Dodds Marshall, Lionel Augustine Joseph Graham, Alexander Bruce Gordon, George Henry Keane, Stanley Victor Percy Pill, James Felton Hammond William Arthur Anderson, Charles Reidy, John Maxwell Taylor, William Richard Morris, William Patrick Cooney, John Dixon, Frank Radcliffe, Alexander Church Brodie McMurtrie William Stewart, Harry Tudor Newling, and Howard Ebenezer Collier Dated May 11th Harry Lawrence Attwater and Cecil Rutherford. Dated May 12th George Stoddart, Sidney John Rowntree, James Alexander Wood Watts, Albert Victor Craig, Gordon Wilfred Ritchie Rudkin, Herbert Michael Moran, Clement Kirwan Sylvester, Archibald Ferguson, David Albert Hutcheson, Herbert Bates, Samuel Frederick Holloway, Frank Edward McGee, Edward Irving Pownoll Pellew William Henry McKinstry George Amos Varian Peter Macdonald, William Edward Lindsey Fowler, William Guy Embleton Allen, and Frederick Travinor Rees Dated May 13th William James Valentine Curtain, Hugh Arthur Evans, and Howard Stein Millar Dated May 14th Percy Hall, Gerald Richard Courtenay Wilson, Richard Hamilton Ashwin, Benjamin Beamish, Alfred Benjamin Bateman, Harry Gordon Leigh Gilchrist, Thomas Mackinlay, William Ross, Arthur Gerald Welsford William Hastings Hardy, Robert Devereux Mothersole, Colin Charles Gordon Gibson, Norman Gerald Meade, Arthur Daniel Clanchy, Aaron Simeon Cohen, Ignatius Patrick Kelly Eric Bayley, John Edward Litton Alexander Turnley, John Thomas Armstrong, Berthold Somerville Taylor, and Ronald Tydd Herdman. Dated May 15th John Hardwick Thornley, Robert Broom, Henry Brown Elton, John Douglas Wilkinson, Sol Cross Burke Cuppage, Archibald Penrhyn Bowdler David Thomas Crichton Frew, Alfred John Davoren, Edward Hamilton Bruce Fox, Hight Blundell, Albert Cameron, Andrew Wilson Cochrane, William Ashley Graves Cluffe Robert Donald, Tom Henry Trevethan Frampton, Francis William Fawssett, James Edgar Hewlett James McAvoy, Archibald Underwood Millar, Murdo Duncan Mackenzie, Andrew Brown McPherson, Arthur Robert Moore, Thomas McCririck, Willie Oliver, Victor John Ruttledge, Thomas Readman, Francis Riley, Herbert Douglas Smart, Daniel Stewart, David Taylor William Wilson Wood, Herbert Kidson Wallace, John Wilson James MacGregor Johnson, John Joseph Pentony, John Newton Martin, Alexander Farquhar, Leonard Owen Weinman, Gilbert Winter Dryland, George Habgood, George Hobson Thompson, Bentley Moore Hunter, Archibald Macmillan, Arthur Henry Thomas, William Francis Blewitt, Frederick George Beatty, Ivon Henry Skipwith Hawes, William Albert Wheeldon, Alfred Whitby George Wheldale Stanley and Henry Richard Rigby Dated May 17th William Bates, Robert Joseph Weidner, William R Thomas James Hamilton Fleming William Reid, James Alexander Mac Laren, William Deane, Alexander Joseph Dempsey, Thomas Bennett, Cecil Lionel Lakin, James William Hutton, Kenneth Gillies, Robert Grant George William Bennett Waters, James Robert Burn, Burford Noel Norman, Sidney Herbert Booth, Murdo Maclean Alexander Johnston Wilson James Joseph Foley Alfred Robert Sieveking, David Joseph Miller, William Wilson Jameson John Erwood Forster, Penrose Lanyon Watkin Williams Samuel Edgar Martin, Alan Renata Green, Maurice Hereward Cane, Henry John MacKay Adams, Francis James Wheeler John Carr Osburne, James Maxwell, Horace Bagster Wilson Edgar James Tyrrell William Alexander Milne Joseph Dudley Benjafield, Reginald Power Frank Davidson Johnson Albert Ernest Henton William Robert Honey burne, William John Gilmour Henderson, Joseph Green Wilbye Cooper, John Frankland West Geoffrey Clarke, Lieutenant Alexander Barnett Brook, 4th Battalion Seaforth Highlanders (Ross shire Buffs, The Duke of Albany's), Territorial Force Dated May 18th John Mandall Coates David Lawrie and Cecil William Wilson Dated May 19th John Miles Chambers, Robert Hamilton, Herbert Walker Binks William Doyle, John Anderson Stanley Batchelor Alfred Hollier Clough, George John Fraser Harold Stanley Groves Lancelot Raoul Lempriere Robert McLean, George McNeill, Thomas Stanley Rippon, Noel Florentine Rowstron, Algernon Verling, Alexander Sweet Wilson, William

Correspondence.

"Audi alteram partem

TYPHUS FEVER, LICE, AND THE WAR A SUGGESTIVE FACT

To the Editor of THE LANCET

SIR,—In the annotation in your issue of June 12th entitled "The Spread of Typhus Fever by Lice," you mention a circular issued by the German Imperial Board of Health which advocates the use of a preparation containing sabadilla vinegar This at once recalled to my mind a statement contained in a letter which I received in January last from Mr James Flind, the administrator of the La Guaira and Caracas Railway, Venezuela. He told me that during the year 1913 no less than 258 tons of sabadilla seed were shipped from La Guaira to Germany, the shipment in former years averaging something over 100 tons per annum. He says, further, "Owing to the war, the sabadilla is now being shipped, but in smaller quantities, to the United States, and we have never shipped any of it to England The uses for this seed are not fully known here, but it is thought that it is used in the curing of hides and as a medicine for horses and animals" In the light of your note it would certainly seem that we have here additional proof, if any were needed, that Germany had carefully prepared for the war which she intended to bring about as soon as it suited her convenience

The most important active principle of sabadilla is, of course, veratrine, which is used to some extent in veterinary practice as a parasiticide, and also enters into the composition of a preparation sometimes employed for treating pediculosis of the scalp

It must be remembered that veratrine is a very poisonous substance, and preparations containing it must be used with caution. Doubtless the German Imperial Board of Health pay due attention to this point in their circular

I am, Sir, yours faithfully,

ANDREW BALFOUR

Wellcome Bureau of Scientific Research London W
June 14th 1915

THE INCIDENCE OF PLAGUE IN EUROPE

To the Editor of THE LANCET

SIR,—In THE LANCET of Nov 14th, 1914, I put forward some contentions with regard to the incidence of plague in Europe I attempted to explain why it is that whereas formerly great epidemics were rife, nowadays no such occurrences take place

First, I endeavoured to establish the fact that the brown rat having replaced the black was to a large extent the reason for the changed condition of affairs The disappearance of plague was coincident with the introduction of the brown rat, and in the seaport towns where the black rat is still largely prevalent small epidemics do occur

Secondly, I tried to find an explanation of this, and I concluded that the reason was to be found in the different bionomics of the two species of rat

Thirdly, I tried to show that whatever danger there was to man from epizootics among brown rats, the danger was much minimised in the summer months I gave certain figures in support of this, and I concluded that the reason for what I took to be a fact was that the rats, being widely dispersed over the countryside in summer, were, *pari passu* with that dispersal, less exposed to infection, and therefore to epizootics

Now Dr R St J Brooks, writing in THE LANCET of Dec 19th, 1914 (which has just come to my hand in a corner of Malaya, May 4th, 1915), challenges the figures by which I tried to prove that rats were less liable to epizootics in the summer He says that, as a matter of fact, an average flea rate per rat of 2 7 produced an epizootic of 11 per cent in one parish in England (I said that a flea rate of 1 per rat had done so, having misinterpreted Martin and Rowland's original paper, or not seen the figure that Dr Brooks gives), and not only does he say that I was wrong in that, but that I had compared my figures for that parish with something that was not strictly comparable—to wit, the incidence of plague among 15,000 rats, which had a flea rate of 4 5, caught later in a great many parishes

I do not know why these figures are not comparable I *contend* that if a flea-rate of 2 7 (admitting the new figure) causes an epizootic of 11 per cent among 123 rats in a town, village, or hamlet, then a flea rate of 4 5 should cause a much greater epizootic than 0 2 per cent among any 15,000 rats one likes to examine Of course, it is possible if 15 000 more rats had been examined a heavy infection would have been found among them (this is only admitting that there is an "error of random sampling"), all I am concerned with is the fact that among 15,000 rats which were examined, with an average of 4 5 fleas per rat, there was no heavy infection, and I want to know the reason why

As a matter of fact, if Dr Brooks still does not consider these figures comparable I will give him some parish for parish figures

—	Parish	Plague.	Flea rate
Martin and Rowland (Winter 1910)	?	117 epizootic.	2 7
Strickland and Merriman (Summer 1911)	Nacton	Nil	6·5
	Tuddenham		6 0
	Tattingstone		5 3
	Hollesley		5 1

The difference in these figures for neighbouring parishes all in the infected area for winter and summer is striking and needs some explanation, and I think I have hit on the right and natural one when I say it is due to the dispersal of the rats over the country side in summer

Dr Brooks finally says my "assumption is erroneous" It is not quite clear from his letter whether he refers only to the last or to all three of my contentions The reader is rather led to infer that one of my figures having been given wrongly the whole thesis was upset. As a matter of fact, his criticism was directed only against my third contention, and I think I have shown that it was captious and inconsequent After all, if Dr Brooks admits the dispersal of the rat population in the summer time, would he not expect a lessened incidence of plague among them? Even if Dr Brooks will not admit the lessened incidence of plague in summer as compared with winter, will he not make it clear whether, while recognising the lessened incidence of plague nowadays as compared with the past, he disputes my first two contentions (1) that it has been due to the replacement of the black rat by the brown,

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last Census, 8049 births and 4697 deaths were registered during the week ended Saturday, June 12th The annual rate of mortality, which had been 15 4, 13 7, and 13 9 per 1000 in the three preceding weeks, fell in the week under notice to 13 5 per 1000 of their aggregate population, estimated at 18,136,180 persons at the middle of last year During the first ten weeks of the current quarter the mean annual death rate in these towns averaged 16 0, against a corresponding rate of 16 3 per 1000 in the metropolis The annual death rate last week ranged from 4 4 in Hastings, 6 6 in Eastbourne, 6 8 in Enfield, 7 0 in Hornsey, and 7 6 in Newport (Mon), to 20 1 in Blackpool, 21 1 in Bury, 23 5 in Cambridge, 24 3 in Middlesbrough, and 29 1 in Gillingham

The 4697 deaths from all causes were 150 fewer than the number in the previous week, and included 449 which were referred to the principal epidemic diseases, against 439 and 489 in the two preceding weeks Of these 449 deaths, 215 resulted from measles, 90 from infantile diarrhœal diseases, 75 from whooping-cough 33 from diphtheria, 29 from scarlet fever, and 7 from enteric fever, but not one from small pox The mean annual death rate from these diseases was equal to 1 3, or 0 1 per 1000 less than in the previous week The deaths attributed to measles, which had been 309, 221, and 239, in the three preceding weeks, fell to 215 last week, and caused the highest annual death rates of 2 3 in Wigan, 2 4 in Sunderland, 2 5 in Derby, 3 3 in Sheffield, 4 5 in West Bromwich, and 6 2 in Middlesbrough The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 70, 64, and 75 in the three preceding weeks, further rose to 90 last week, and included 21 in London, 6 each in Liverpool and Manchester, and 4 each in West Ham and Birmingham The fatal cases of whooping cough, which had been 137, 90, and 90 in the three preceding weeks, further fell to 75 last week, of which 16 belonged to London and 4 each to Liverpool, Wigan, Manchester, Leeds, and Sheffield The deaths attributed to diphtheria, which had been 51, 31, and 50 in the three preceding weeks, fell to 33 last week, and included 9 in London and 2 each in Birkenhead, Liverpool, Bradford, and Sheffield The deaths referred to scarlet fever, which had been 20, 21, and 22 in the three preceding weeks, further rose to 29 last week, of which 5 were registered in London, 3 each in Bradford and Sheffield, and 2 each in Tottenham, Liverpool, Manchester, and Salford The fatal cases of enteric fever, which had been 15, 11, and 13 in the three preceding weeks, fell to 7 last week, of which 3 occurred in Manchester

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2286, 2252, and 2267 at the end of the three preceding weeks, had increased to 2336 on Saturday last, 330 new cases were admitted during the week, against 320, 257, and 327 in the three preceding weeks These hospitals also contained on Saturday last 1058 cases of diphtheria, 91 of measles, 49 of enteric fever, 12 of whooping-cough, and 1 of small pox. The 1103 deaths from all causes in London were 48 fewer than the number in the previous week and corresponded to an annual death rate of 12 7 per 1000 The deaths referred to diseases of the respiratory system, which had steadily declined from 469 to 181 in the eight preceding weeks, further fell to 165 last week, but were 22 in excess of the number in the corresponding week of last year

Of the 4697 deaths from all causes in the 96 towns, 279 resulted from different forms of violence and 401 were the subject of coroners' inquests, while 1394 occurred in public institutions The causes of 34, or 0 7 per cent, of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in London and in its 14 suburban districts, in Manchester, Sheffield Bristol, Bradford, Hull, and in 57 other smaller towns Of the 34 uncertified causes, 9 were registered in Birmingham, 3 in Liverpool, and 2 each in Gillingham, St Helens, Preston, South Shields, and Gateshead

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns, with an aggregate population estimated at 2,345,500 persons at the middle of this year, 1123 births and 806 deaths were registered during the week ended Saturday, June 12th The annual rate of mortality in these towns, which had been 16 1 18 2, and 18 9 per 1000 in the three preceding weeks, fell to 17 9 per 1000 in the week under notice During the first ten weeks of the current quarter the mean annual death rate in these towns averaged 18 8, against 16 0 per 1000 in the large English towns Among the several towns the death rate last week ranged from 7 1 in Kilmarnock, 10·0 in Motherwell, and 12·4 in Ayr, to 20 9 in Dundee, 22 0 in Leith, and 23 7 in Aberdeen

The 806 deaths from all causes were 42 fewer than in the previous week, and included 148 which were referred to the principal epidemic diseases, against numbers increasing from 90 to 147 in the three preceding weeks Of these 148 deaths, 80 resulted from measles, 40 from whooping-cough, 12 each from scarlet fever and infantile diarrhœal diseases, and 4 from diphtheria, but not one from enteric fever or from small pox The mean annual death rate from these diseases was equal to 3 3, against 1 3 per 1000 in the large English towns The deaths attributed to measles, which had been 36, 72, and 85 in the three preceding weeks, fell to 80 last week, and included 52 in Glasgow, 17 in Aberdeen, and 3 in Edinburgh The deaths referred to whooping-cough, which had been 40 43, and 40 in the three preceding weeks, were again 40 last week, of which 23 occurred in Glasgow 5 in Edinburgh, and 3 in Dundee The fatal cases of scarlet fever, which had been 6, 5, and 7 in the three preceding weeks, further rose to 12 last week, and comprised 6 in Glasgow, and 3 each in Edinburgh and Aberdeen The deaths of infants (under 2 years), attributed to diarrhœa and enteritis, which had been 5, 15, and 10 in the three preceding weeks, rose to 12 last week, and included 5 in Glasgow, 3 in Dundee, and 2 in Aberdeen The 4 fatal cases of diphtheria were 4 below the average in the earlier weeks of the quarter, and were all registered in Glasgow

The deaths referred to diseases of the respiratory system, which had been 117, 141, and 145 in the three preceding weeks, fell to 126 in the week under notice, but were 31 in excess of the number registered in the corresponding week of last year The deaths attributed to different forms of violence numbered 25, against 26 and 35 in the two preceding weeks

HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland, with an aggregate population estimated at 1,212,380 persons at the middle of this year, 536 births and 357 deaths were registered during the week ended Saturday, June 12th The annual rate of mortality in these towns, which had been 18 3, 16 4, and 17·0 per 1000 in the three preceding weeks, fell to 15·4 per 1000 in the week under notice During the first ten weeks of the current quarter the mean annual death rate in these towns averaged 19 3, against corresponding rates of 16·0 and 18 8 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 17·0 in Dublin (against 12 7 in London and 19 1 in Glasgow), 13 7 in Belfast 15 6 in Cork, 21 5 in Londonderry, 19 0 in Limerick, and 11 4 in Waterford, while in the 21 smaller towns the mean rate was 14 0 per 1000

The 357 deaths from all causes were 39 fewer than the number in the previous week, and included 21 which were referred to the principal epidemic diseases, against 20 and 27 in the two preceding weeks Of these 21 deaths, 9 resulted from whooping cough, 7 from measles, 2 each from diphtheria and infantile diarrhœal diseases, and 1 from scarlet fever, but not one from enteric fever or from small pox. The mean annual death rate from these diseases was equal to 0 9, against corresponding rates of 1 3 and 3 3 per 1000 in the English and Scotch towns respectively The deaths attributed to whooping cough, which had been 5, 3, and 5 in the three preceding weeks, further rose to 9 last week, and included 3 in Londonderry, and 2 each in Dublin and Cork The deaths referred to measles, which had been 9, 10, and 3 in the three preceding weeks, rose to 7 last week of which 5 occurred in Belfast The 2 deaths from diphtheria were registered in Dublin, those from infantile diarrhœa in Belfast and Queenstown, and the fatal case of scarlet fever in Belfast

The deaths referred to diseases of the respiratory system, which had been 93, 63, and 56 in the three preceding weeks, rose to 64 in the week under notice Of the 357 deaths from all causes, 107, or 30 per cent, occurred in public institutions, and 3 resulted from different forms of violence The causes of 8 or 2 2 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the 96 English towns the proportion of uncertified causes did not exceed 0 7 per cent

A FREE TUBERCULOSIS DISPENSARY AT ST BARTHOLOMEW'S HOSPITAL —A dispensary has been established at St Bartholomew's Hospital at which residents in the City or non resident workers suffering from any form of tuberculosis may receive advice and treatment free The dispensary, which is the outcome of an arrangement between the City Corporation and the hospital, is open between the hours of 12 30 and 2 30 P M on Tuesdays and Fridays Special cases receive attention on Thursday evenings

The War.

THE CASUALTY LIST

THE names of the following medical officers have appeared in the casualty lists since our last issue —

Killed Second Lieutenant A Clifford Clifford, 3rd Dragoon Guards, was a Guy's man and M.B Cantab , Lieutenant-Colonel J W Jessop, 4th Battalion Leicestershire Regiment (T.F), of Horncastle, Lincolnshire, was also a medical man (M.R C S , L.R C.P)

Died of wounds Surgeon T L G Stewart, R.N , Lieutenant D G Watson R.A.M C

Wounded Captain R M Dickson, R.A.M.C., Major G H. L Hammerton, Yorks Mounted Brigade F.A. (T F), Captain H. L Gregory, attached 7th Middlesex Regiment (T.F), Lieutenant G Bailey, 1st East Lancashire F A. (T F), Major T Holt, attached 6th Lancashire Fusiliers (T.F), Captain H Henry, attached 4th East Lancashire Regiment (T.F), all of the R A.M.C (T.F), Surgeon R Creasy, *Divisional F.A* , and Surgeon W Bradbury, Medical Unit, both of the R N , Captain R Knowles, I.M.S Lieutenant-Colonel W R Pearless, N.Z Army Medical Corps

DEATHS AMONG THE SONS OF MEDICAL MEN

The following must be added to the sons of medical men who have fallen in the war Second Lieutenant G F Blacker, only son of Dr A. E Blacker, of Clifton, Lieutenant-Commander R S Parsons, R.N., fifth son of Dr Charles Parsons, of Tunbridge Wells, Second Lieutenant T A. Heywood, only son of Dr T W Heywood, of Darwen, Major E L Baddeley, eldest son of the late Dr Baddeley, of Whalley, Lieutenant W A. Leland, eldest son of Dr Alfred Leland, of Kensington, Lieutenant E F Thorburn, youngest and only surviving son of Professor William Thorburn, of Manchester, Second Lieutenant A. J I. Donald, eldest son of Dr Archibald Donald of Manchester

THE BRITISH CASUALTIES

Mr. Asquith has now given to the House of Commons statistics regarding the casualties amongst officers and men of the Royal Navy, Royal Marines, and Royal Naval Division to May 31st The figures include the casualties resulting from the loss of the *Bulwark*, and other accidental losses The figures are as follows —

	Officers	Men.
Killed	549	7 696
Wounded	181	2 262
Missing	74	2,785
Total	804	12,743

This makes the total of casualties in the Senior Service of all ranks 13,547

In the House of Commons on June 9th Mr Asquith stated that our total casualties in the French and Mediterranean Expeditionary Forces up to the end of May (i e , for ten months) amounted to 10 955 officers and 247,114 non commissioned officers and men, killed, wounded, and missing the figures *not* including the losses among the naval forces that is, not including the figures given above Of the total losses in the army the killed numbered 3327 officers and 47,015 non commissioned officers and men. In no previous war of which we have accurate statistical records has there been so great a loss of life in a similar period of time, and the figures dealing with the army can be submitted to certain rough comparisons

Throughout the Crimean campaign the British losses were 2755 killed and 12,094 wounded, and our Allies lost 8250 killed and had 39,868 wounded In the Franco German War of 1870–71, during the whole period from July to April, the Germans had 17,570 killed and 96,189 wounded In the Russo Turkish War of 1877 the Russians lost 32,780 killed and had 71,268 wounded In the South African War there were 5256 killed in action and 26 286 wounded In the absence of authoritative statistics as to the numbers of men engaged, it is impossible to compare the relative losses by wounds and by death in the present campaign with previous experiences At Waterloo the British killed in action amounted to 4 85 per cent of the troops engaged, the wounded were 16 25 and the missing 2 19 per cent In the Crimea our losses were 2 81 per cent killed and 12 35 per cent wounded. In the Franco German War the German troops lost 1 97 per cent killed and 10 83 per cent by wounds In the South African War we lost 1·25 per cent of the force in battle and 2 46 per cent by disease

In an attempt to compare the conditions of the present campaign with those of previous wars, in regard to the amount of injury done by one force to the other, the points that must seem the most noticeable are the immense number of combatants, the great extent of the battle lines, the continuous character of the fighting, and the use by each side of arms of great precision, both small arms and artillery Never before has there been such a concurrence of factors towards the production of an enormous loss of life and limb, and in these circumstances there is little in past precedent to guide us in making any estimates or deductions We can, certainly, compare the relative proportions of the killed and wounded (including in the latter category the missing, who may be killed or may be prisoners) in the present war with the proportions that have prevailed in the past, and the figures are of better omen than would be expected The ratio is as 1 killed to 4·25 wounded and missing, or 23 5 per cent. In the Crimea the ratio of killed to the number wounded and missing was as 1 to 4 4, or 22 7 per cent , in the Franco-German War of 1870 it was as 1 to 5·70, or 17 53 per cent , in the Russo Turkish War it was as 1 to 2 17, or 45 98 per cent , in South Africa it was as 1 to 5, or 20 per cent The proportion of killed to wounded has therefore so far been similar to, but slightly in excess of, our experiences in the Crimea and South Africa.

Among officers, the proportion of killed to wounded has been in the present war much higher than in the case of the men—namely, as 1 to 2 3, or 43 61 per cent , it forms our main anxiety It is said, we do not know with what degree of truth or how widely it is applicable, that our opponents are not led into battle, but that their officers exhort them from the rear rank, and indeed sometimes have to apply some force to make their men advance This may be mere gossip, or arguing from the particular to the general and what has certainly taken place in some areas of fighting in the German ranks may have been assumed to be occurring universally At any rate, there neither is, nor ever has been, any doubt that the British officer (in the words of the drill book) "will lead his company in the assault' , he takes a greater risk, but he knows his men are with him and (2) that the reason for this is found in the difference of bionomics in the two species of rat?

Until Dr Brooks sets up some thesis more reasonable than that of my three contentions I hold that mine may stand

I am, Sir, yours faithfully,
C STRICKLAND,
Travelling Medical Entomologist, Federated Malay States Government
Malaria Bureau, Kuala Lumpur, F M S , May 5th 1915

DIAGNOSIS OF TUBERCULOSIS

To the Editor of THE LANCET

SIR,—The article by Dr G H Dart on this subject in THE LANCET of June 12th must have been of great interest to all those who are doing tuberculosis work, and who are, in consequence, examining numbers of contacts daily I think one and all will agree with Dr Dart with regard to the great difficulty in many cases of making a definite diagnosis, especially so in childhood, at the first examination I have a special opportunity of watching these difficult and anomalous cases at the Kensal House Open air School, which is under my medical supervision, and to which this particular class of case is admissible

It seems to me, from a clinician's standpoint, almost impossible to lay down any hard and fast rules with regard to symptoms, physical signs, or special tests (such as Moro's, von Pirquet, &c), as to which case should be classed as "definite" and which "suspect," as there are never two cases exactly alike, consequently each case must be judged, so to speak, on its own merits Then, again, in many cases the final diagnosis can only be made after having had the child under observation in an open air school or some such institution for some considerable time

It is obvious that no scheme for dealing with tuberculosis can be complete without an open air school —I am, Sir, yours faithfully,
R SEPTIMUS WALKER,
Medical Officer Paddington Tuberculosis Dispensary
June 15th, 1915

PULSUS ALTERNANS

To the Editor of THE LANCET

SIR,—Dr J Davenport Windle's comments in THE LANCET of June 12th on one of the tracings attached to my paper on pulsus alternans, which appeared in your issue of May 29th, are of very considerable interest, and, as I well know, the subject is one on which he speaks with special authority Nevertheless, I think I can assure him that the tracing was not produced in the way he suggests The patient was not the subject of laboured breathing, and in whatever position she was placed a tracing some 12 or 14 inches in length exhibited throughout the perfectly regular alternation which is displayed in the short example Perhaps it may be well to add that the tracing was taken not through the agency of a tambour, but directly by Dudgeon's sphygmograph Dr Windle's second point is of great importance, as it proposes a method of distinguishing between a pulsus alternans which is of serious import and one which is free from anxious significance But is he not a little severe in challenging my tracing as a true picture of pulsus alternans because of the absence of a feature which, as he himself says, has not hitherto been mentioned as one of the characteristics of this condition? If the tracing conforms to the recognised descriptions it may surely claim the corresponding title, though the new test proposed by Dr Windle may be a possible method of appraising its exact prognostic significance The measurements on which he insists must obviously receive the attention of all who are interested in graphic methods, and on this particular issue it would be of interest to have his opinion on my Fig 1 (*a*) where the downstroke of the weaker beat is definitely shorter than that of the stronger This tracing would therefore seem to satisfy the new condition which he presents as essential to a true pulsus alternans But both Fig 1 (*a*) and Fig 6 (*a*) are tracings taken from one and the same patient

May I be allowed a word in recognition of Sir James Goodhart's interesting letter in your issue of June 5th? The question he raises of the relative values of sphygmometric and sphygmographic records does not seem to have engaged the attention it merits In THE LANCET of Feb 18th, 1911, I tried to show that the sphygmometer can at the best relate only to level or height of pressure, while for information relative to the duration of pressure and to the fashion of its decline an appeal must be made to the sphygmograph On the other hand, at least such was my claim, the sphygmograph makes no announcement of the height to which the pressure rises, and therefore the terms "high pressure" and "low pressure," as commonly applied to its readings, are unjustified and misleading I am, Sir, yours faithfully,
June 14th, 1915 C O HAWTHORNE

THE GRATUITOUS TREATMENT OF DEPENDENTS

To the Editor of THE LANCET

SIR,—I was glad to see the letter of "M D" in THE LANCET last week At the beginning of the war, when this was proposed, no one realised what the nation was in for, and the suggestion was quite fitting and proper Now that the matter has grown to such dimensions it is becoming a burden The whole service should be properly arranged with fitting remuneration As it is, half my patients now come under this category, and soon some of us on whom an unfair share of this work happens to fall will find themselves unable to continue Other State work is remunerated, why not this?

I am, Sir, yours faithfully,
June 14th, 1915 SATIS

⁂ By the same post a letter from a correspondent in Vancouver reaches us saying "At the commencement of the war the Medical Society of Victoria, British Columbia, decided that wives and children of soldiers on active service should be attended gratuitously, but owing to great abuse of the members' services that resolution has now been rescinded."—ED L

LITERARY INTELLIGENCE —Messrs Henry Frowde and Hodder and Stoughton announce the publication within the next few weeks of a series of Oxford War Primers of Medicine and Surgery, to be written mainly by medical officers in the naval and military services who have had special experience of the subjects The series will be issued under the general editorship of *Lieutenant-Colonel* D Arcy Power, R.A.M C (T)

DEATH OF AN ABERDEEN MEDICAL MAN —Dr J E Fowler, a well known medical practitioner in the Woodside district of Aberdeen died on June 11th in the seventy sixth year of his age The whole of his professional life had been spent in the district where he lived and he took a keen interest in public affairs When Woodside was a separate burgh he held the office of Provost recommended the board to offer to the War Office the female mental wards of their infirmary besides the wards already offered and accepted, with a view to bringing up the hospital accommodation to 500 and meet the problems of staffing and stores As it was shown that ample *accommodation* was available elsewhere *for the present* occupants of the wards the scheme was approved —The Welsh Metropolitan Military Hospital, with accommodation for 900, was formally opened at the Cardiff Mental Hospital on June 9th The hospital was handed over rent free the staff being retained, with military commissions, under the same conditions of pay and service as heretofore The commandant is Lieutenant-Colonel E Goodall the former medical superintendent —Windlesham Moor, Surrey providing accommodation for 40 wounded men, has been opened as a military hospital, the owner, Mr L. B Peters having equipped it for that purpose —A large first-line military hospital is to be erected by the Scottish Branch of the Red Cross Society in Bellahouston Park, Glasgow It is to contain 700 beds

Wounded Allies Relief Committee —The committee has appointed as Médecin Chef to the Hôpital Militaire Anglais Limoges Mr C E S Jackson, honorary surgeon of the West Norfolk and Lynn Hospital, and senior assistant medical officer to the Queen Mary s Hospital for Children Carshalton. The position of Médecin Chef at the Hôpital Militaire 27a, Dieppe has been accepted by Captain Owen Paget, of the Australian Army Medical Corps, medical officer of health, Fremantle, Australia. These hospitals, which together treat an average of 300 cases weekly are entirely supported by the committee and have the approval of the French military authorities

The doctor at present in charge of the Wounded Allies Relief Committee s typhus hospital at Kragujevac, Serbia, writes as follows "I think I have succeeded in making the best use of an old artillery stable It is nothing more or less than a stable which they have given us for our hospital Everything has been concreted and whitewashed, the sanitary arrangements are very satisfactory, we have water close to the hospital for baths and laundry In fact, the Wounded Allies *Relief Committee s hospital* is the cleanest and the smartest hospital at Kragujevac With the 12 *nurses* whom you have sent out the nursing staff is more than adequate The hospital will become a *surgical one as* soon as possible—that is to say, we are awaiting the surgical instruments to *start work* All the staff are quite well and are working with courage and goodwill. The only thing that troubles us is that we have no English papers The hospital accommodates 100 *patients, and Colonel* Joseph A Hearne recently left England to take up the position of medical *superintendent* In the meantime the medical work is being admirably performed by two Belgian doctors

The British Farmers' Red Cross Fund —A further sum of £5000 has been sent by the British Farmers Red Cross Society *to the British Red* Cross to pay for the British Farmers' Enteric Hospital at Calais This makes £8000 in all The Fund has also sent two complete hospitals to Serbia. It is intended to appropriate the next £20 000 collected *for* the wounded among the British forces at the Dardanelles

Schools as Military Hospitals —From the annual report of the Board *of Education* it appears that by the month *of* April the military authorities had taken over for hospital *purposes* 60 elementary and 17 secondary schools 3 training colleges and 2 universities In addition, there were in occupation as billets *stores* &c., 178 elementary and 18 secondary schools 14 technical schools and 2 training colleges In the great majority of cases the loss of the school premises has not been allowed to stop the work of the school Local authorities *managers* and teachers by their efforts have succeeded in minimising the results of this interruption

Corstorphine Hospital Beds at Rouen and Boulogne.—As a result of the *appeal for* funds in the parish of Corstorphine the sum of £234 12s 6d has been collected and it has been decided to endow two beds—one at Rouen and another at Boulogne—the surplus funds being reserved for administration by the Edinburgh Committee of the Red Cross Association

Medical News.

Royal College of Surgeons of England —*An ordinary meeting* of the Council was held on June 10th, Sir Frederic Eve, senior Vice-President, being in the chair The secretary reported that the President left England on May 29th *to carry out duties* assigned to him by the Admiralty, and would probably be absent for about three weeks A letter was read from Mr C A. Ballance stating that he was going to Malta by *request of* the War Office and asking the Council to sanction his absence from their meetings Leave of absence was given A report was read from the Board of Examiners in Anatomy and Physiology for the Fellowship stating that at the recent examination 42 candidates were examined of whom 14 were approved and 28 rejected A report was read from the Court of *Examiners* stating that at the recent examination for the Fellowship 24 candidates were examined, of whom 8 were approved and 16 rejected The following are the names and medical schools of the successful candidates —

Shridhar Bheekajee Gadgil B.A Bombay M R C S L.R C P Bombay University and University College Hospital Robert Edward Collins M.B Edin. M R C S L.R.C P Edinburgh University and St Bartholomew s Hospital Louis Carnac Rivett M.R.C S L.R C P Cambridge University and Middlesex Hospital Lalit Mohan Banerji M.S Calcutta, M.R.C S L.R.C P Calcutta Medical College and St Bartholomew's Hospital Arthur Oliver Gray M.R C S L.R C P Middlesex and St Bartholomew s Hospitals James Renfrew White M.B., Ch.B New Zealand M.R C S L.R.C.P Otago University and Middlesex Hospital Charles Jennings Marshall M D Lond M R.C S L.R C P., Charing Cross *Hospital* and Benjamin Thomas Edye M B., Ch M Sydney Sydney University and St. Bartholomew s Hospital

Diplomas of Member were also conferred upon the following gentlemen who have now complied with the by-laws —

George Maudsley Jackson Bristol University and Charles Wainwright Fort Manchester University

In accordance with a report from the Board of Examiners in Dental Surgery it was resolved to issue Licences in Dental Surgery to the following successful candidates —

Arthur Bramston Austin Middlesex and Royal Dental Hospitals, Edward Doane Barrows D M D Harvard Charing Cross and Royal Dental Hospitals John Leycester Dudley Buxton University *College* and Royal Dental Hospitals James Arthur Balfour Carson, Middlesex and Royal Dental Hospitals Leopold Harold Cross Guy s *Hospital* Wilfrid Arthur Culverwell, Bristol University and Royal Dental Hospital William Robert Davies Liverpool University *Ernest Archibald Dawson* Guy s Hospital John William Edgar Middlesex and National Dental Hospitals Julius Gillis *Middlesex and Royal Dental Hospitals* Cyril Bowdler Henry Westminster and Royal Dental Hospitals Walter Sebastian Herman B.A. Cantab Cambridge *University* and London Hospital Francis William Holgreaves Liverpool University Arthur Edmund Lowein and Launcelot Machin *Guy s Hospital* Albert Victor Milnes Liverpool University Leonard Stanley Pilbeam and Petrus Lafras van Schalkwijk Guy s Hospital Herbert Vernon Manchester University Willem Jacobus Rousseau Viljoen Guy s Hospital William Harold Waldman Middlesex and *Royal* Dental Hospitals Frederick Harry Wallace, Guy's Hospital and Leslie Williams Birmingham University

It was resolved to close the Museum until further notice The Council proceeded to elect the examiners *for* the ensuing year, and all the present examiners were re elected

A Member who had been guilty of advertising was removed from the roll.

Death of Dr George Moore —Dr George Moore, who died recently in his eighty fourth year at Torquay, practised formerly in Hartlepool where he was honorary physician to the Hartlepool *Hospital* and medical officer of health and later in *Jersey*, where he was medical superintendent of the lunatic asylum. A student at the Middlesex *Hospital* he took the M R C S in 1853, proceeding later to the M D of St Andrews

Women s Hospital for Children, Harrow-road —At the annual court of this hospital, which was held at Kensington Town hall on June 10th, a special *appeal* was made *for* funds to endow an adequate in patient department Countess Brassey Lady Hall, Miss E Robins *Dr L Garrett* Anderson, and Dr Flora Murray urged the need of the hospital which is staffed entirely by women and situated in a crowded district. At present the in patients' department has only seven cots Treatment is given to children up to the age of 14 years

TEMPORARY MEDICAL COMMISSIONS AND COMPENSATION

A medical correspondent asks us whether any arrangements are made, either by the Government, the insurance companies, or the medical profession, to give compensation to any medical man who may either be killed or suffer the loss of a limb or other organ in the war The gentleman in question had been passed for life assurance by a leading company, but when they learnt that he had applied for a temporary commission in the R A M C they declined the risk absolutely As we have had many similar queries, it seems likely that a general statement will be of widespread service So far as the medical profession is concerned no provision for the granting of such compensation has been made

As to insurance offices, it is a purely individual matter between the individual candidate and the individual insurance company It seems quite likely that while perhaps some arrangement could be arrived at between old policy holders and their company, insurance offices would for the most part decline to take new proposals from those who contemplate going to the front In any case there would probably be additional premiums for war risk

With regard to the Government, we are informed by the military authorities that officers (under the rank of colonel) of the Special Reserve of Officers, the Territorial Forces, and those holding only temporary commissions for the purposes of the present war, all stand on exactly the same footing as officers of the Regular Army with regard to compensation for themselves in case of wounds, disease, injury, or disablement consequent on duty, and pensions and compassionate allowances for their families and dependents in case of death What these gratuities, pensions, and compassionate allowances are under varying conditions and for different ranks in the service can be learnt from the Royal Warrant for Pay, Appointment, Promotion, and Non effective Pay in the Army, 1914 (Sections X. and XI, Paras 639 to 680), to be obtained, price 6*d*, either directly or through any bookseller, from Wyman and Sons, Limited, London and Cardiff, H M Stationery Office, Edinburgh, and E Ponsonby, Limited, Dublin

WAR SERVICE AND THE BRIGHTON MEDICAL PROFESSION

The Brighton Division of the British Medical Association has adopted the following scheme for assisting medical men who are rendering medical war service A copy of the scheme has been sent to all practitioners in the area, who are invited to sign the following declaration and return it to Mr E Burchell, the honorary secretary —

I am willing, during the conditions of emergency caused by the war, to attend, on the terms and conditions formulated below, the patients of other practitioners in this district who are engaged on military duties I will not attend on my own behalf any patient of a practitioner for whom I have acted under this agreement within one year from the termination of that practitioner's military duties I agree to accept half of all fees earned as payment for the services I render, or, in the cases of insured persons, a portion of half the quarterly cheque received from the Insurance Committee which shall be determined by the number of insured persons attended by me during that quarter If I wish to withdraw from this undertaking I will give the Hon Sec of the Executive Committee Brighton Division B M A not less than 14 days notice I am willing to undertake (1) Private practice, (2) practice under the Insurance Act, (3) Poor law practice (4) Although unable to undertake work in any of the kinds of practice enumerated I agree to be bound by the principles of the scheme [The signatory deletes those kinds of practice he is not willing to undertake]

From the signatures to this undertaking a list of all practitioners willing to attend patients of absentees on war service is drawn up, and any practitioner leaving on military service may select by agreement with them any or all of the practitioners on the list to attend his patients, it being understood, of course, that only those willing to attend Insurance Act or Poor law patients shall be called upon to do so A circular letter, of which the following is the approved form, is sent to all the patients whose names have been on the books of the doctor for the previous two years and who, there is no reason to suppose, have since become patients of another doctor —

Dr X desires to inform you that, having undertaken military duties, he will be absent from his practice after , 191 By mutual arrangement, the doctors named below have undertaken to attend his patients during his absence To assist in carrying out this arrangement, you are particularly requested to inform the doctor whose services you require that Dr X is your usual medical attendant Those doctors whose names are marked with an asterisk are willing to attend patients under the Insurance Act, and insured persons on Dr X's list calling in another doctor will remain on that doctor's list until the return of Dr X

The patients on receipt of this circular will select from the list appended thereto by their own medical attendant one of the doctors named thereon, with limitations already specified as to the kind of practice The payment to the substitute doctor in the case of private patients shall be half of all fees earned, the fees being those usually charged by the absent practitioner In Insurance Act cases one half of the quarterly cheque from the Insurance Committee shall be retained by the absent doctor, the other half being divided pro rata among those doctors who have attended his insurance patients The accounts for medical attendance undertaken on behalf of the military medical man shall be sent out by him or by some one appointed by him, and it is urged that he leave power of attorney with some person to act for him during his absence All sorts of professional services, including consultations, inquests, court fees, and so on, rendered in consequence of such introduction to a military medical man's patients are to be regarded as services rendered on his behalf Out of pocket expenses shall be divided equally between the absent doctor and his substitute, who must keep full records of all attendances and prescriptions given and forward them within 14 days after each quarter day to the absent doctor or his nominee On returning to practice from military duties the medical man shall make within six months all payments due to those doctors who have acted as his substitutes

NEW MILITARY HOSPITALS —The Newcastle City Lunatic Asylum at Gosforth is being transformed into a military hospital Some 400 wounded men are now being accommodated there and when the work is complete it will be able to take 1040 Colonel Prescott, R A M C is in command —Highbury Moor Green, the residence of the late Right Hon Joseph Chamberlain, now a hospital under the control of the 1st Southern General Hospital, received its first batch of 40 wounded men recently The hospital is to accommodate 145 It is staffed entirely by the Voluntary Aid Detachment from the 30th Worcestershire Division —The war hospital committee of the Stoke board of guardians has of dwellings, and whether it was to be addressed to rural district as well as to county borough and urban district councils.—Mr LONG replied: The circular referred to was issued last month[1] to urban authorities. I am considering the issue of another circular to all sanitary authorities urging special precautions for the prevention of disease during the summer months.

Notification of Births Act.

Mr. LOUGH asked the President of the Local Government Board whether his attention had been drawn to the increase of infant mortality both in London and throughout the country, and whether having regard to the seriousness and urgency of this question in its relation to the problems created by the war, he could see his way to introduce and pass as an uncontentious measure a Bill which, by the more stringent enforcement of the prompt registration of births, the greater safeguarding of the health of mothers the establishment of public crèches, or other methods, might tend to abate this evil.—Mr LONG answered: I am fully aware of the importance of this matter, and as I intimated to a deputation on Thursday last, I am anxious to introduce without delay a measure making the Notification of Births Act of general application and conferring certain powers on local authorities for safeguarding the health of infants and expectant mothers. I shall be glad if honourable Members will coöperate with me in securing the unopposed passage of the Bill.

Treatment of Nerve-Strain amongst Soldiers.

Mr. RENDALL asked the Under Secretary for War to state the names of the clearing houses to which soldiers of the rank and file when disabled by nerve strain were sent on arrival from the front, and the names of the military hospitals specially adapted for the treatment of uncertifiable cases of mental strain, how many of these border line cases were at present in each one of these institutions, indicating at the same time for what purpose the institution was used previous to being commandeered, and in how many instances these uncertifiable cases had been put in charge of medical officers now gazetted officers of the Royal Army Medical Corps who, up to the time when the institutions were commandeered, belonged to the asylum service and still retained that status in addition to their military status.—Mr TENNANT said in reply: The clearing houses are the Royal Victoria Hospital, Netley, and the 4th London (T.F.) General Hospital, Denmark Hill. These cases are sent to various military hospitals throughout the country and special neurological sections have been established in connexion with the Territorial Force general hospitals so as to bring the patients under the observation of the eminent neurologists at these centres. It is not possible with any degree of accuracy to give the numbers of what my honourable friend calls "border line cases." The Red Cross Military Hospital, Maghull, and the Springfield War Hospital were taken over as military hospitals through the Board of Control and the superintendents of these institutions were appointed to the charge of the military hospitals when they were taken over. For the time they are purely military medical officers.

Mr RENDALL asked the Under Secretary of State for War whether the new military hospital shortly to be opened at Napsbury had been known for years as a county lunatic asylum, whether its lunacy staff of medical officers were to be retained to take charge of nerve-shattered soldiers without any appeal or judicial investigation and whether he would consider the possibility, as an alternative of treating transiently acute cases of nerve-shock in the same way as delirious cases were treated on medical lines in ordinary hospitals and so save both the injured soldiers and their families from the opprobrium associated with having been treated in a lunatic asylum.—Mr. TENNANT replied: The answer to the first two parts of the question is in the affirmative but I am unaware what appeal or judicial investigation is contemplated by my honourable friend. The cases of nerve-shock to which the word "transient" may be applicable will be sent to military hospitals. I can assure my honourable friend that neither the desire nor the intention is lacking in my military medical advisers to save the soldiers and their families from the opprobrium associated with having been treated in a lunatic asylum.

Battalion Medical Officers.

Sir PHILIP MAGNUS asked the Under Secretary for War whether there was any shortage of battalion medical officers in the army; if so what steps were being taken to remedy such shortage, and whether the Army Medical Department was conferring with the official representatives of the medical profession in this country with a view to the better organisation of the medical profession for war purposes.—Mr TENNANT answered: There is not at present any shortage of battalion medical officers but more are still required in order that the needs of the new Army and the Territorial Force may be fully supplied. Considerable numbers are being engaged every week, and the Director General of the Army Medical Service is receiving every support from the official representatives of the civil medical profession with whom, not only on this but also on other matters affecting the health and well being of the troops, he is in constant and cordial relations.

The King George Hospital.

Sir PHILIP MAGNUS asked the Under Secretary for War whether he could state how many medical officers were at present employed at the King George Hospital, Stamford-street, how many of these were of military age, what was the proportion of such officers to the number of patients and how that proportion compared with the proportion of medical officers to patients in the general medical hospitals; whether men above the age of 40 were eligible for appointments at the King George Hospital, and whether the staff of younger men might be reduced if they were assisted by medical men over 40 years of age working part time.—Mr. TENNANT said in reply: The medical officers of this hospital were appointed by the Red Cross Society and I understand that there are 25 resident and 24 are of military age; though I cannot say how many of these are, in fact eligible for any service. There is one medical officer to 65 beds, which is a somewhat more favourable proportion than in other hospitals. An arrangement of part-time service would not be convenient I believe; but I sympathise with the object the honourable gentleman has in view and inquiries will be made to see whether any of the junior medical officers who are eligible could be released for general medical service with the army.

Precautions against Asphyxiating Gases.

Sir ARTHUR MARKHAM asked the Under Secretary for War 1. Whether, seeing that Dr. Haldane was requested by the Government to report on the poisonous gases used by the Germans he was aware that Dr Haldane at once instructed Mr S. F. Winmill, B.A., B.Sc., chief chemist of the Doncaster Coalowners Scientific Research Committee, to make tests of the best forms of respirators for the use of the troops; and that Dr. Haldane stated that the form of respirator proposed to be issued by the War Office was of no value whatever, whether, notwithstanding this, Lord Kitchener made an appeal to the women of the country to make these respirators; whether many men at Hill 60 lost their lives at Hill 60 when using this respirator, and whether the Director General of Medical Services was consulted and approved this pattern of respirator. 2. Whether, seeing that Mr Winmill had presented a report to the Doncaster Coalowners Scientific Research Committee that men could, if they took certain precautions, evade poison gases without even using respirators, he would say whether Dr Haldane and Mr Winmill had been asked by the War Office to make any report on the question, whether, if no such report had been asked for, he would at once ask Dr Haldane to make a brief report stating the precautions which would prevent loss of life even though no respirator was used or available and would he see that this report was at once sent to General Sir John French. 3. Whether he was aware that Dr Haldane was recognised in all countries as one of the greatest living physiologists, his books being the recognised standard authority; whether he was aware that Dr Haldane had for years past given his services to the Home Office to assist in obtaining a reliable breathing apparatus for use in mines, and whether he was aware that Dr Haldane has made innumerable tests of all types of breathing apparatus.—Mr TENNANT answered: The eminence of Dr Haldane as an authority is of course well known and he has advised the War Office on the matter in question and continues to advise. The type of respirator used at the outset was that approved by the Admiralty, and it was adopted with the approval of the Director General of the Army Medical Service until a more suitable type could be devised for the special circumstances. I have on previous occasions explained the circumstances in which an appeal was made to the public. I have no knowledge of the report made by Mr Winmill, but I may inform my honourable friend that Dr Haldane has already indicated certain protective measures that may be taken by troops, if they happen to be without one of the authorised respirators, and the necessary instructions have been given by the military authorities in France. The means of protection now in use are reported on most favourably by the authorities in France. Recourse has been had in studying these problems to all the best brains in the country.

TUESDAY, JUNE 15TH.

Notification of Births Act.

Mr SNOWDEN asked the President of the Local Government Board whether he was aware that the latest return of the Registrar of Births showed that the birth rate in London was now from 400 to 500 per week below the average of the last five years; that children had been dying in London during the last 13 weeks at the rate of 200 per week above

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[1] THE LANCET, June 5th, p. 11[illegible].

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Naval Casualties

Mr ASQUITH has now given to the House of Commons statistics regarding the casualties amongst officers and men of the Royal Navy, Royal Marines, and Royal Naval Division to May 31st The figures include the casualties resulting from the loss of the *Bulwark* and other accidental losses The figures are as follows —

	Officers	Men
Killed	549	7,696
Wounded	181	2,262
Missing	74	2,785
Total	804	12,743

This makes the total of casualties of all ranks 13,547

Milk and Dairies Acts Postponement Bill

A Bill has been introduced in the House of Commons by Mr HAYES FISHER, on behalf of the Government to postpone the operation of the Milk and Dairies Act, 1914, and the Milk and Dairies (Scotland) Act, 1914 It was read a first time

HOUSE OF COMMONS

THURSDAY, JUNE 10TH

The War and Epidemics

Mr GINNELL asked the Under Secretary for Foreign Affairs whether any international, precautionary or preventive measures were being taken, or instructions issued, against the danger of plague, cholera or other rapidly spreading disease arising from the war, and, if not, whether the most competent medical advice on the subject would be obtained and made public at the earliest possible date —Lord ROBERT CECIL replied Discussions are in progress between French and British experts as to measures to be taken for the prevention of epidemics, and the civil population will receive ample warning and advice should any danger arise

Medical Consultants to the Navy

Mr JOYNSON-HICKS asked the Secretary to the Admiralty when the contracts with the six medical men who were receiving £5000 a year from the Admiralty expired, and whether, having regard to the fact that equally eminent doctors were serving with the army at the front for the ordinary pay of Royal Army Medical Corps officers, he would determine the Admiralty contracts at the earliest possible moment —Mr MACNAMARA answered The question is receiving consideration I hope a statement may be made shortly

Treatment of Mental Strain amongst Soldiers

Mr RENDALL asked the Under Secretary for War whether cases, which in civilian life were uncertifiable, were amongst soldiers being treated as incipiently insane by being placed not under general physicians but under medical officers whose practice as regarded experience in nervous disturbance had been limited to their practice in asylums for the insane, if so, whether such uncertifiable patients as had been subjected to lunacy control had no right, while still in the army, which was comparable to the right possessed by civilians of appeal to a magistrate, and what steps he proposed to take to give soldiers rights equal to those possessed by all civilians —Mr TENNANT said in reply Uncertifiable cases of nervous disturbance are being treated in the neurological sections of general hospitals and in addition in two institutions which have been taken over from the Board of Control as military hospitals In the former they are under the care of selected general physicians and neurologists, in the latter under physicians whose previous experience has been largely that obtained in practice in mental institutions In all such hospitals the patients have exactly the same rights as a soldier undergoing treatment in a purely military hospital, such as the Herbert Hospital at Woolwich which existed as such in times of peace

Mr RENDALL May I take it now that the soldiers are placed under the control of lunacy doctors, and while under such control have not the right of appeal which ordinary civilians have to a magistrate?—Mr TENNANT I do not think that is a fair deduction to make from my answer

Mr RENDALL But is not this the arrangement that the doctors under whom soldiers are placed when they break down mentally, although they are lunacy doctors and have at some time been connected with lunacy establishments, have a right to certify, and that the soldiers have been put under these doctors without any power of appeal?—Mr TENNANT I think that the statement of my honourable friend goes a little beyond the information I have given him It is a fact that these medical men have had previous lunacy experience, but they do not necessarily exercise and are not necessarily vested with the same powers as those with which they are vested during peace time over civilians In these military cases, as I have said, the patient has the same right as a soldier undergoing treatment in a purely military hospital

Mr RENDALL Are greater powers not now exercised without there being any right of appeal?—Mr TENNANT No sir

Colonel YATE May we take that as an assurance that soldiers who break down mentally temporarily are not placed in lunatic asylums?—Mr TENNANT I have already informed the House that strict orders have been given that cases of this kind are not to be treated as incurable until it is absolutely certain that they are incurable Every chance is given for the man to be cured.

Colonel YATE In the meantime they are not placed in an asylum?—Mr TENNANT No, that is right

Mr RENDALL Is any mental case certified while under military control?—Mr TENNANT Mental cases are not certified until it is necessary to discharge them from the service

Mr RENDALL asked the right honourable gentleman to state the names of the clearing houses to which soldiers of the rank and file when disabled by nerve strain were sent on arrival from the front and the names of the military hospitals specially adapted for the treatment of uncertifiable cases of mental strain how many of these border-line cases were at present in each one of these institutions, indicating at the same time for what purpose the institution was used previous to being commandeered, and in how many instances these uncertifiable cases had been put in charge of medical officers now gazetted officers of the Royal Army Medical Corps who, up to the time when the institutions were commandeered, belonged to the asylum service and who still retained that status in addition to their military status —Mr TENNANT replied I am obtaining this information

Mr AUGUSTINE ROCHE asked the right honourable gentleman whether soldiers invalided from the front, or who had temporarily lost their mental balance, were to be maintained out of Imperial funds —Mr TENNANT answered Soldiers who have temporarily lost their mental balance while with the armies in the field, are at present being retained in the army under treatment at the public expense

Mr RENDALL Is it a fact that many soldiers have been put in lunatic asylums in this country?—Mr TENNANT The number is about 17

Mr RENDALL Then there have been some?—Mr TENNANT By mistake

Mr O'DONNELL Will the men go on the local rates after they are declared to be incurable?—Mr TENNANT I think they go on the local rates, but I am not quite sure

Naval Surgeons in Charge of Hospital Ships

Commander BELLAIRS asked the Under Secretary for War whether the naval surgeons in charge of hospital ships having the rank of fleet-surgeon in the Royal Navy had been given the rank of major in the Royal Army Medical Corps, and whether, having regard to the fact that a fleet surgeon ranked with a lieutenant-colonel, the latter rank could be accorded to them, no question of pay being involved, instead of degrading them one step in rank —Mr TENNANT wrote in reply These officers voluntarily offered their services and accepted the rank of major They have no experience for army requirements beyond that which is to be obtained by medical charge of hospital ships, and are not, therefore, eligible for service in the rank of lieutenant colonel

Housing Accommodation in Wrexham

Mr WARDLE asked the President of the Local Government Board what action the Board had taken, or intended to take, in connexion with the neglect of the Wrexham town council to carry out the recommendations of the Board, based upon an inquiry held in 1913, to build at least 30 houses suitable for the working classes, whether he was aware that in the report of the Wrexham medical officer of health for 1914 it was stated that at that time there was not a single house vacant at a week's rental of 6s or less, and whether, in view of the scarcity of working class accommodation in Wrexham pressure would be brought to bear on the local authority to take steps to meet the admitted need —Mr W LONG answered The Local Government Board has been in communication with the town council of Wrexham in regard to the provision of houses for the working classes, and the council has made application for sanction to a loan for the erection of 30 houses A local inquiry in regard to the matter is to be held on June 17th

MONDAY, JUNE 14TH

Accumulations of Refuse

Sir J D REES asked the President of the Local Government Board whether he had issued his proposed circular regarding the accumulation of refuse in the neighbourhood

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon unmarried Salary £250 per annum with board residence &c.

VENTNOR, ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Isle of Wight.—Assistant Resident Medical Officer

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon and Anæsthetist Salary £150 per annum with board residence and laundry

WARRINGTON INFIRMARY AND DISPENSARY —Senior and Junior House Surgeons Salary £180 and £120 per annum respectively with board apartments and laundry

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon unmarried. Salary £150 and £120 per annum respectively with residence board and laundry

WEST HAM AND EASTERN GENERAL HOSPITAL.—Resident Medical *Officer Salary £160 per annum* Also House Physicians and House Surgeons Salary £120 and £100 per annum respectively with board residence and washing

WEST HAM UNION —Third Assistant Medical Officer and Fourth Female Assistant Resident Medical Officer at Infirmary Whipps Cross road Leytonstone N E Salary £200 and £180 per annum respectively Also Female Resident Assistant Medical Officer at Workhouse Union road, Leytonstone N E Salary £180 per annum Each with usual residential allowances

WIGAN ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY — Junior House Surgeon Salary £150 per annum, with board apartments and washing

THE Chief Inspector of Factories, Home Office London S W gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Buckhaven in the county of Fife at Kirkham in the county of Lancaster at Market Bosworth in the county of Leicester and at Rothes in the county of Elgin

Births, Marriages, and Deaths.

BIRTHS

BOURNE.—On June 13th at *Nottingham place, W , the wife of* Lieutenant A. W Bourne F R C S of a daughter

LINTON —On June 14th at Tunbridge Wells to the wife of Captain F C Linton R A.M C (T) a son and a daughter

MILLIGAN —On June 4th at Hessle Yorks to Dr and Mrs H P Milligan a son

ROPER.—On June 8th at Biscovey House Par Cornwall to Dr and Mrs Charles Rop r a son

WEBB —On June 9th at Moreton " Park Drive Hampstead to Lieutenant G Harvey D Webb R.A M C (T F) and Mrs Harvey Webb a daughter

MARRIAGES

EVANS—RUTHERFORD —On June 10th at Dunkeld Cathedral Albert Edward Evans M.B to Jessie Dorothy second daughter of the Rev T R. Rutherford M A Minister of Dunkeld.

PARROTT—MEADE.—On June 15th at S . Michael s Church Greinton Harold Winnock Parrott M B B S son of A. G Parrott M R C S L.R C P of Shanghai to Ella Mary daughter of Mr and Mrs Frank Meade of Greinton Somerset.

ROOK—CALWAY —On June 12th at St. George s Church Wilton Taunton Henry Colwell Rook, Lieutenant, R A M C (S R) to Alice Marguerite elder daughter of Mr and Mrs. F Calway, of Henley Lodge Taunton

SCHOFIELD—OVER —On June 11th at Crowthorne Berks Harry Schofield R A M C to Nellie fourth daughter of Mr and Mrs H Over Wellesley House Crowthorne, Berks.

DEATHS

HOLLIS —On June 4th at Tower House Freshwater Isle of Wight, Alfred Hollis M D aged 69 years

MOORE.—On June 10th at Torquay George Moore M D J P in his 84th year

TREWMAN —On June 13th, suddenly George Turner Trewman, Lieutenant Colonel R A.M C aged 59 years

N.B — A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

BOOKS, ETC , RECEIVED

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION Baltimore, U S.A.
Proceedings of 70th Annual Meeting May 1914 Vol XXI

ARNOLD EDWARD London
Urgent Symptoms in Medical Practice By Robert Saundby M D Edin Lt. Col R A.M C T Price 7s 6d net

BAILLIÈRE, TINDALL, AND COX London
The Selection of the Recruit By Captain S J Beggs M.D R A M C (Reserve of Officers) Price 2s 6d. net

BALE, JOHN SONS AND DANIELSSON London
A Practical Manual of Tuberculosis for Nurses By L. T Burra M D Oxon Price 2s net

CHAPMAN AND HALL, LIMITED London
Drink and the War: From the Patriotic Point of View By Marr Murray Price 1s net

CHURCHILL, J AND A., London
Sanitation in War By Major P S Lelean F R C S D P H., R.A.M C. With an Introduction by Surgeon General Sir Alfred Keogh K C B F R.C I Price 5s net

HEINEMANN WILLIAM London
The Book of the Fly: A Nature Study of the House-fly and its Kin By G Hurlstone Hardy With an Introduction by Halford Ross. Price 2s 6d net.

Notes, Short Comments, and Answers to Correspondents.

MONSTERS AND SCHRECKLICHKEIT

So the "*wild girl of* Naini Tal," who received notice in these pages some months ago, is now pronounced on good authority to be an ordinary imbecile All men are inclined to be mythopoetic in such matters, for there lingers in the human breast a tendency to discover prodigies, inherited from savage ancestors Monsters of all kinds, including "wild" children, were indeed better known to a more primitive generation than to the present; and at one time the production of monsters was an industry having for its double object pecuniary gain and the satisfaction of superstition An Italian work was published as lately as the closing years of the nineteenth century in order to show the manner in which monstrosities can be produced and grown Once alive and kicking, your monstrosity can be exhibited to the public for cash An old authority on prodigious births is Lycosthenes In his 'Prodigiorum et Ostentorum Chronicon," published at Basle in 1557, are some remarkable recitals He describes, for instance, a cadet of a noble Polish house who was "terrible to behold," for he was born with flaming and shining eyes His mouth and nostrils were similar to those of an ox He had also long horns and a back hairy as a dog's, and cat's eyes, which were situated far below his chest—we are not told exactly where These eyes looked "hideously and frightfully" Furthermore, this Pole "had the heads of dogs upon both elbows and at the whirlbones of each knee" His feet resembled those of the swan, and he possessed "a tail which was crooked backwards about half an ell long," so that sitting down was impossible Born at Cracow, this noble Polish cadet remained perfectly silent until within an hour of his death, when he uttered the one word "Watch," which was held to refer to one or other of the many revolutions of the time (1543)

Even the most rational of medical men concerned themselves with descriptions of abnormalities Ambroise Paré describes a small monster, of the Molline family at Antwerp, "wholly like a dog, save that it had a shorter neck and the head of a bird" Also a young Savoyard, who had a long piece of flesh, like a French hood, hanging down from the nape of his neck almost to his heels, while two other pieces, like the collar of a shirt, were wrapped round his neck He had also white boots of flesh on his legs, doubled down like the boots of brigands in old world melodrama The Duke of Savoy caused him to be brought to court, which performed, one would hardly imagine the various censures the courtiers gave of the creature'

Now Paré, a Frenchman, and Lycosthenes (Conrad Wolffhart), who was a professor of Basle and a native of Alsace, were both inheritors of noble traditions of culture If in matters touching monstrosity these enlightened men were credulous, how much more so must have been the inhabitants of remote and half-civilised regions Northern Germany, for instance, is known to have long possessed an intensive tradition of monstrosity and of the terrible, dating from the mythologic epoch A more grandiosely dreadful, a more Apocalyptic picture than that of the entire annihilation of the world by the Powers of Darkness and Fire, which is the climax of the "Prose Edda," has perhaps never been painted But the monsters of Germanic mythology and of mediæval medical men are only terrible in vague outline It was left to a mild Saxon lunacy expert of modern times, Dr Heinrich Hoffmann, *to introduce* into the petty mythology of the nursery a pair of degenerates in the persons of the ever memorable "Struwwelpeter," the self neglecting little monster of weak intellect and *der böse Friderich, der wahrer Wüterich,* who dismembered flies and killed birds and cats The ten episodes in the classic ' Struwwelpeter" a chap-book for the nursery, which was published in 1845 and had reached its fortieth thousand before 1860, are mostly of the bloodthirsty kind

SANITARY CONVENIENCES IN SHOPS

THE Committee appointed by the Government to consider the question of further enlistment in the distributing trades have represented to the Local Government Board that a difficulty arises in the case of the smaller shops in releasing men of military age for service in the army and replacing them by women by reason of the provisions of the Public Health Acts requiring separate sanitary accommodation for each sex The Government at the moment are appealing to shopkeepers to set free all their male staff who are medically fit for service, and of age for enlistment. It is found, however, in many cases that separate sanitary accommodation for the two sexes is not available the rate for the corresponding weeks of last year, that the increased mortality among children was general throughout the country, that this increase was attributed to causes connected with the war, that the problem was now so serious that if the present rate be continued for 42 weeks all the infants would have succumbed, in view of the state of things would he at once meet the defects in the present law by a small Bill to amend the Notification of Births Act, empowering local authorities to make such arrangements as might be sanctioned by the Local Government Board for securing the health of mothers and infants, and would he at the same time respond to the many appeals which have been made to his department to make the Notification of Births Act universal, especially in view of the fact that 1 child in 10 born died within 48 hours of birth

Sir George Toulmin asked the right honourable gentleman whether he was prepared to introduce legislation for the amendment and strengthening of the Notification of Births Act —Mr Long (replying to both honourable Members) said The births registered in London during the second quarter of this year averaged 79 per week fewer than the corresponding weekly number in the past five years, and during the 13 weeks ending June 5th there has been a weekly excess in the deaths of children under 5 years of age averaging 169 This excess has been mainly due to an exceptional prevalence of measles and whooping cough with their usual sequelæ The suggestion in the question that, if the present rates be continued for 42 weeks, all the infants will have succumbed, is, I am happy to say, devoid of foundation, as is also the statement that 1 child in 10 dies within 48 hours of birth As regards the legislation suggested in the two questions, I would refer to the answer which I gave yesterday, in which I stated that I was anxious to introduce without delay a measure making the Notification of Births Act of general application, and conferring certain powers on local authorities for safeguarding the health of infants and expectant mothers

Wednesday, June 16th.

Royal Army Medical Corps

Colonel Yate asked the Under Secretary for War whether, considering that between July 31st, 1914 and March 31st, 1915, only 14 captains in the Royal Army Medical Corps were promoted majors, and during the same period some 97 majors were promoted lieutenant-colonels, he would now take steps to have a corresponding number of captains promoted to the rank of major —Mr Tennant replied The majors were promoted to the rank of lieutenant-colonel to fill appointments for officers of that rank The promotion of captains will be considered as and when majors are required There is no fixed establishment of the latter rank, and under ordinary circumstances promotion to it goes by time qualification

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward to The Lancet *Office, directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week such information for gratuitous publication*

Ahearn, M J has been appointed Medical Officer of the Lowpark Dispensary District by the Swinford Board of Guardians

Davies Howard M R C S L S A. has been appointed Temporary Medical Officer of Health and Superintendent of the Isolation Hospital Pontypridd

Ibotson Edward C B M D B S Lond L S A has been appointed Certifying Surgeon under the Factory Act for the Civil Parish of Talyllyn and part of Machynlleth Rural District.

McMillan A. Lewis M D C M Glasg has been appointed Consultant Eye Specialist to the Glasgow Corporation Hospitals.

Ogilvie, W M M.B C M Aberd has been appointed Medical Superintendent of the Ipswich Borough Mental Hospital

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

Aberdeen University of —Examiners

Bath Winsley Sanatorium for Consumption —Assistant Resident Medical Officer Salary £250 per annum with board residence and laundry

Bexley Kent London County Asylum —Locum Tenens Medical Officer Salary 6 guineas a week, with quarters board and washing

Birkenhead Borough Hospital.—House Surgeon Salary £300 per annum with board and laundry

Birmingham General Dispensary —*Resident* Medical Officer unmarried Salary £250 per annum, with apartments attendance &c.

Birmingham and Midland Eye Hospital.—Junior House Surgeon. Salary £100 per annum with residence board &c.

Blackpool County Borough —Clinical Tuberculosis Officer

Bolingbroke Hospital, Wandsworth Common S W —House Surgeon Salary £100 per annum with board residence

Bolton Infirmary and Dispensary —Senior House Surgeon Salary £230 per annum with apartments board and attendance

Bristol Royal Infirmary —Assistant to Ear, Throat, and Nose Department.

Brook War Hospital, Shooters Hill Woolwich —Resident Assistant Surgeons and Physicians Salary £1 a day with residence board, and lodging

Bury Infirmary —Senior and Junior House Surgeons Salary £175 and £150 per annum respectively with board residence, and washing

Cardiff Welsh Metropolitan War Hospital, Whitchurch near Cardiff —Pathologist and Bacteriologist Salary £1 per day with board apartments and washing

Carlisle Non Provident Dispensary —Resident Medical Officer Salary £200 per annum with apartments (not board)

Chelsea Infirmary Cale-street, S W —Assistant Medical Officer Salary £300 per *annum* with rations apartments and washing

Cirencester, Glos 1st South Midland Mounted Brigade Field Ambulance —Two Medical Officers to complete 2nd Line (Territorial)

Evelina Hospital for Sick Children Southwark, S E —Clinical Assistants in Out patient *Departments*

Folkestone, Royal Victoria Hospital.—House Surgeon. Salary as agreed with board residence and laundry

General Lying-in Hospital York road S.E —Resident Medical Officer for three months

Guildford Royal Surrey County Hospital.—House Surgeon Salary £150 per annum with board residence and laundry

Hospital for Consumption and Diseases *of the Chest* Brompton. —House Physician for six months Salary *30 guineas Also* Assistant Resident Medical Officer Salary £100 per annum with board and residence

Inverness Northern Infirmary —House Surgeon Salary £150 per annum with board &c

Leamington Spa, Warneford Leamington and South Warwickshire General Hospital.—*Second Resident* Medical *Officer* Salary £200 per annum with board residence and laundry

Leeds Public Dispensary —Female Resident Medical Officer Salary £130 per annum with board residence and laundry

Macclesfield General Hospital —House Surgeon Salary £150 per annum with board and residence

Manchester County Asylum, Prestwich —Locum Tenens Salary 6 guineas per week

Manchester Northern Hospital for Women and Children Park place Cheetham Hill road —House Surgeon Salary £120 per annum with apartments and board

Margate Royal Sea Bathing Hospital for Surgical Tuberculosis —Resident Surgeon Salary at rate of £150 per annum, with board residence, and laundry

National Hospital for Diseases of the Heart Westmoreland street, W —Resident Medical Officer for six months Salary at rate of £80 per annum, with board residence and washing

New Zealand War Contingent Association 25 Victoria street London S W —Two Visiting Surgeons.

Norwich Incorporation —District Medical Officer Salary at rate of £100 per annum

Norwich 3rd Line Depôt 2nd East Anglian Field Ambulance —Medical Officers Pay and allowance as in Regular Army

Nottingham General Hospital.—Senior House Physician and Assistant House Physician. Salary at rate of £300 and £250 per annum respectively with board residence and laundry

Oldham County Borough —Assistant Schools Medical Officer Salary £325 per annum

Plymouth South Devon and East Cornwall Hospital.—House Surgeon and House Physician Salary as arranged, with board, residence and washing

Poplar and Stepney Sick Asylum Devon road Bow E —Temporary Assistant Medical Officer Salary 7 guineas per week with board and residence

Portsmouth Workhouse Infirmary Workhouse and Children's Home —Female Second Assistant Medical Officer Salary £150 per annum with apartments rations &c.

Queen Charlotte's Lying-in Hospital, Marylebone-road N W —District Resident Medical Officer for four months Salary at rate of £60 per annum with board residence and washing

Rhondda Urban District Council.—Temporary Assistant Medical Officer of Health and School Medical Officer Salary £350 per annum

Royal Eye Hospital, St George's-circus Southwark S E.—House Surgeon Salary £75 per annum with board apartments and washing

St Mary's Hospital for Women and Children Plaistow E —Assistant Resident Medical Officer Salary at rate of £90 per annum with board residence and laundry

Salford County Borough —Medical Officer for Maternity and Child Welfare work Salary £300 per annum

Salisbury General Infirmary —House Surgeon and Assistant House Surgeon unmarried Salary £150 and £100 per annum respectively with apartments board lodging and washing

Sheffield Royal Infirmary —House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

Sheffield Wharncliffe War Hospital, Middlewood road.—Resident Medical Officers

South London Hospital for Women 83-90 Newington-causeway S E —Female Anæsthetist.

Southampton Parish Infirmary Shirley Warren —Resident Assistant Medical Officer Salary £250 per annum with apartments rations washing and attendance

Stockport Infirmary —Senior House Surgeon Salary £200 per annum with board washing and residence

Sunderland Royal Infirmary —Resident Medical Officer Salary £150 per annum with board residence and laundry

Swansea General and Eye Hospital.—House Physician Salary £200 per annum, with board, apartments and washing

1000 Of 60 cases of pneumonia that have been treated in the hospital, 95 per cent have recovered The book which is well illustrated, is published by the proprietors of *Country Life*, 20, Tavistock street, Covent Garden, W C, price 1s net

T L Caskel —The various eponymous terms can all be found by reference to one of the medical dictionaries of which there are several The best of these, we regret to state, are of American origin

COMMUNICATIONS not noticed in our present issue will receive attention in our next

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON Pall Mall East.

TUESDAY AND THURSDAY —5 P.M Croonian Lectures —Surgeon General Sir David Bruce C.B : Trypanosomes causing Disease in Man and Domestic Animals in Central Africa. (Lectures II and III)

POST-GRADUATE COLLEGE West London Hospital, Hammersmith road, W

MONDAY —10 A.M. Dr Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Mr D Armour Operations Dr Pritchard: Bacterial Therapy Department. Mr B. Harman and Mr Gibb: Diseases of the Eye.

TUESDAY —2 P.M., Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Davis Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin

WEDNESDAY —10 A.M. Dr Saunders Diseases of Children. Dr Davis: Operations of the Throat, Nose and Ear 2 P.M., Medical and Surgical Clinics. X Rays. Mr Pardoe Operations Dr Simson: Diseases of Women. Mr Gibb. Diseases of the Eye

THURSDAY.—9 A.M., Dr. Bernstein: Bacterial Therapy Department. 2 P.M. Medical and Surgical Clinics. X Rays. Mr D. Armour: Operations. Mr B Harman: Diseases of the Eye.

FRIDAY —10 A.M., Dr Simson Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Davis Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin.

SATURDAY —10 A.M., Dr Saunders Diseases of Children. Dr Davis: Operations of the Throat, Nose and Ear Mr. B Harman: Eye Operations. 2 P.M., Medical and Surgical Clinics X Rays Mr Pardoe: Operations

NORTH EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital Tottenham N

MONDAY —Clinics —10.30 A.M Surgical Out patients (Mr E. Gillespie) 2.30 P.M. Medical Out patients (Dr T. R. Whipham) Gynæcological Out-patients (Dr Banister) 3 P.M., Medical In-patients (Dr R. M. Leslie)

TUESDAY.—2.30 P M Surgical Operations (Mr Carson) Clinics —Medical Out-patients (Dr A. G Auld) Surgical Out patients (Mr Howell Evans) Nose Throat and Ear Out patients (Mr H. D Gillies) Radiography (Dr Metcalfe) 3.30 P.M Medical In-patients (Dr. A. J Whiting)

WEDNESDAY —Clinics —2.30 P.M. Throat Operations (Mr Gillies) Children Out patients (Dr T. R. Whipham) Eye Out-patients (Mr R. P Brooks) Skin Out-patients 3.30 P.M., Eye Operations (Mr R. P Brooks)

THURSDAY —2 30 P.M., Gynæcological Operations (Dr A. E Giles) Clinics —Medical Out-patients (Dr A. J. Whiting); Surgical Out patients (Mr Carson) Radiography (Dr Metcalfe) 3 P.M Medical In-patients (Dr R. M Leslie) 4.30 P.M. Clinical Demonstration:—Dr A. E Giles: Illustrative Gynæcological Operations.

FRIDAY —2.30 P.M. Surgical Operations (Mr Howell Evans) Clinics:—Medical Out patients (Dr A. G Auld) Surgical Out-patients (Mr E Gillespie); Eye Out patients (Mr. R. P Brooks)

THE THROAT HOSPITAL, Golden-square, W

MONDAY —5 15 P.M., Special Demonstration of Selected Cases.
THURSDAY —5 15 P.M. Clinical Lecture.

For further particulars of the above Lectures &c., see Advertisement Pages

EDITORIAL NOTICES

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures original articles, and reports should be written on one side of the paper only AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

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(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs 50 per month.)

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W C

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METEOROLOGICAL READINGS

(*Taken daily at 8.30 a.m. by Steward's Instruments.*)

THE LANCET Office, June 18th, 1915.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb	Remarks.
June 10	29·900	E.	0·01	109	70	61	58	62	Raining
11	30·100	N E	...	106	72	57	56	61	Cloudy
12	30·226	S E	...	105	69	54	5[illegible]	59	Fine
13	30·220	N E	...	107	75	53	52	56	Cloudy
„ 14	30·230	N E	...	116	68	51	49	53	Cloudy
„ 15	30·220	N.E.	...	111	69	51	50	55	Cloudy
„ 15	30·15[illegible]	N E.	...	111	73	49	53	55	Fine

The following magazines journals &c., have been received —Canadian Journal of Medicine and Surgery Annali di Medicina Navale e Coloniale Bulletin of the Johns Hopkins Hospital, Revista de la Asociación Médica Argentina, Surgery Gynæcology and Obstetrics St. Thomas's Hospital Gazette Medical Journal of Australia, Revista Medica del Uruguay Modern Hospital American Journal of the Medical Sciences Proceedings of the Royal Society of Medicine Maryland Medical Journal, Archives of Radiology and Electrotherapy Tropical Medicine and Hygiene, &c.

on the premises and such accommodation is required by the Acts It will be hard on the employer if, having already lost many male assistants, he is called upon to make structural alterations in his premises to meet conditions which are only intended to be temporary, while the need will especially arise in small shops where female labour has not yet been employed The requirements of the Acts cannot, of course, be dispensed with, and the *Board suggest that the difficulty may be met by some temporary arrangement, such as the use, free of charge, of a convenience in a neighbouring house, or of a public convenience near by* We believe that in the case of factories and workshops, where the same problem has arisen, arrangements of this kind have been adopted, with the consent or concurrence of the Inspector of Factories, and have proved satisfactory; and no other economical course is possible We trust that the sanitary officers, to whom circulars have been issued, will ascertain whether temporary arrangements of the kind indicated can be made, and will generally facilitate the action of any shop keeper who is willing to allow his male assistants to join the army

FATAL EXPECTANCY.

To the Editor of THE LANCET

SIR,—Recently in a conversation with a medical officer in charge of a department especially devoted to tuberculosis he expressed the opinion that he would exclude a diagnosis of pulmonary tuberculosis until a third or even a fourth examination of the sputum revealed each time the presence of T B, the local symptoms being indefinite and suspicious only Not, be it observed, that he would exclude the diagnosis only after a third or fourth examination proved negative Such a view if generally held must surely be fatal to the campaign against consumption It would be interesting to know if this view is prevalent Sceptics are not the class from whom progress may be expected in any sphere of life, whereas enthusiasts, though they are apt to fly too high, do help the world to progress To wait until the symptoms are definite and unmistakable and the complaint has got a firm hold is not good either for the individual or for preventing it spreading

I am Sir, yours faithfully

City road, E C, June 10th, 1915. J J UDALE

LIME-JUICE

WITH the advent of the hot weather there is likely to be a demand for cooling drinks, especially for lemonade and lime juice. In the South African War lime-juice was provided for the troops in jars and barrels, and quantities were held in reserve at various places, and there is little doubt that far greater amounts of this beverage will be consumed this summer For the wounded officers and for certain wounded men there is a supply of iced champagne but an army cannot be kept refreshed on such a costly beverage, even if available In 1903 Sir Wodehouse Richardson said "Powdered lime juice can now be obtained, 2 or 3 ounces of which make several gallons of a very palatable beverage It is thus far more portable than lime juice in barrels or bottles The medical authorities would have to be consulted before this powder could be adopted" We do not know to what medical authorities this refers, unless to the army medical authorities, but the merits of a powder as against a liquid call for careful consideration on the grounds of preservation of the essential properties, keeping qualities in hot weather, freedom from admixture, intentional or accidental, flavour, and so forth

SCOPOLI.

To the Editor of THE LANCET

SIR,—With your permission I would supplement your note on Scopolamine on p 1272 of to-day's issue of THE LANCET by some references to Signor Giovanni Antonio Scopoli, the great naturalist of Cavalese, in the Tyrol, where he was born on June 15th, 1725, 190 years ago From M L Hahn we learn that Scopoli studied the humanities at Trieste and medicine at Innsbruck, where he took his doctorate in 1745 At Innsbruck he developed a strong love for natural history, botany first attracting his attention As there was no teacher of natural history in the University he was practically self taught, and formed the basis of a natural classification which much more nearly approaches to Ray's natural one than that of Linnæus. He collected a large number of the plants indigenous to the mountains of Tyrol, and formed the design of publishing a flora of his native country But the project was defeated by his being called to Styria and afterwards to Vienna hence he came to Idria, where he obtained a medical appointment But his love of natural science drew him away from the routine work of medicine, and with renewed energy he applied himself to the study of botany His mental activity, however, was so great that he embraced in his curriculum entomology, mineralogy, and chemistry Whilst in practice in Idria he found time to write his famous "Flora Carniolica, which was published in 8vo at Vienna, 1760, in which book it may be noted that he followed the Linnean classification His entomology, "Entomologia Carniolica," published in Vienna, 1763, illustrated by some 40 odd engravings, was not a financial success though it greatly increased his reputation His interest in the subject of minerals was excited by seeing the extensive use made of mercury in the Styrian mines, and in 1771 his "Mineralogische Vorlesungen" was published at Vienna Of medical writers he was one of the first to call attention to diseases incidental to industrial occupations The removal of Jacquin to Vienna from Chemnitz left a vacancy for a mineralogist for the great Hungarian mines which Scopoli was called to fill, and in the year of his appointment, 1777, he published his "Fundamenta Chemiæ" at Prague Soon afterwards he was appointed professor of natural history at Padua, which chair he occupied until his death in 1788

I am, Sir, yours faithfully,

Dublin, June 12th, 1915 GEORGE FOY

THE LATE LORD ROBERTS ON THE TREATING OF SOLDIERS

A FEW days ago a soldier arrested for drunkenness in London gave as his explanation that he had returned from the front wounded and that a lady had treated him to a bottle of whisky. Now, this is not the way to welcome returned soldiers, and we would redirect attention to the letter from the late Lord Roberts published in THE LANCET of Nov 10th, 1900, in which he said "Will you kindly allow me, through the medium of your paper, to make an appeal to my countrymen and women upon a subject I have much at heart and which has been occupying my thoughts for some time past All classes in the United Kingdom have shown such a keen interest in the army serving in South Africa, and have been so munificent in their efforts to supply every need of that army, that I feel sure they must be eagerly looking forward to its return and to giving our brave soldiers and sailors the hearty welcome they so well deserve when they get back to their native land It is about the character of this welcome and the effect it may have on the reputations of the troops whom I have been so proud to command that I am anxious and that I venture to express an opinion My sincere hope is that the welcome may not take the form of 'treating' the men to stimulants in public houses or in the streets, and thus lead them into excesses which must tend to degrade those whom the nation delights to honour, and to lower the 'soldier of the Queen' in the eyes of the world—that world which has watched with undisguised admiration the grand work they have performed for their sovereign and their country From the very kindness of their hearts, their innate politeness, and their gratitude for the welcome accorded them it will be difficult for the men to refuse what is offered to them by their too generous friends I therefore beg earnestly that the British public will refrain from tempting my gallant comrades, but will rather aid them to uphold the splendid reputation they have won for the Imperial army"

Lord Roberts's warning seems to be urgently needed at the present juncture

THE NATIONAL CLEAN MILK SOCIETY

THE aims of this society are to raise the hygienic standard of milk and milk products, and to educate the public in regard to the importance of securing a clean and wholesome milk supply Plans are now being decided upon by the council for a clean milk and infants' welfare station to be established in one of the poorest quarters of London, where clean milk can be sold to the poor, and where mothers can be educated in the care of their babies on lines similar to those that have proved useful in New York The movement will have medical approval and we should be glad to see it develop, rapidly and successfully all over the country Money, of course, is needed to carry on this important hygienic work and the council which is a strong one, containing several well known leaders of our profession, appeal to the public to support the movement by becoming members of the society Communications should be addressed to the secretary, 2, Soho-square, London, W

THE OPEN-AIR TREATMENT OF THE WOUNDED

UNDER the title of "The Open-air Treatment of the Wounded" Dr A E Shipley, F R S, Master of Christ's College, Cambridge has written a description of the First Eastern General Hospital, Cambridge, for the *Country Life* Library The book is an eloquent plea for fresh air in the treatment of disease, and the remarkable statement is made that this form of treatment reduces the expense per bed from £200 to £16. In a footnote Lord Knutsford says that Dr Shipley's estimate of £200 per bed for an ordinary hospital is too low, £300 to £400 being nearer the truth in a London hospital Professor W J R Simpson, C M G, in a chapter on open air treatment, gives the number of patients who have passed through the Cambridge Hospital as 6600, with a death rate of only 4 6 per

The Croonian Lectures

ON

TRYPANOSOMES

CAUSING DISEASE IN MAN AND DOMESTIC ANIMALS IN CENTRAL AFRICA

Delivered before the Royal College of Physicians of London on June 17th, 22nd, 24th, and 29th, 1915,

By Sir DAVID BRUCE, C B, F R S,
M B Edin, F R C P Lond,
SURGEON-GENERAL, A.M.S

LECTURE I

Delivered on June 17th

Mr President and Gentlemen,—I beg to thank you for the honour you have conferred in electing me Croonian lecturer for the present year I am afraid the subject I have chosen will be found to be of little or no practical interest to the Fellows of this College, since it deals with a form of tropical disease which is seldom seen in England, and then, as a rule, only in hospitals devoted to the treatment of exotic diseases The investigations into these diseases were also made from the standpoint of causation and prevention rather than treatment, a circumstance which must further lessen their interest to physicians engaged almost exclusively in the treatment of disease But this is the subject which for some years has almost exclusively engaged my attention, and on account of the pressure of work caused by the war it would have been difficult or impossible to gather materials on any other subject Further, I intend to confine myself in these lectures to a consideration of the trypanosomes causing disease in man and domestic animals in Central and Southern Africa, since it is only in Zululand, Uganda, and Nyasaland that I have had the opportunity of studying these parasites in the field and under natural conditions The conditions, however, which obtain on the East and West Coasts of Africa between 20° N and 30° S latitude are much the same as those which are found in the central parts, and it is probable that the same trypanosome species are found throughout So that in describing the species found in our own colonies it may be assumed that all the important pathological species found in Central Africa are being dealt with, although in other places they may be known by other names

The central region—the tropical or equatorial—corresponds with the distribution of the tsetse flies, and the trypanosomes causing disease in this region are carried from sick to healthy animals by various species of this genus of flies In the north of Africa, outside the range of the tsetse flies, two trypanosome diseases are found, one of the horse (dourine) and another of camels (surra), the former conveyed from sick to healthy horses by contagion, the latter almost certainly by large biting flies, the so called horse flies, or tabanidæ Now, in order to understand the wide distribution of these hæmatozoa, reference may be made to Fig 1, a map of the world on which their distribution is shown

Geographical Distribution

It will be seen from the accompanying map that these blood parasites are found in most parts of the world, from South America through Africa, Southern Europe and Persia to India, Burma, China, and the Philippines (Fig 1) In Africa is shown a broad equatorial band representing the trypanosome diseases carried by the tsetse flies In it are represented, for example, the distribution of *Trypanosoma gambiense*, the cause of the ordinary or Congo sleeping sickness, and the distribution of *Trypanosoma brucei* the cause of nagana in animals, and the Rhodesian and Nyasaland form of sleeping sickness or trypanosome disease in man. Further north out of the tsetse fly region we have *Trypanosoma equiperdum*, the cause of dourine, which the map shows to be widely distributed in Europe also *Trypanosoma evansi* or surra, which spreads out of Africa along the camel caravan routes into India and China, is also shown

In this introduction it is unnecessary for me to give an early account of the history of these parasites, since this has often been done and can be found in most text-books, suffice it to say that the first trypanosomes were discovered some 70 years ago in the blood of fish and frogs These were of interest to zoologists, but having no obvious bearing on the causation of disease did not attract the attention of medical men. Thirty years afterwards, in 1877, Surgeon Timothy Lewis, of the Army Medical Department, discovered in Bombay the trypanosome of the common rat, which was afterwards named after him—*Trypanosoma lewisi* Three years later, in 1880, Dr Evans, Chief of the Veterinary Staff in Madras, discovered what were supposed for a long time to be similar flagellates in the blood of horses suffering from surra. It is from these two discoveries that we must date the beginning of the study of trypanosome diseases

Classification of the African Trypanosomes

After these few introductory remarks, and in order to further clear the ground, allow me before proceeding to describe any of the individual species of African trypanosomes to briefly introduce them and to show into what groups or classification they can be thrown In classifying them I have striven for simplicity, as it seems better for practical purposes to divide them into a few well defined groups and species rather than to try with our present incomplete knowledge to subdivide them more minutely

The three characters mainly relied upon in this classification of trypanosomes are, in the first place, their morphology, secondly, their pathogenic action on animals, and, thirdly, their mode of development in the tsetse flies

At one time it was hoped that cultivation on artificial media might be used as an aid to classification, but up to the present this hope has been unfulfilled Other methods, such as cross inoculation experiments and serum diagnosis, I do not consider of much use in making a *simple*, workable, practicable classification such as will be found of use for diagnosis in the field If we admit them into our methods the multiplication of species must proceed to an unmanageable degree

1 *Morphology*

To begin with the morphology, and this is of great importance in classification The trypanosomes are first examined in a fresh living condition to ascertain their general appearance and kind of movement There is a good deal of difference in the range of movement in different species. Whereas many vibrate about one spot, and show little power of wider movement, others are capable of hurling themselves from one point to another with great power and rapidity But, of course, it is

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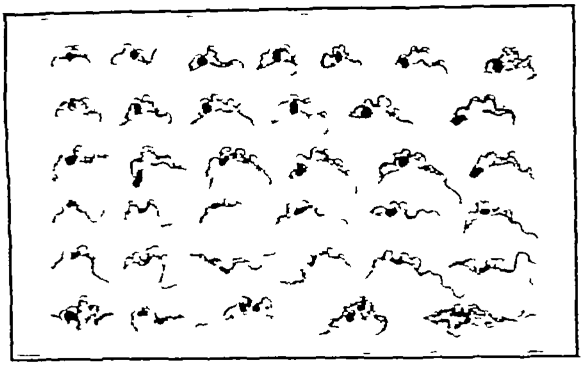
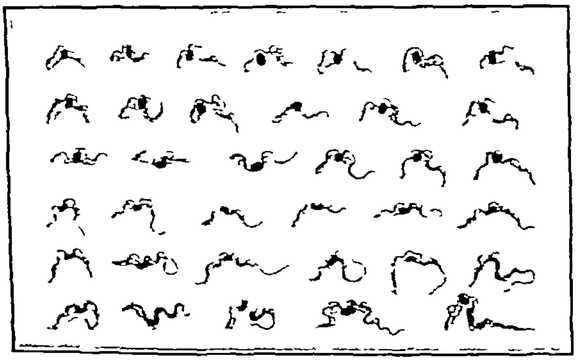
FIG 2



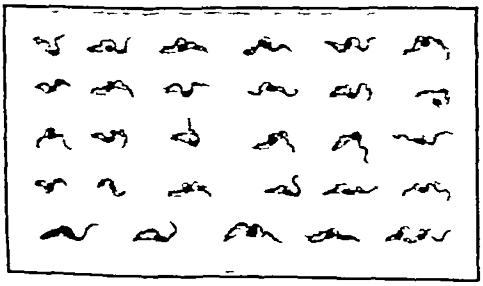
Trypanosoma brucei (Plimmer and Bradford) Zululand 1913 × about 700

FIG 3



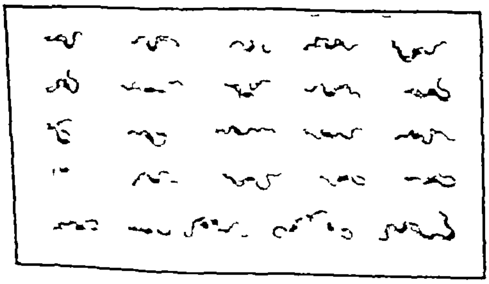
Trypanosoma gambiense (Dutton) Tanganyika 1913 × about 700

FIG 4



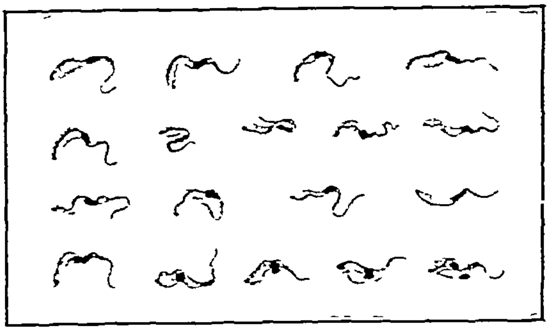
Trypanosoma pecorum × about 700

FIG 5



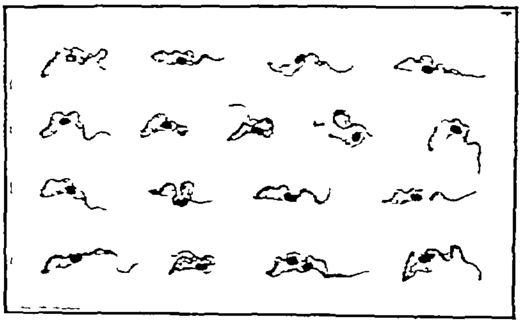
Tryp[illegible] × about 700

FIG 6



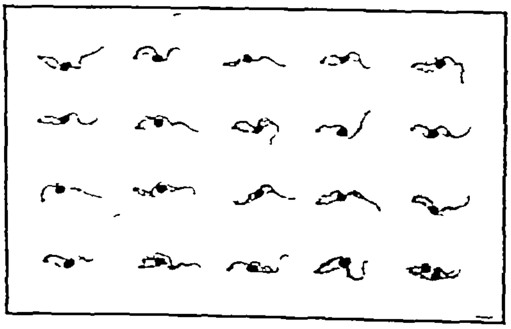
Trypanosoma vivax (Ziemann) × about 700

FIG 7



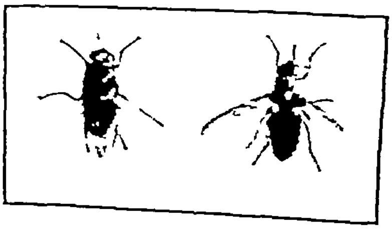
Trypanosoma capræ (Kleine) × about 700

FIG 8



Trypanosoma uniforme. × about 700.

FIG 9



The tsetse fly life size

after the trypanosomes have been fixed and stained that their characteristics can be made out best For example, the length and breadth of a fixed and stained trypanosome may be very useful in identifying it, and in addition to the length and breadth, a description of the contents of the cell, the nucleus, micronucleus, undulating membrane, and flagellum, may all help in the differentiation of species

2 *Susceptibility of Animals*

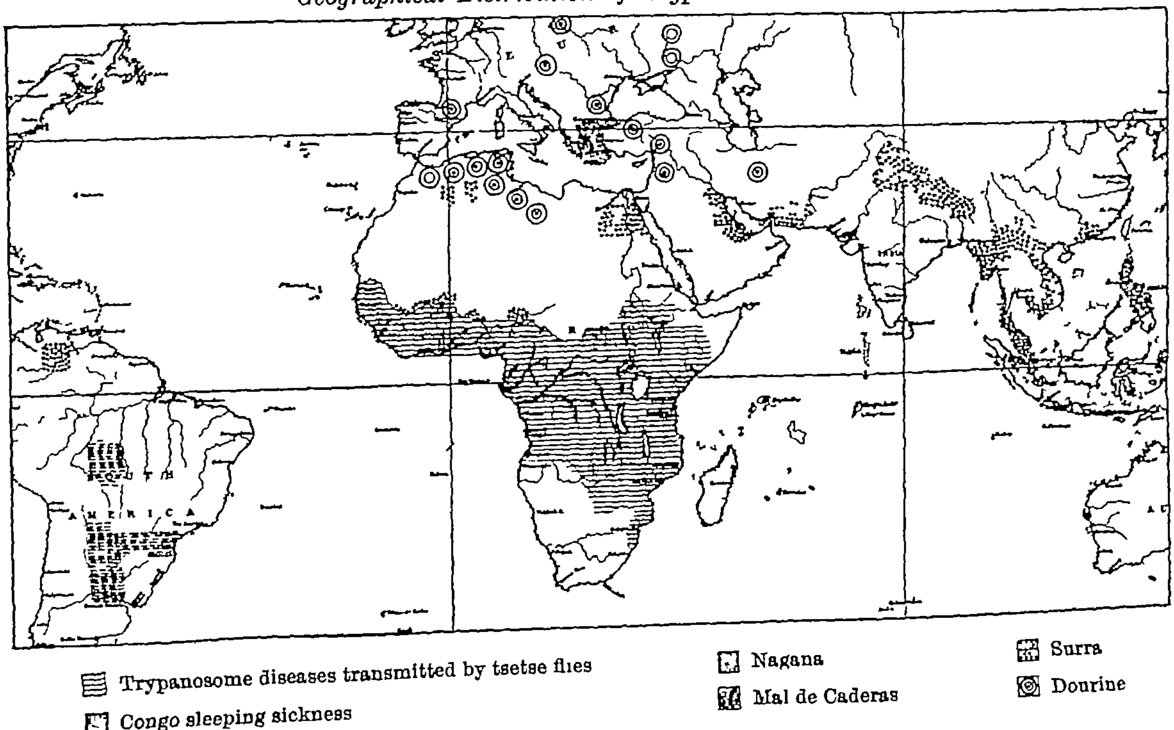
The second means at our disposal for the classification or differentiation of trypanosomes—namely, their pathogenic effect on various experimental animals—must be used with caution For example, it is well known that their passage through a series of animals of the same species usually exalts their virulence towards that animal For instance, the nagana parasite, after passage through white rats for many generations, kills the rats in as short a time as two days, whereas the naturally wild strain of nagana only kills the same animals on an average in 20 or 30 days On the other hand, another species of trypanosome in its natural wild state kills monkeys in a few days But if it is first passed through a goat, and the attempt is made to infect a monkey with the goat's blood, the experiment always fails Passage through the goat has lowered the virulence of the parasite towards the monkey But if a trypanosome is caught in its wild state, and straightway put through a series of experimental animals, the result is, in my opinion, of some use in differentiating species For example, *Trypanosoma brucei* will be found to be much more virulent and kill off more quickly the various laboratory animals than *Trypanosoma gambiense* Some trypanosomes are deadly to horses and cattle and harmless to other animals, such as dogs, monkeys, and rabbits while others show a marked preference for some particular species of animal, such as the domestic pig

3 *The Development in the Invertebrate Host*

The third character of use in classification is the mode of development in the tsetse fly or invertebrate host As already mentioned, all the pathogenic trypanosomes of man and his domestic animals found in Africa, with the exception of the two northern species, pass through a specific cycle of development in the tsetse flies, the mode of development in the tsetse flies is different for different species of trypanosomes, and this may be made use of in classification, and in truth is one of the best means at our disposal It is not known whether the North African species are capable of developing in tsetse flies It is possible that on account of disuse they have lost the faculty, if they ever had it It would certainly be an interesting experiment to try to pass them through the "fly"

FIG 1

Geographical Distribution of Trypanosome Diseases


AMERICA
▤ Trypanosome diseases transmitted by tsetse flies
☐ Congo sleeping sickness
☐ Nagana
▦ Mal de Caderas
▦ Surra
◎ Dourine

CLASSIFICATION INTO THREE GROUPS

With these few preliminary remarks, let me now introduce the chief Central African pathogenic trypanosomes They may be divided into three groups, and these are set out on the following scheme —

Group A *Trypanosoma Brucei Group*
- 1 Trypanosoma brucei
- 2 Trypanosoma gambiense
- 3 Trypanosoma evansi
- 4 Trypanosoma equiperdum

Group B *Trypanosoma Pecorum Group*
- 1 Trypanosoma pecorum
- 2 Trypanosoma simiæ

Group C *Trypanosoma Vivax Group*
- 1 Trypanosoma vivax
- 2 Trypanosoma capræ
- 3 Trypanosoma uniforme

These names probably represent most of the principal pathogenic trypanosomes discovered up to the present time in Central Africa For the sake of completeness I have placed the Northern species, *Trypanosoma evansi* and *Trypanosoma equiperdum*, in the first group, as they seem by morphology and their action on animals to belong there Each group is distinguishable or separable by well defined characters

Group A The Trypanosoma brucei group—The species forming this group (Figs 2 and 3) are all more or less polymorphic, varying in size and shape from short and stumpy forms without free flagella to long and slender forms with free flagella. The cytoplasm contains numerous dark staining granules The micronucleus or kinetonucleus is small, and is situated as a rule some distance from the posterior extremity The undulating membrane is well developed and thrown into bold folds

In regard to their action on animals, the members of this group may be said generally to affect many different species of animals—as, for example, man horses, cattle, dogs, and most of the smaller experimental animals The two Central African members of the group, *Trypanosoma brucei* and *Trypanosoma gambiense*, develop in the tsetse flies in the same way At first the development takes place in the intestine, afterwards the parasites pass into the salivary glands, by way probably of the proboscis, and there complete their development into infective forms This is the only group in which the salivary glands are invaded This group can be separated from the other groups by shape alone

Group B. The Trypanosoma pecorum group—The trypanosomes are small and monomorphic The cytoplasm is non granular The micronucleus is prominent, subterminal, and often seems to project beyond the margin The undulating membrane is fairly well developed (Figs 4 and 5)

The cycle of development in the tsetse fly in Group B begins in the intestinal tract, afterwards the flagellates pass forward into the proboscis of the fly, and finally reach the salivary duct or hypopharynx, where they complete their development and become infective The difference between Group A and Group B is that in the latter the salivary glands are never invaded There are only two species at present included in this group—*Trypanosoma pecorum* and *Trypanosoma simiæ* The former gives rise to the most important trypanosome disease of cattle in Africa, while the latter is remarkable for the rapidity with which it kills the domestic pig

Group C The Trypanosoma vivax group—The species making up this group (Figs 6, 7, 8) are monomorphic, and remarkable for the extreme rapidity of their movements The posterior extremity is enlarged The cytoplasm is clear and hyaline The micronucleus is large and terminal, and the undulating membrane is little developed and simple This species only affects horses, cattle, goats, and sheep Monkeys, dogs, rabbits, guinea pigs, and rats are refractory

The cycle of development in Group C differs from that in Groups A and B in that it takes place at first only in the labial cavity of the proboscis, and later in the salivary duct or hypopharynx (Fig 10) No part of the cycle takes place in the intestinal tract or in the salivary glands

These three groups are well marked, and it is fairly easy by microscopic examination alone to name what group a trypanosome belongs to, when seen in the blood of the vertebrate host or even in the tsetse fly

DESCRIPTION OF THE TSETSE FLIES

General characters—The insects (Fig 9) are dull coloured, ordinary looking flies about half an inch in length The strong proboscis stands out horizontally in front The wings are long and closed over each other, like the blades of a pair of scissors, when the fly is at rest The dorsal aspect of the abdomen is marked by five more or less distinct transverse bands

FIG 10, A

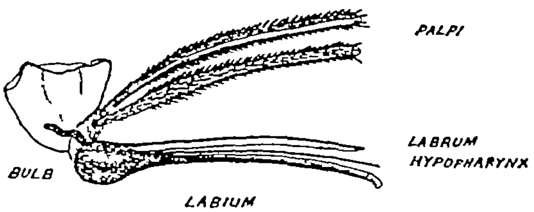
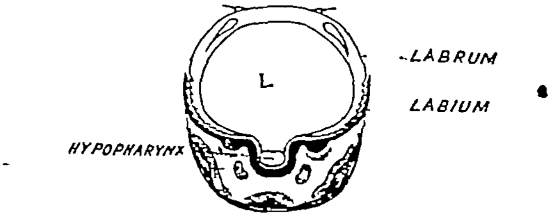


FIG 10 B



Mouth parts of tsetse fly L, Indicates labial cavity

It is important to understand the structure of the proboscis, as this plays an important part in the development of Groups B and C In Fig 10 a side view and a transverse section of the mouth parts are given In the side view the mouth parts —the labrum, the labium and the hypopharynx or terminal duct of the salivary glands—are separated This is done by slipping the point of a fine needle between them at the base and running it towards the tip This separates the labrum from the labium, and, as a rule, the hypopharynx springs up from the hollow of the labium and appears between the two parts as an extremely delicate transparent tube

In the transverse section the parts are seen in position, the labrum and labium joined together form a tube through which the blood is drawn in the act of sucking, and known as the labial cavity, and the delicate terminal duct of the salivary glands or hypopharynx lying in the hollow of the labium, and opening near the tip of the proboscis The salivary glands are long convoluted organs lying chiefly in the abdominal segment of the fly

When I arrived in Zululand in 1894 there was only one known species of tsetse fly—*Glossina morsitans* At the present time some 14 or more different species have been named These are divided into four groups by Austen The *Glossina palpalis* group, the *Glossina morsitans* group, the *Glossina fusca* group, and the *Glossina brevipalpis* group For our purpose it will be sufficient to describe the principal species from the first two groups, *Glossina morsitans*, the carrier of *Trypanosoma brucei*, and *Glossina palpalis*, the carrier of *Trypanosoma gambiense* But I may mention here that probably all the tsetse flies are capable of acting as carriers of all the pathogenic trypanosomes, at least in laboratory experiments What makes one species of fly the especial carrier of a particular trypanosome is probably bound up in the natural history, the habits, and distribution of the fly

easily, or it may be some instinct in favour of the offspring which enables the newly emerged fly to obtain a feed within 24 hours of birth.

Glossina Palpalis

This is also a widely distributed species. It ranges on the west coast from the Senegal river —16° N latitude—to Angola. It extends eastwards into the Bahr el Ghazal. The eastern boundary of the species follows the valley of the Nile, the eastern shores of Lake Victoria and Lake Tanganyika. From the south end of the latter lake the boundary follows the frontier between the Congo Free State and Rhodesia in a south westerly direction to Angola.

Habitat.—This species differs from *Glossina morsitans* in being a lover of water. It frequents the edges of lakes and rivers where there is clear water and plenty of shade; this shade consists of thick jungle with high trees and dense undergrowth, which grows to within a few feet or yards of the water's edge. This tsetse fly is never found on open beaches backed by grass plains, even although there may be some low scrub near the water. It is not found in reed beds or papyrus swamps, and as most of the Uganda river valleys are choked with reeds it follows that the tsetse fly does not ascend these rivers. In short, it is never found away from water, except in cases where it has followed man or animals for a mile or so for the purpose of feeding. In this way it is brought much more in contact with man than *Glossina morsitans*, which is a dweller in desert places, the haunt of wild animals. *Glossina palpalis* is a frequenter of watering places, on lakes and rivers, or water holes in the bush, where the natives come for water, and where as a rule, on account of the density of the human population, there is little game.

Habits.—*Glossina palpalis* has the same habit of biting by daylight as *Glossina morsitans*. It is not seen until the sun is up. If it is a fine morning they may be active as early as seven or half past seven. On dark shady spots on the lake shore they do not become troublesome until about ten o'clock when the sun is well up. In cloudy or windy weather few flies are abroad. They have a rapid flight and suddenly and silently flop on to the skin, causing so little sensation that the sharp stab of the proboscis is often the first thing felt. Sometimes they insert the proboscis so painlessly that attention is not drawn to the spot. As a rule little or no irritation follows the bite, no itching or swelling or reddening of the skin. But if there have been many bites about the same place there is often a good deal of swelling, induration, redness, and irritation which last for several days, and as is natural some individuals are much more affected than others.

Feeding.—As in *Glossina morsitans* the time taken by the fly in filling itself with blood is short. Stuhlmann weighed the flies before and after feeding and found that the males took in one and a half times their own weight in blood, and the females sometimes as much as two and a half times.

Food.—Under ordinary circumstances in populous districts it may be assumed that man supplies most of the food of this fly, and it is considered by some that it thrives better on human blood than on any other. In captivity, however, it feeds readily on any warm blooded animal, especially on birds, and if hungry may even be induced to feed on cold blooded animals, such as the lizard or frog. But in the absence of man it may be remarked that as this species is a dweller on the banks of rivers and lakes, it comes much more in contact with large birds—cormorants and other water fowl—and reptiles—crocodiles and monitors—than does *Glossina morsitans*. In Uganda before the natives were removed from the lake shore and islands doubtless they formed the chief supply of blood for the fly. On the other hand, after the natives had been removed inland or in places where there was no native population the fly had to adapt its diet to the available supply. One experiment made by us in Uganda in such a place showed that only 17 per cent of the flies had fed on mammalian blood and 83 per cent on avian or reptilian, and as far as could be made out twice as many of the flies had fed on reptiles as on birds. In such places the large lizard or monitor seems to be a favourite dish with this species.

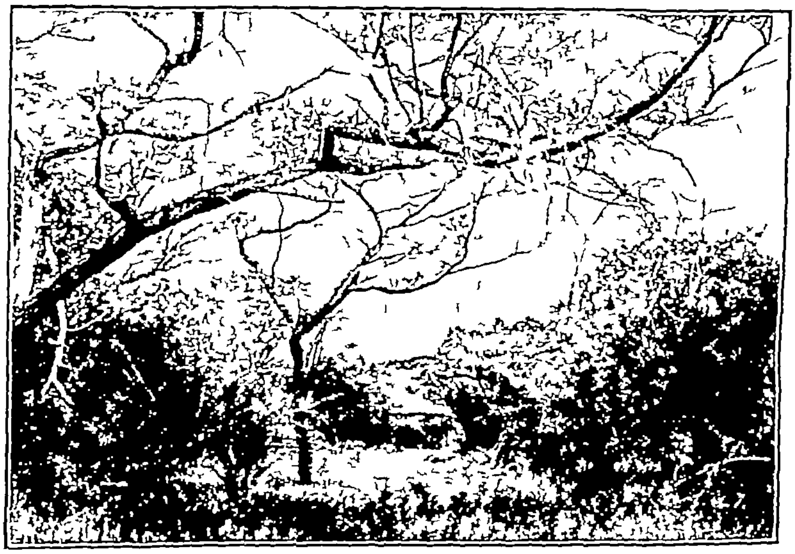
Reproduction.—I need not go fully into the reproduction of *Glossina palpalis* as the process is the same as in *Glossina morsitans*. One point may be mentioned, however, and that is that in Uganda the former has a marked predilection for certain breeding grounds; these are sandy beaches along the lake shore backed by a belt of vegetation. The breeding grounds on Damba Island, for example, where some thousands of pupæ were collected every month for the laboratory, are formed of coarse sand and pebbles. It is 4 or 5 feet above the level of the lake, and the bush comes to within a few yards of the water's edge. The pupæ are found as a rule an inch or two below the surface of the sand at or near the edge of the belt of vegetation. For a long time we failed to find any wild pupæ, although days were spent in turning over soil and decaying vegetable matter in those places where the fly most abounds. At last their breeding haunts were discovered by Captain A. D. Fraser, R.A.M.C., to be in patches of sand at the edge of the lake. After this secret was discovered there was no lack. Our natives found them in large numbers. One day they brought up as many as 7000, and as I had promised a cent for each pupa brought up to the laboratory I had to pay out nearly £5 for them. These wild pupæ proved to be much healthier than those obtained from flies in captivity. The flies bred from pupæ born in the laboratory rarely showed any marked vitality; on the other hand, the flies hatched out from the wild pupæ found on the lake shore were fairly strong and vigorous, and lived in captivity for a couple of months or more. In conducting experiments with flies it is very necessary to work with laboratory bred ones, as the wild flies may be naturally infected with several species of trypanosomes. Numerous experiments went to show that there is no hereditary transmission of trypanosomes in tsetse flies, and there is no reason to believe that flies become infected by contact with infected flies or from fouled cages. Any trypanosomes found in laboratory bred flies may therefore be considered to be derived from the infected animal they were fed upon.

It will be seen from the foregoing that the two principal groups of tsetse flies—the *Glossina morsitans* group and the *Glossina palpalis* group—differ from each other in well marked characters, the former living in wild, unpopulated districts and trusting to the wild game for their food, the latter along rivers and lakes which are usually thickly populated and trusting to man for a food supply, or in his absence living on the large reptiles, birds, and antelopes which frequent these places.

Habitat.—This is the species made familiar by writings of travellers like Livingstone and hunters like Gordon Cumming. Until a few years ago it was the only species of which the habits had been studied, and when the word tsetse was used it was this species which was meant. Its habitat is the dry, thorny scrub which covers large areas of tropical Africa (Fig. 11). It is not found along the banks of lakes or rivers, and, in fact, seems to have a distaste for water. It requires shade, however, and is never found on open plains where it would be exposed to the tropical sun. In the "fly country" there are thickets, undergrowth, and trees which supply the requisite shade.

Habits.—These flies begin to bite soon after sunrise if the day is fine, but usually disappear during the hottest hours, coming out again towards evening when it becomes cooler. About sunset they are often particularly active. Moving objects such as a motor cycle seem to attract them greatly, and the cyclist is often surrounded by a cloud of them attacking him like an angry swarm of bees. Under these circumstances there is often a great disparity in the numbers of the sexes, the males predominating. This is probably due to the males attaching themselves to a moving object in order to mate with the females, which are attracted by the same movement, and come out of their cover to feed. Tsetse flies are very sensitive to weather conditions. If it rains or blows they usually remain hidden. They diminish in numbers during the dry season, and are most numerous towards the end of the rains.

FIG. 11.



Habitat of *Glossina morsitans.*

Food.—In regard to the food of *Glossina morsitans*, in one experiment 500 flies were caught in the sleeping sickness area of Nyasaland, and examined as to the contents of their intestines. It was found that 288 (or 57.6 per cent.) contained mammalian blood in a recognisable state. Measurements of these were made and the small type of blood cell was found to predominate, such as occur in the hartebeeste, waterbuck, and other antelope. In only three cases were nucleated red blood corpuscles found. From this experiment it appears, at least in that district, that the principal food of *Glossina morsitans* is the blood of antelope. Tsetse flies never suck the juices of fruits or vegetables, as is usual in the case of other biting flies such as mosquitoes.

The question is sometimes asked as to how often tsetse flies feed under natural conditions. From experiments with flies in the laboratory it was found that blood is recognisable in stained specimens for two and even three days after a feed, but not beyond the third day. This means, roughly, that half the 500 flies examined had fed within at most three days of their capture, it results that flies feed under natural conditions once in five or six days.

It is rather an interesting point as to whether these flies could maintain an existence on the smaller mammals and birds if the big game disappeared. They are quite ready to feed on the smaller animals, but most of these, such as monkeys, shrews, the mongoose, and rats, are usually too quick and snap up the fly before it has had time to feed. Another curious fact seems to be that when rinderpest sweeps through a country the tsetse flies disappear with the game and only return when the game has again multiplied to a fair extent. The curious point is that by no means all the game is killed off by the rinderpest, there is usually some species left which one would think would suffice to keep numbers of flies in food. It was thought at one time that this mortality among the flies might be due to some poisonous quality in rinderpest blood, but when flies were fed on rinderpest animals nothing untoward happened.

Act of feeding.—In regard to the act of feeding, this is done as a rule very rapidly, the fly fully distending itself in from half a minute to a minute after it has punctured the skin.

Reproduction.—Lastly, we come to the most important function of the tsetse flies, that of reproduction. The genus *glossina* is distinguished from most of the other diptera in being pupiparous. The female produces a single whitish or yellowish coloured larva about once in ten days. This is retained in the oviduct until it is fully grown. As soon as the larva is born it creeps at once into the soil or into a crack in the earth, or among leaves and débris, and within a few hours has changed into a hard black puparium. As to how long the pupa remains quiescent depends mainly on the temperature. At a temperature of 85° F. the fly will emerge in 23 days, at 70° in 35 days, and at 65° in about 60 days. These larvæ are deposited all over the "fly" country, but there are certain positions and conditions which are favoured. The female usually chooses a spot with plenty of shade. A favourite site for her to take up her abode is on the under surface of a tree which has fallen, and which remains at places some inches above the ground. Another condition is that the breeding place is near a native path or a game path. This may be to enable the mother to procure her food

Intraspinal injections may begin to show a definite relief from the spasms in less than half an hour after the injection, and after one hour the relaxation may be complete The extent as well as the duration of the relief afforded to the patient is greater when the magnesium solution is given by the intraspinal method than by any other method of administration, the relief may last between 12 and 30 hours

There is a fundamental difference in the mode of action between the intraspinal method and the other three methods of injection The first acts by local application of the magnesium salts to the hyper irritable parts of the central nervous system, requires only a small quantity of the solution, and the effect lasts a fairly long time The other three methods of injection act through the circulation, require much larger doses, and the effect is either moderate and slow in its appearance or is of short duration There is still another significant difference The ill effects upon the respiration caused by injections through the circulation are accessible to a fairly rapid correction by injections of calcium chloride and physostigmine (which will be discussed presently), while these injections have apparently no such beneficial neutralising effects when the respiratory paralysis has been brought about by an intraspinal injection of the magnesium solution

As stated before, practically the only danger which may arise from an injection of an overdose of magnesium sulphate consists in a paralysis of the respiration The paralysis is temporary, and when brought about by the administration through the circulation is readily reversible In many instances an injection of 1 5 milligramme of physostigmine improves the respiration without interfering with the relaxation of the patient A more reliable reversing effect is obtainable by an injection of calcium chloride It may be given intramuscularly—30 or 40 c c of a 2 per cent solution By this method, which has the advantage of simplicity of procedure, the resuscitating action may not be as rapid as desirable, furthermore, it may at times bring back also the spasms, which is surely an undesirable result The calcium chloride may be administered intravenously in a very dilute solution (0 2 $CaCl_2$ + 0 6 NaCl to 1000 of H_2O) injected slowly As soon as an efficient spontaneous respiration is restored, which may occur in less than one minute, the infusion should be discontinued

When the magnesium solution is given intraspinally in a dose of 1 c c (25 per cent) for 10 kilogrammes of body weight to adults, as a rule nothing happens to the respiration But if the respiration should exceptionally become shallow and slow, the first thing to do is to insert a needle in the spinal canal and let some of the fluid run out and then wash out the canal several times by a warm saline or Ringer solution This should not be done when a reliable device for artificial respiration is at hand, the spontaneous respiration will return later without this aid, which has the disadvantage that it shortens the period of relief from the spasms

I consider the pharyngeal insufflation as devised by me and described at the end of this paper, as a most reliable method of artificial respiration in man Whenever possible, this apparatus should be at hand when a case of tetanus is to be treated If this is not at hand respiratory paralysis should be treated by inserting a catheter through a tracheotomy wound deep into the trachea, which is to be connected with an oxygen tank The catheter should be of a size which would fill out about two thirds of the lumen of the trachea. The oxygen stream should be interrupted a few times in a minute for two or three seconds

To summarise briefly Any case of tetanus, mild or severe, should from the start to finish be treated by subcutaneous injections about every six hours with doses of magnesium sulphate as described before Cases having severe attacks should receive in addition an intraspinal injection This may be repeated when necessary, but the subsequent doses should be slightly smaller than the preceding ones If the attack contains an element of immediate danger an intravenous injection may be administered as described above When for one reason or another the intraspinal and intravenous injections are not practicable the intramuscular injection plus ether anæsthesia may be resorted to When treating tetanus by magnesium sulphate preparations for artificial respiration ought to be made in order to be able to use efficient doses of the salt The pharyngeal insufflation device is the simplest and most reliable method for this purpose When this device is not at hand, then oxygen should be administered by the method of intratracheal insufflation through the tracheotomy wound The treatment of the failing respiration should be begun at an early stage, asphyxia of the tissues would thus be avoided and a complete restoration could be attained early The treatment of tetanus by magnesium does, of course, not exclude its serum treatment

It ought to be borne in mind that unavoidably cases of tetanus will be met with which no method of treatment could cure, either on account of the presence of great amounts of toxin, fixed and free, or on account of the presence of several undiscoverable foci containing living bacilli The failure to cure such cases should not militate against any method of treatment

A SIMPLE APPARATUS FOR PHARYNGEAL INSUFFLATION AS A RELIABLE METHOD FOR ARTIFICIAL RESPIRATION IN CASES OF EMERGENCY

The occurrence of paralysis of respiration after intraspinal injections of too large a dose of magnesium sulphate has been the stimulus for looking for a reliable method of artificial respiration in human beings It leads up, in the first place, to the now well known method of intratracheal insufflation This method, however, can at present be used only by experts and under favourable conditions During the last few years, while serving on two Resuscitation Commissions, a method for artificial respiration has been developed by me which is easy to handle and reliable in its service The principle of this method consists of blowing air into the pharynx If this is done without further precautions most of the insufflated air would escape through the mouth and through the nose and would enter into the stomach The prevention of the escape of air into the stomach is accomplished in our method in the first place by compressing the abdomen The escape through the mouth and nose is readily prevented by blowing the air through a pharyngeal tube of a proper form and size The insufflated air, or oxygen, enters therefore nearly exclusively into the lungs

The mentioned apparatus consists then in the first place, of an appropriate pharyngeal tube (which will best be understood by seeing it in the apparatus) and a foot bellows (or oxygen tank) which serve as a source for driving a continuous air stream into the pharynx Between the foot-bellows and the pharyngeal tube a ' respiratory valve is introduced which regulates the inspiration and expiration by turning a ring with the thumb from side to side, when turning to the right the air is driven into the lung, by turning it to the left the air from the bellows is cut off, and at the same time an opening is made in the tube through which the escape of the expiratory air is accomplished

LENGTH OF LIFE OF TSETSE FLIES

One word more in regard to the duration of life of tsetse flies This is an important question, but one difficult to answer The importance comes in when we have to consider how long a place may remain dangerous from the presence of infected flies I remember at a meeting of the Royal Society when the question came up that the late Lord Avebury said he did not see any reason why a tsetse fly should not live for years He had himself known an ant to live in captivity for some 15 years Carpenter tried to solve the question by marking large numbers in a given spot and finding out how long the marked flies could be recaptured One male was caught 199 days after it had been marked Kleine states that he kept a fly in captivity for 227 days If we put the life of the fly, then, at anything up to a year we may not be far out

I have now given a sketch of the principal pathogenic trypanosomes in Central Africa, and also of their carriers, the tsetse flies In my next lecture I shall proceed to describe more in detail the individual species of trypanosomes, beginning with that one which causes nagana

THE USE OF MAGNESIUM SULPHATE IN THE TREATMENT OF TETANUS

WITH AN ACCOUNT OF A SIMPLE APPARATUS FOR PHARYNGEAL INSUFFLATION

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TETANUS, a frequent complication of the wounded in the present war, is a frightful disease Horrible spasms torture fully conscious victims Furthermore, it is the spasms which, at least in most cases, cause the fatal issue, by profoundly affecting the functions of respiration and circulation Accordingly, a treatment which may offer nothing more than relief from these spasms ought to be of considerable importance

The various experiences accumulated in the last nine years with the use of magnesium sulphate in sporadic cases of tetanus have established beyond a doubt that the spasms of tetanus can be relieved by the use of this remedy to a much greater extent than by any other method of treatment Furthermore, in many cases of tetanus magnesium sulphate proved to be directly a life saving remedy Similar results were obtained with the use of Epsom salts in the extensive experience in the present war However, by a study of the present numerous brief communications on this subject I became convinced that there is great necessity for a better understanding of the principles underlying this method of treatment, the various methods of administration and their indications, the possible danger due to the use of the magnesium salts, and the means for combating this danger On the basis of an extensive experimental experience and a study of the clinical literature I formulated definite opinions regarding these various points, which I shall state here as briefly as possible, having in mind exclusively the practical side of our subject

There are four ways for the administration of magnesium sulphate, each of which has a special action and consequently a special indication They are (1) Subcutaneous injection, (2) intramuscular injection, combined with inhalation of ether, (3) intravenous injection, and (4) intraspinal injection Except for the intravenous injection, the magnesium salt ($MgSO_4 + 7 H_2O$) shall be given in a 25 per cent (molecular) solution In sterilising the solution it must be kept in mind that if evaporation be allowed and not refilled with sterile water, the solution will be much more concentrated and the patient will therefore receive more of the salt The injections should be made aseptically, or at least antiseptically

1 *Subcutaneous injections* —The dose should not be more than 2 c c and not less than 1 2 c c. of the solution (25 per cent) per kilogramme of body weight, to be injected four times in 24 hours No massage Light etherisation or a morphinisation should precede the injection of magnesium.

2 *Intramuscular injection and inhalation of ether* —It is based upon the finding by Auer and myself that a moderate inhalation of ether increased considerably the efficiency of magnesium salts Chloroform does not exert such an effect The patient should be fairly well etherised, and 2 c c of a solution of magnesium sulphate (25 per cent) per kilogramme of body weight be injected into the muscles of the thigh At the end of the injection the thigh should be massaged and the ether anæsthesia continued lightly for about 20 minutes longer

3 *Intravenous injections* —The concentration of the solution should be about 3 per cent (isotonic), and not more than 5 c c per minute should be permitted to run into the vein

4 *Intraspinal injection* —The dose to be injected, at the usual place of the lumbar region, should be 1 c c (of a 25 per cent solution) for every 10 kilogrammes of body weight

Subcutaneous injections exert their effects slowly They cannot relieve immediately severe or dangerous spasms, but they exert undoubtedly a beneficent effect by cumulative action Under their influence the spasms gradually become milder and less frequent, and the patient may eventually recover Subcutaneous injections should be begun as soon as initial symptoms set in (local tetanus, slight trismus, &c) and be continued throughout the disease (In very young infants the dose should not exceed 0 8 c c per kilogramme of body weight)

Intramuscular injections plus ether may relieve greatly even severe spasms in less than half an hour, but the beneficial effect is liable to pass off completely after two or three hours On account of the local reaction which they produce the injections should not be repeated too frequently, and the method ought not to be used as a routine treatment However, on account of the simplicity of the procedure it may be resorted to in severe spasms when for some reason other methods which are capable of exercising a rapid effect are not practicable

Intravenous injections are capable of relieving dangerous effects of the spasms (tetanus of the diaphragm, constriction of the larynx) more promptly than any other method of application But the beneficial effect may completely disappear in less than 30 minutes Besides, by the use of this method the circulation may become affected also—by the direct action upon the myocardium. The use of this method of injection should therefore be reserved for emergency cases only, when quick action is urgently desired. Pulse and respiration should be guarded during the infusion of the solution, when the pulse shows softness or intermittence, or the respirations show shallowness, the infusion should be at once discontinued Fortunately the ill effects, if not permitted to continue too long, disappear quite soon after the infusion is discontinued

A CONTRIBUTION TO

THE STUDY OF THE ETIOLOGICAL FACTOR IN SO-CALLED CEREBRO-SPINAL FEVER

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The following paper, the gist of which has already been communicated to the Reading Pathological Society, is the result of observations made during the outbreak of cerebro spinal fever in Reading During this epidemic I have examined the cerebro spinal fluids from about 70 cases, many of which I have seen in consultation with the patients' own medical attendants or on behalf of the Reading sanitary authority

It has been my great regret that I have had to forego many valuable opportunities *for research in* relation to this disease Owing to pressure of work, both military and civil, however, and want of adequate laboratory assistance, I have had my hands full to get through even the routine work I offer this as an apology for the imperfections in my paper I would further take this opportunity of saying that any hypothesis put forward by me is based on very scanty grounds, which at a more opportune time must later be carefully examined and amplified It may then be found that my assumptions require considerable modification

At the outbreak of this disease I believed, like many others, that the meningococcus of Weichselbaum was responsible for the disease, and, indeed, in every fluid which I have examined a Gram negative diplococcus has been found and a positive diagnosis made As has been the case with other workers, I soon noticed that other organisms were present in films made from the centrifuged deposit whose nature puzzled me, especially as in the few cases (five) in which I made cultures from the fluid growths were obtained of what were apparently typical meningococci. These unknown organisms were sometimes coccal in form and Gram positive Others were slender Gram negative rods, while still others, stained by Gram, consisted of minute Gram positive dots placed a short distance apart as if at either end of a short bacillus The body of the bacillus was sometimes represented by a faint Gram negative rod As a rule this was absent and its apparent site was then represented by a thin streak slightly lighter than the surrounding film Occasionally one could see masses of these which looked like debris with minute dots interspersed at more or less regular intervals Occasionally also could be seen several of these dots placed in line at regular intervals from each other, suggesting that there might have been a fine filament connecting them

With a view of obtaining organisms from the blood of cerebro spinal cases I withdrew a few cubic centimetres of blood from the median basilic vein of 12 patients at various stages of the disease The blood was citrated, at once placed in nutrient broth with a + 10 reaction, and incubated for several days An interval of two or three hours elapsed between the sowing of the tubes and their arrival in the incubator No growth, to the naked eye at least, took place in any Subcultures were made on an egg agar medium devised by workers at the Lister Institute, who kindly gave me the formula. No apparent colonies were grown on these, but owing to the somewhat greater opacity of this medium as compared with ordinary agar it is possible that very minute colonies were missed This is the more likely as films made from certain of the incubated broth tubes revealed a few organisms more or less similar to what I have described as present in the cerebro spinal fluid films It is also possible that while the organisms may have been present in the blood they had not sufficient vitality to continue their existence in artificial media. For more elaborate attempts to recover the organisms seen in the spinal fluid I had no time

On April 16th I was asked by Mr E G March, of Reading, to see the following case in consultation with him

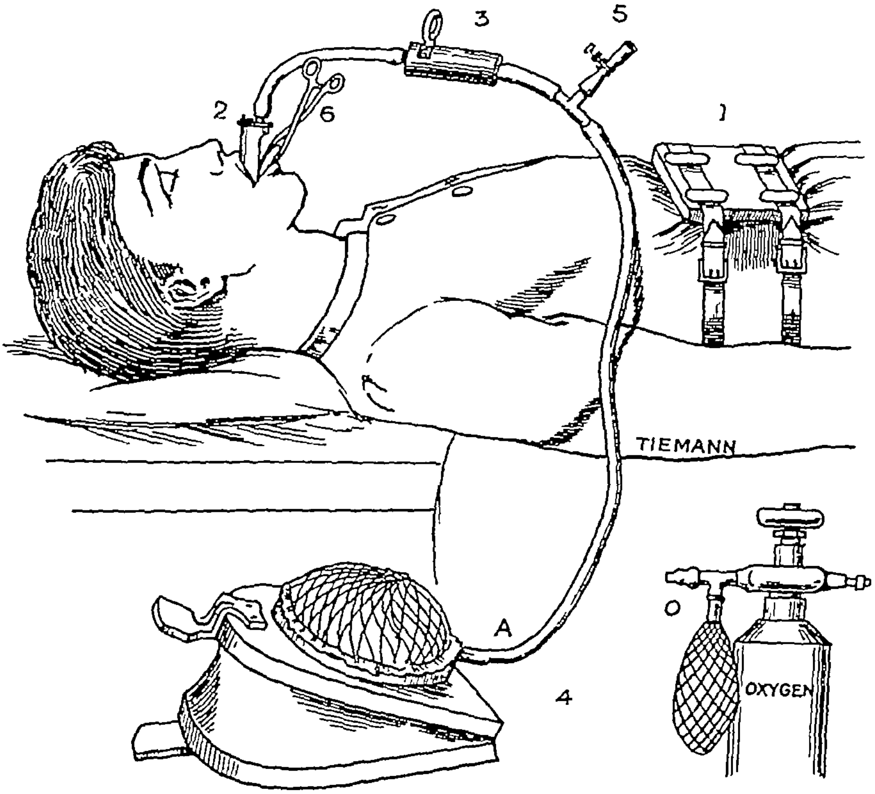
Case 1 —The patient a young woman, consulted Mr March on Dec. 14th, 1914, because of an oblong swelling over the extreme surface of the lower part of the left forearm Naturally it was considered to be a ganglion The patient showed no signs of tuberculous taint and indeed, looked unusually strong and healthy Later Mr March ascertained that for two months previously to consulting him she had suffered from diarrhœa. On Jan 4th, 1915, another swelling appeared on the forearm. This was burst subcutaneously under digital pressure. On Feb 16th the patient took to bed with gastric symptoms The abdomen at that time was distinctly distended and there was a good deal of flatulence The temperature was 102° F in the evening The urine was of a mahogany colour, but beyond a fairly large amount of indican it contained nothing abnormal About this time the breathing became rather short, and fluid appeared at the right base with signs of consolidation The patient complained of pains in the legs and ankles and showed a pyæmic type of temperature. The right lung soon cleared up, but similar signs then appeared in the left lung Mr March suspected pus, the infective agent probably having entered through the intestinal tract Meantime other "ganglia" appeared in various parts of the arms

On April 17th I made a leucocyte count and found 20 000 leucocytes per c mm. Of these, 73 per cent were polymorphonuclear neutrophils A suggestion was made that the condition was an infective one, and that in view of the history one of the so-called ganglia should be opened and the contents examined On the 23rd a similar swelling appeared on the tongue The temperature then dropped to normal, but the pulse remained quick The ganglia were then opened under an anæsthetic and blood stained pus was found in every one I was present at the operation and planted on glucose-agar tubes some of the pus taken direct from the swellings The leucocytes now numbered about 15,000 per c mm The subsequent history so far is that since the operation, now some weeks ago she has suffered from slight sickness and recently has complained of marked giddiness on moving the head. Pain in the occipital region is marked.

The case was one apparently of pyæmia, with a history of preceding gastro intestinal disturbance, followed by a prolonged illness, in the course of which we find a high relative and absolute increase in the polymorphs, together with headache, giddiness, and sickness in the later stages There seems at first sight nothing very much out of the common here, and yet when I came to examine the pus, expecting to find one of the ordinary pyogenic organisms, I received my first surprise Before referring further to the organism I shall only say that I kept it living by frequent subculture until I had more leisure to investigate it The desire to make further investigation came with the appearance of the second case, which I shall now briefly describe

Case 2 —On May 11th a patient was admitted to the Royal Berks Hospital under Major G S Abram, R A M C (T) with a history that three days previously he was seized with severe persistent headache There was no history of previous illness beyond the fact that for six years he had suffered from a discharge from the left ear The temperature was 100 4° F, the pulse rate 120 and regular, and the tongue was thickly furred. On examination of the

The expiration is carried out through the elasticity of the over distended chest walls Between the bellows and the respiratory valve a T tube is interpolated, which is supplied with a screw clamp on the vertical branch When the pharyngeal tube is first introduced the T tube has to *remain widely open*, but immediately after beginning of working the bellows and the respiratory valve the screw clamp should gradually be narrowed down until the chest shows a proper heaving The mentioned parts of the apparatus should be kept connected and ready for immediate action Besides these parts, the apparatus contains also a wooden board with belts for the compression of the abdomen, a tongue forceps, some tape, and a stomach tube, to be used in a manner which will be mentioned later All these parts are collected in a handy *small bag* The details and the working of the apparatus are very simple and by seeing the latter the description will be readily understood



Apparatus for artificial respiration by pharyngeal insufflation 1 Abdominal pressure pad 2. Pharyngeal tube 3 Respiratory valve 4 Foot-bellows 5 T tube with a screw clamp, interpolated between the respiratory valve and the foot bellows. Pharyngeal tube respiratory valve T tube and foot-bellows should be kept connected by means of good rubber tubing which does not kink. The apparatus will then be in readiness for immediate application. 6 Tongue forceps and tape (or gauze bandage) for tying the tongue to the pharyngeal tube.

Oxygen may be used by attaching the tube (A) to a cylinder of the compressed gas (O) in place of the bellows (4)

The order of procedure should be as follows 1 The abdomen should be compressed by the small wooden board bearing belts 2 The tongue should be pulled out by means of the tongue forceps 3 The pharyngeal tube should be inserted as far back as the pharyngeal wall, with the lateral opening of the tube facing the entrance into the larynx The tongue should then be fastened to the pharyngeal tube, but not too tight By this means the entrance into the larynx is kept widely open, and the pharyngeal tube is kept safely in its proper place The outer end of the pharyngeal tube should then be connected with the end of the respiratory valve which bears the lateral ring The foot-bellows should be worked continuously, and the respiratory valve should be turned about 12 times per minute The T-tube should be, as stated above, gradually compressed until a satisfactory heaving of the chest is established The whole procedure of the establishment of the working of the artificial respiration need not last longer than one minute

The anterior end of the pharyngeal tube bears an opening which is kept closed by means of a movable plate Through this opening a stomach tube which fits into the hole can be pushed down until the fenestrated end of the tube is within the stomach. By the aid of this procedure all the air entering into the stomach may escape through this tube, and a very satisfactory artificial respiration may then be obtained even without the pressure upon the abdomen (The rubber tubing connecting the various parts should be strong and not easily subject to kinking When the source of pressure comes from an oxygen tank the T tube should be interpolated between the respiratory valve and pharyngeal tube, to prevent waste of oxygen during expiration, while the rubber bag should be interpolated between the oxygen tank and the respiratory valve for the accumulation of the escaping oxygen during the period of expiration)

The efficiency of this apparatus has been tested on a great number of animals of various species under complete paralysis from ether and curare without a single failure It has also been tested in a completely paralysed human being with success Furthermore, it has been tested in several human beings for the production of profound anæsthesia, and it proved to be absolutely satisfactory even in temporary suspension of respiration

The pharyngeal insufflation apparatus for artificial respiration can be handled with ease by laymen after slight instruction

The apparatus, which is made for me by Messrs George Tiemann and Co, of New York can be used, of course, for any other emergency case of paralysis of respiration But it is here especially recommended to have such a reliable and easily handled apparatus on hand when magnesium sulphate is used for the relief of tetanus, then an efficient dose of the salts may be administered without the fear of the consequence of an accident of paralysis of respiration

On examination of the larger colonies after several days' incubation, the impression is gained that there are two kinds

In cultures from Case 2 the colonies were rounded or oval, with a slightly more opaque dot in the centre The majority had a fairly regular margin, and by the aid of a hand lens the colony looked as if it had a slightly more opaque centre surrounded by a lighter zone, which in turn was surrounded by another rim of the same opacity as the centre While the majority showed this form there were others which had a distinctly crenated margin On examination with a low objective they presented the same granular appearance as the former colonies, but differed in that the edge was distinctly "scalloped" The larger colonies were very flat and occasionally a very slightly prominent central boss could be seen. When several days old both types of colony have a dry, glazed appearance

Colonies from Case 1 showed under a low objective exactly the same granular appearance When older it was found that the majority did not preserve a smooth unbroken edge The margin began to show crenation, and in old cultures the edge was very markedly serrated, so much so that there appeared radial divisions running well into the interior and giving the edge a feathery appearance At the same time there were interspersed with these colonies a few which preserved the smooth edge and were then exactly like the majority of the colonies of Case 2 Except for the feathery edge, colonies from the two cases could not be distinguished with a low power objective No growth occurred at room temperature

Cultures from Case 2 in + 10 nutrient broth after many days' incubation showed a deposit of whitish particles at the bottom and sides of the tube and a slight uneven scum floated on the top Broth cultures have not yet been made from Case 1 In the water of condensation in agar tubes from Case 1 and Case 2 respectively could be seen minute particles suspended in the liquid Saline emulsions made from the two cultures differed slightly That made with a culture from Case 1, while becoming very slightly opalescent, was characterised mainly by the suspension in it of many minute particles or granules Similar particles were seen in emulsions from a culture in Case 2, but they were not so numerous and the fluid was more opalescent The same difference was observed in spreading films The culture from Case 2 seemed to emulsify easily with only a few granules in it, while in that from Case 1 there were more granules and a homogeneous mixture was not obtained Both cultures suggested the appearance observed in making films from diphtheria cultures, especially that of Case 1 Glucose and saccharose serum peptone water tubes were inoculated from the original cultures from both cases, with the result that glucose in each case was rendered acid while the saccharose remained unaffected Milk was apparently not clotted by the organism of either case Cultures were made anaerobically, but no growth was apparent after two days incubation Similarly, no apparent growth was obtained after sowing on ordinary + 10 agar and incubating at room temperature Stab culture in glucose agar showed small granules and discs along the needle track The organism is fairly long lived

Morphology and staining reactions—Films were made from isolated colonies obtained by plating out and from agar cultures raised from a single plate colony of each of the two types mentioned as occurring in cultures from each case Gram's and a slightly modified Neisser's stain were employed A film from a smooth margin colony from Case 1 showed short and sometimes rather thick Gram positive rods often occurring as diplobacilli, arranged frequently parallel to one another in small rows They varied in size and in the intensity with which they retained the Gram stain They recalled at once the appearance of Hoffmann's bacillus Others again were club shaped, or in shape like a point of exclamation Others appeared to be Gram positive diplococci of various sizes, sometimes resembling the meningococcus in shape, in other cases the two elements composing the diplo were unequal in size, and sometimes one was Gram positive while the other was Gram negative, and occasionally the staining was indefinite Sometimes these cocci lay singly and then were often oval in shape or slightly pointed at one end. Other diplococci were exceedingly minute, no more than mere specks, and these frequently stained a faint red with Gram and often appeared to have a halo around them Some appeared to be beaded bacilli, the intermediate parts taking a lighter tint of the Gram In addition many of the minute Gram positive dots already referred to were seen, sometimes with a faint red stain joining them, in other cases this connexion was not evident

In films made from a 12 hour agar growth in addition to the above a short thin Gram negative rod was seen which sometimes showed strips of a slightly darker red occurring in it Others had a minute Gram positive dot at each end Occasionally also a faint Gram negative diplococcus was seen. Films from an agar growth raised from one of the smooth margin type from the culture in Case 2 showed practically the same appearance Neisser's stain applied to films of the above strains grown on Lorrain Smith's medium showed many bacilli more or less closely recalling Hoffmann's bacillus and staining a uniform red Others looked exactly like meningococci, while others were short rods with a black bead at each pole Some were slightly club shaped and showed black bars transversely to the long axis While these beaded or barred forms were seen the majority stained red, and in the case of films from the culture in Case 2 while barred forms were seen the majority were coccal, ovoid, or diplobacillary in shape

Films made from agar cultures raised from one colony of the feathery edge type from the culture in Case 1 showed forms indistinguishable from the Klebs Löffler bacillus, with the difference that the film although made from a young culture looked as if it were made from an old diphtheria culture with abundant involution forms Any illustrated text book showing involution forms of the diphtheria bacillus will give an idea of what was found here It is to be noted, however, that along with these forms was found also an occasional thin Gram negative rod, often a Gram negative rod lay beside a Gram positive one Also a few very small Gram negative diplococci were seen

Practically the same appearance was got in films made from a culture raised from a single crenated colony from Case 2 When stained by Neisser it would at once be said that they were films of the Klebs Löffler bacillus The smooth edged type of colony, therefore, would appear to contain a larger proportion of the Hoffmann element, while those with crenated margins had more of the Klebs Löffler element In both, however, occasional Gram negative ear a slight discharge was seen coming from a small perforation in the membrane, no mastoid pain, teeth very filthy On the 15th the patient still complained of headache, the pupils were dilated but equal, and there was tenderness in the neck and shoulder, but none over the spine He could bend his head freely on the chest. There was no Kernig sign Cerebro-spinal meningitis was suspected, and about 25–30 c c of very clear fluid were allowed to escape by lumbar puncture This was examined in the usual way by making films from the centrifuged deposit Gram negative diplococci were found, together with the other unknown forms above mentioned He was given 15 c.c of antimeningococcal serum On the 17th I withdrew a few cubic centimetres of blood from the median basilic vein, sowed them immediately in about 20 c.c of ordinary + 10 broth, which was placed at once in the incubator There was no apparent growth next day, and subcultures were made on 1 per cent glucose agar These remained apparently sterile Subcultures on to fresh 1 per cent glucose agar tubes were made on each of the four following days I kept subculturing because in films made from the broth organisms appeared to be present On the sixth day I obtained a growth on the agar slope inoculated the day before and shall describe this organism further on On the 18th there was a slight manifestation of Kernig's sign The plantar response was flexor, but the knee jerks were absent On the 25th a slight systolic bruit was noticed Next day four teeth stumps were removed under cocaine The leucocytes now numbered 15,000 per c mm On the 27th the patient became very delirious and attempted to get out of bed. A vaccine made from five different strains of meningococcus which I had isolated during this outbreak was injected Next day a small dose of an autogenous vaccine made from the patient's own organism was given On the 29th the abdomen became tumid and the patient rapidly became worse and died

Post mortem examination —The brain and cord showed marked congestion of vessels in the meninges with some opacity along the larger vessels, a layer of pus on the under surface of the left temporo-sphenoidal lobe, which also contained a small abscess, and turbid fluid, but no excess in the ventricles No abscess in the cerebellum No definite pus in relation to the cord, which was very soft and congested Skull Advanced disease of the left middle ear with a perforation through the tegmen tympani, these parts being bathed in pus, while in the middle ear yellowish white material of a cheesy consistency was found Otherwise the bones of the skull were apparently normal. Heart The pericardium contained a larger quantity than usual of turbid fluid. Ante mortem clot was present in the right auricle The tricuspid and mitral orifices admitted the tips of four fingers respectively The myocardium was pale and friable No vegetations were found The coronary vessels were healthy, but slight atheromatous change was seen in the aorta in the neighbourhood of the coronary openings The vessels otherwise apparently were healthy The bronchial glands were enlarged hæmorrhagic, and soft There was a small amount of turbid fluid in each pleural cavity No sign of tubercle Small hæmorrhages were found all over the surface of the right lower lobe In the left lower lobe was found a small whitish nodule which, on being incised was found to contain pus No signs of pneumonic consolidation Abdomen Liver pale and friable The kidneys were pale and showed cloudy swelling No enlargement of the cortex. No hæmorrhage into kidneys or suprarenals The spleen was enlarged, weighing 1 lb 6 oz, no infarcts, no hæmorrhages, but the pulp was very soft and very diffluent The stomach small intestine, and appendix apparently were healthy The colon was greatly distended and contained some light-coloured stools, the mucous membrane showed patches of congestion, but no hæmorrhages and no evident ulceration Pancreas normal, lumbar and mesenteric glands enlarged, bladder and ureters normal Muscles There was a large hæmorrhage into the muscles of the abdominal wall immediately in front of the bladder, into the right iliacus and extending round to the muscles on the right outer side of the pelvis, causing pressure on the right sciatic nerve The hæmorrhage was probably several days old A similar but smaller hæmorrhage was found into the muscles of the abdominal wall near the left costal margin The inguinal glands were enlarged, as also were the glands in the right axilla These latter were also markedly hæmorrhagic.

The case was remarkable for the high temperatures reached during the illness, 105 8°, 106 °, and 106 8° occurring several times, preceded by rigors This patient during life showed signs and symptoms of cerebro spinal meningitis, and a Gram negative diplococcus was found in the cerebro spinal fluid Post mortem, however, a temporo sphenoidal abscess with caries of the temporal bone was found, together with hæmorrhages into the muscles and evidence pointing to septicæmia, borne out by the recovery of an organism or organisms from the blood

The first point I wish to make is that these two cases, though essentially very different in their history, are nevertheless due to the same infective agent I am quite aware that the first case, until recently at any rate, never showed any symptom suggestive of cerebro spinal infection and that the second case, while showing symptoms of meningococcal infection, will be attributed by some to ordinary middle ear disease, followed by an abscess in the brain, and I am well aware of the fallacy that may here enter into my argument However, since completing the preliminary work for this paper, I thought it well to look up recent numbers of the medical journals, and I have received support—or so I think—from papers published on the etiology of the disease,[1] for, so far as I can gather, the organism which I shall now describe appears to be similar in many respects to that described in those papers

The agar tubes inoculated with pus from the abscesses in Case 1 showed no growth for several days, but about the fourth or fifth day minute colonies were found on the agar Films made several days later from these showed the most extraordinary diversity of form—club shaped, pear shaped, point of exclamation like, Gram positive bacilli, small diplobacilli resembling Hoffmann's bacillus, and Gram positive cocci occurring in pairs or singly with occasional Gram negative rods and cocci In addition to these could be seen the small black dots already referred to Films made from the pus direct showed practically all these forms, the club shaped bodies apparently having a Gram negative tail These cultures were simply kept going for further investigation when Case 2 turned up I have already described the steps taken to obtain a growth from this case and was surprised to find that the colonies were similar to those of Case 1 when they appeared first On making films from these I was at once struck by the general resemblance of the organisms to those isolated from Case 1 There were slight differences which I shall describe further on

Cultural characters —Owing to the extreme diversity in appearance of the organisms a series of plates were inoculated from each of the two cultures Within 24 hours on 1 per cent glucose agar there was a copious growth of colonies on each series of plates At this stage they were all indistinguishable They consisted of very minute pin point colonies, discrete for the most part, with apparently a regular margin, and were rounded or slightly oval in shape With a low objective they appeared to be homogeneous and granular They were so small that unless the agar was very clear they could quite easily be missed Incubated further these colonies grow larger and may attain in a few cases a diameter of about 0 5 to 0 75 mm though the majority remain smaller single diplococcus or diplobacillus Further, we know how extremely pleomorphous is the familiar Klebs Löffler bacillus, especially in older cultures, and also how in apparently pure cultures of the meningococcus variations in staining, in size, and even in shape have been described The feature common to both the diphtheria bacillus and the meningococcus, hitherto accepted as being pure strains, is their tendency to variation, more especially of course in the case of the former organism This plemorphism suggests that after all Hoffmann's bacillus may be merely one of the many forms of the true Klebs Löffler bacillus Further, the hypothesis which I suggest would explain to a certain extent the reason for the discrepancies and frequent failures met with in serum treatment

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[1] Hort Shaw and others Brit Med Jour March 27th and April 17th and 24th 1915

If the so called meningococcus is merely a phase in the life history of a diphtheroid organism we can understand the effect on the patient of a serum such as Flexner's Temporary benefit may be expected to follow as a result of its action on the meningococcal forms The other and presumably the more resistant diphtheroid forms are left uninfluenced The effect of this wears off, and the patient may be again benefited by the introduction of serum, and so the process goes on until his own tissues overcome the other forms of the infecting organism or until death occurs My suggestion is that an anti diphtheroid serum or vaccine, or even an antitoxin analogous to diphtherial antitoxin, may be found to exert a greater influence on the course of the disease than the present antimeningococcal serum, which probably only acts on the so called meningococcal forms Further, I would make the suggestion that, if this assumption is correct, the life history of the gonococcus must be reinvestigated, for, owing to the similarity between the gonococcus and the meningococcus, one might reasonably expect to find a diphtheroid form of the urethral coccus as well As a matter of fact, various diphtheroid rods are known to be found in that region It would further explain the very disappointing results obtained by the vaccine treatment of gonorrhœa. The gonococcus may disappear for a time, but returns again, because the vaccine has no effect on the presumably more resistant diphtheroid forms

If the views above enumerated are correct it would further go to prove the comparative uselessness of examining contacts merely for meningococci The want of uniformity in the results obtained suggests either errors of technique or the fact that the meningococcus is not always present in the throat as such, but may exist in another form

Further evidence could be adduced if space permitted in support of the analogy between the manifestations of the disease in the present epidemic and those met with in diphtheria, especially the more malignant forms of it Within broad limits, seasonal prevalence, presumably incubation period, mode of onset, occasional appearance of rashes, hæmorrhages, and occasionally subsequent paralyses are common to both The analogy between the two diseases has been remarked upon by several observers both in this and other epidemics Many of the victims subsequently develop heart affections, and I have now post mortem notes before me of a case in which the patient died suddenly from heart failure when he was apparently convalescent Another feature found frequently in cases of diphtheria, as in the epidemic with which we have been dealing, is the comparative slowness of the pulse in relation to the temperature curve Clinically, in the epidemic mentioned we have seen cases presenting the most diverse symptoms, and many patients must have recovered or died with a wrong diagnosis I believe the statement quoted by Sir William Osler[3] to be probably very near the truth —viz, that in 2 per cent of apparently healthy people the diplococcus may be found I would suggest substituting the words "infective agent" for "diplococcus" Finally, might I make a suggestion that the local epidemics described by McGowan[4] as occurring in industrial schools in Edinburgh and elsewhere may actually have been due to a diphtheroid infection of the type suggested by me and not to a combination of atypical pneumococcal infection occurring in boys the subject of endemic status lymphaticus

To sum up, I would suggest that the causal organism of the epidemic dealt with in this article is a diphtheroid rod closely related to the Klebs Löffler bacillus, of which, indeed, it may actually be a variant, and that we are witnessing, as Sir William Osler says, the struggle of a new disease to win a place among the great epidemics of the world This diphtheroid rod is an extremely pleomorphous organism and may give rise to Hoffmann like forms, to what appear to be meningococci, &c It is probably very widely spread in nature in one of its more resistant forms, and it is this form and not the meningococcal one which is transmitted from one to another It is also probably to be found more frequently among individuals than we imagine The disease may give rise to the most diverse symptoms, evidently due to an actual invasion of the body by the infective agent, and not merely to the action of toxins manufactured locally It is in this respect that it differs from diphtheria as we understand it In other ways, however, there is a certain similarity between the two diseases

The above hypothesis offers an explanation why sera fail so often in the treatment of so called cerebro spinal meningitis, and the analogy to diphtheria suggests that treatment on similar lines should be adopted It further suggests that fresh investigation must be made into the life history of the gonococcus, and offers an explanation of the failure of vaccines in that disease

I am aware that much of the above is open to criticism, but I have already stated that fuller investigation remains to be done when times are more normal than they are at present

PS —Since writing the above I find that I have succeeded in obtaining a growth directly from the cerebro spinal fluid of a fatal case which was otherwise quite healthy and where there was no middle ear disease I have also obtained a growth from the blood of another case sent me by a pathologist, and I have seen organisms, morphologically similar to those described, in films made from the pleural fluid These facts are further evidence in favour of the sameness of the organism causing the present epidemic

Reading

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[3] Brit Med Jour Jan. 30th 1915

[4] Endemic Febrile Illness with Rapidly Fatal Cases Occurring in a Boys Industrial School Proceedings of the Pathological Society of Great Britain and Ireland January 1913 p 412.

HEALTH OF NEWQUAY (CORNWALL) —Dr A Hardwick the medical officer of health of Newquay, in his twenty sixth annual report states that during 1914 the death rate was 10 2 per 1000, the birth rate was 11 0 per 1000 Newquay has increased rapidly probably more so than any other town in Cornwall In 1871 the population was 1121, and now it is estimated at 4850 rods and Gram-negative and positive diplococci and ovoids were seen. When film preparations were made from glucose serum peptone water it was surprising to find the large and irregular forms on the whole absent. The majority were very short diplobacilli, and films made from the two cases could scarcely be differentiated.

Animal inoculations.—White mice were inoculated on May 27th with 1 c.c. of an emulsion in sterile saline of a 12-hour agar culture made from each of the two cases described. For each case two mice were used, one for intraperitoneal and one for subcutaneous inoculation.

Within 20 hours one of the mice inoculated with a culture from Case 2 was dead. The other mouse from the same case appeared to be all right. On the 30th it appeared to be very ill; it maintained the same position all the time, back arched convexly outwards, head touching floor and trembling slightly. On causing the animal to move the trembling became more marked and it walked slowly, dragging one leg after the other. The mere act of touching the animal appeared to increase the tremors. On the 31st it was found dead. One of the two mice inoculated with a culture from Case 1 was found dying within 20 hours. It was lying on one side with its back arched, head down, and toes clenched. Nothing definite was found post mortem. The other mouse inoculated from the same case is still alive and well.

The three mice died from a general septicæmia as the organism was recovered from the heart blood. Films made from the peritoneal fluid, in addition to the variety of form of the organism inoculated, showed large numbers of small Gram-negative diplococci bearing a resemblance to meningococci, also very minute negative diplococci and Gram-negative rods occurring both singly and as diplos. Practically the same findings as in films made from cultures, with the exception that there were many more Gram-negative diplococci.

Two rabbits were inoculated on the same date intravenously with 1 c.c. of the same cultures used for the mice. These rabbits are still well, but seem slightly thinner than they were. Two small guinea-pigs were inoculated on June 2nd subcutaneously into the skin of the abdomen, each with an emulsion in 3 c.c. sterile saline of one agar slope from each case respectively. The age of the agar culture was 20 hours. Both animals are still alive, but that inoculated from Case 1 has some oedema of the lower part of the abdomen, while round the site of inoculation the skin is hard, irregular and tender on pressure. The hair has disappeared from the part and it looks leathery.*

I have said that in every case of cerebro-spinal infection I have found a Gram-negative diplococcus. In every one also I have found two or more of the types of organism just described. In view of that I have stained many of my spare films made from different cases examined during the last three months and have found definite diphtheroid rods present with beading and sometimes with bars. In Gram films made from the various blood cultures in which I was unsuccessful in finding a growth I have been able to distinguish in addition to Gram-negative diplococci one or more of the forms above described. They were evidently present in the attempted cultures and may have grown to a certain extent, but for some reason or other subculture did not succeed. I have found the same types of organism in films made from pus from cases showing definite meningitis. In three cases I have examined catheter specimens of urine, and in two by culture have got the same type of organism. The third one was only examined by film preparations made from the centrifuged deposit and showed again Gram-negative diplococci as well as one or more of the other types. I have observed apparently the same organisms in films made from a case of irregular pneumonia. In this case there appeared to be much larger club-shaped bodies, many with a longer tapering extremity. The same curious variety of form has been got in films and culture from the heart blood after passage through mice.

The factor common to all the fluids and purulent exudates which I have examined is the invariable presence of diphtheroid rods together with Gram-positive and Gram-negative diplococci. All these various types of form have been reproduced in cultures from Cases 1 and 2, and while in culture the Gram-positive elements preponderated, yet on passage through mice large numbers of Gram-negative diplococci were obtained in the peritoneal exudate. These two cases, therefore, I regard as due to the same infective agent as is responsible for the present epidemic, notwithstanding that Case 1 is different from anything I have seen described as due to the meningococcus, and in spite of the fact that Case 2 was complicated by middle-ear disease.

The second point which I now wish to make is this, that in the disease termed "spotted" fever, or cerebro-spinal fever, the causal organism is a pleomorphous diphtheroid rod closely akin to the Klebs-Löffler bacillus, if not a variant of that organism. It is rather fitting that in "spotted" fever, or cerebro-spinal fever, which is characterised generally by the absence of spots, and the absence of typical meningitis in the majority of cases, the paradox should hold good with regard to the etiological factor, so that meningococcal infections are not really due to the meningococcus at all, but rather to an extremely pleomorphous organism. There are various reasons for making this statement, one of which has already been given. Others may briefly be referred to. It has always been a puzzle why such an extremely delicate organism as the meningococcus should be capable of transmission even through a hypothetical series of intermediaries from one case to another frequently at very considerable distance apart. The suggestion now is that we are dealing really with a pleomorphous organism and that the infection is transmitted, not by the meningococcus as such, but by another form in the life-history of the organism which is pretty robust and capable of surviving for considerable periods of time and even under adverse conditions. This form I believe to be a diphtheroid one, although it is always possible that, as Hort and others suggest, there is an ultra-microscopic form. I would put it another way and say that it is probably transmitted in the same way as diphtheria. Subject necessarily to verification by subsequent rigorous investigation I believe the organism to be highly pleomorphous. It would be an extraordinary coincidence if in all these cases whose fluids or exudates I have examined a combination of more or less the same types of organism should be present. Further, the very careful and painstaking efforts of Hort and others to separate out the various forms have met with no success. The explanation is probably to be found in the fact, not that the cultures are impure, but that the organism undergoes various metamorphoses according to circumstances whose nature we do not yet understand. This seems a reasonable explanation in view of the fact that in film preparations great differences in form and staining reaction are frequently evident in the two elements composing a the hospital quadrangle, he is anxious to resume general duties The huge cavity resulting from the total destruction of the structures comprising the nasal fossæ is lined with healthy granulations There is a bridge of healthy gum separating the orifice external to the alveolar process and the perforation of the hard palate There is now no discharge coming down into the mouth, and the sinus over the right lacrymal bone is healthy It is considered wise to keep the patient on a modified course of pot iodid and mercurial inunction.

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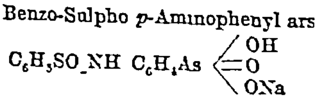
* This animal has since died.

The case is interesting in that it clearly proves that we have, apart from the already accepted specifics comprising mercury, pot iodid, salvarsan, neosalvarsan, and now kharsivan, neokharsivan, and the French arsenobenzol, " yet another valuable string to our bow " In this case we have not the least doubt that but for the employment of hectine this patient's chance of ever becoming an efficient soldier, or, in fact, of ever recovering—his decline in weight and general condition being so rapid—was very poor It was a matter of daily anxiety as to how much further the processes would go without involving the meninges This is undoubtedly unique in our experience in the most severe cases of syphilis treated at this hospital, in that no improvement resulted when subjected to the above described intensified combination of accepted specifics Regarding the patient s future service in the army, he is merely waiting now for the general structures of the buccal cavity to have settled down sufficiently to warrant the fitting of a dental obturator

Encouraged by the above, we have used hectine in other cases, and hope to publish more notes on the subject before long, and discuss its relative value with the results we are obtaining with kharsivan and neokharsivan, which drugs we are now giving an exhaustive trial in approximately 100 cases

The following formula gives the composition of hectine —

Sodii Benzo-Sulpho *p*-Aminophenyl arsonas



$$C_6H_5SO_2NH\ C_6H_4As \begin{cases} OH \\ =O \\ ONa \end{cases}$$

Hectine consists of colourless needles, very soluble in water, containing approximately 21 per cent of arsenic The preparation used is put up in sterile ampules containing 20 cg in 1 c c

Hitherto we have employed hectine purely locally —e g, into the neighbourhood of a chancre, gumma, &c —with good results clinically

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CENTENARIANS—Mrs Mary Shelton, of Rowcroft, Stroud Gloucestershire, celebrated the 103rd anniversary of her birthday on May 29th.—Mrs Jane Taylor, who was over 100 years of age, has recently died at Burlescombe, Devon

DEATH OF MR FRIEND EDWARD STREETEN—Mr Streeten L R.C P Edin, M R C S, D P H., died recently at Swindon in his sixty third year He received his medical education at St George s Hospital and in the eighties ' began practice at Swindon After some years he gave up his private work and devoted his whole time to his various appointments He was medical officer of health for the borough of Swindon and for the Highworth rural district and was also medical superintendent of the Swindon and District Isolation Hospital and school medical officer for the Swindon education committee He was one of the best known men in Swindon taking an interest in all local matters and was held in great esteem there He was an energetic Freemason and at the time of his death was Acting Provincial Grand Secretary He leave a widow and two daughters

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VACCINES IN THE TREATMENT OF RESPIRATORY DISEASES[1]

By ROBERT J ROWLETTE, M D DUB,
F R C P IREL,
PHYSICIAN TO JERVIS-STREET HOSPITAL, DUBLIN

WITHIN the past few years vaccines have been gradually coming into more frequent use in the treatment of diseases of the respiratory tract Our knowledge as to their applicability and its limits is still to a great extent tentative, and it is only by the accumulation and comparison of the experience of different observers that we can hope to advance our knowledge I do not, in the present paper, intend to concern myself with diseases due to tuberculous infection

In the early days of vaccine treatment it was thought that its scope was limited to localised diseases, and in particular to those of chronic course We know now that neither the degree of acuteness nor the lack of localisation is a bar to successful treatment, and some of the most marked successes have been in the case of acute generalised diseases The main difficulty of vaccine treatment is one of diagnosis—of bacteriological diagnosis, and this difficulty is specially great in the case of diseases of the respiratory tract No clinical entity among the diseases of the respiratory organs —not even pneumonia—can be stated with confidence to be due to a constant bacterial cause Pneumonia, though most commonly due to the pneumococcus, may be due to any one of half a dozen organisms A similar statement would be true of the infective diseases of the rest of the respiratory tract We cannot, therefore, foretell from clinical grounds what organism we have to deal with in any particular case

But this is only the beginning of our difficulties The respiratory tract is part of the surface of the body, and it is open to constant bacterial soiling In the upper part of the tract the mucous membrane is the normal habitat of a great number and variety of organisms, many of which are potentially pathogenic In case of chronic infection the number of organisms may be indefinitely increased, and two or more of them may be simultaneously pathogenic Our problem is, therefore, not merely to discover the organisms present, but to select from among them that which is most likely to be causative, bearing in mind that more than one may be causative at the same time With our present degree of knowledge of the bacteriology of the respiratory tract it is not easy to solve the problem Indeed, in not a few cases the diagnosis is only settled by the result of treatment This, however, is not peculiar to vaccine treatment

This difficulty of diagnosis might not, it is true, be a great hindrance if we were merely engaged in studying a scientific problem, where we had ample time and material at our disposal It is very real, however, in the conditions of practice, whether in hospital or in private It is not easy to subject a patient to several series of inoculations with different organisms, (*b*) being employed when (*a*) has proved useless, and (*c*) in its turn replacing (*b*) It is by an increasing knowledge of the relations of the several organisms which inhabit the respiratory tract to definite diseased conditions that vaccine treatment will be rendered at once more

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[1] A paper read before the Section of Medicine Royal Academy of Medicine in Ireland on May 21st 1915

SEVERE CASE OF

INTRACTABLE SYPHILIS TREATED SATISFACTORILY WITH HECTINE

By E G Ffrench, M D Edin, F R C S Edin,
MAJOR, R.A.M C OFFICER COMMANDING MILITARY HOSPITAL, ROCHESTER ROW S W

AND

C H. MILLS, M R C S, L R C P Lond,
TEMPORARY LIEUTENANT R.A.M.C MEDICAL OFFICER IN CHARGE OF SYPHILIS WARDS MILITARY HOSPITAL, ROCHESTER ROW, S W

Private ——, aged 30, was admitted to the Military Hospital, Rochester row, London, S W, on Sept 19th, 1914, suffering from a large perforation of the hard palate He was placed on the syphilis register after giving the following history

History of case—The patient, a reservist, had been a very heavy beer drinker In November, 1910, he developed a hard chancre on the penis He did not seek medical advice, however, until after the chancre had been present for three weeks He then consulted a civilian doctor, who commenced a course of mercurial treatment comprising pills and medicine by the mouth. This he continued for six months Three weeks later, having abandoned his treatment, a rash appeared on the trunk, arms, and legs, which he described as dry and scaly The patient then went to a large general hospital when scabies was diagnosed, and he was given sulphur ointment supplemented by sulphur vapour baths, and the rash gradually disappeared. In 1913 (two years ago) a "lump" appeared in the centre of the hard palate He attended the Mildmay Mission Hospital, when he was again given mercurial pills and mouth wash He continued his work for four months, and the condition seemed to improve The gumma, however, for such it was, did not discharge nor was the surface broken Eight months later (approximately one year ago) the gumma again commenced to increase in size This he reported to the Mildmay Mission Hospital It had now broken down and was discharging profusely Mercurial treatment was resumed, but the ulcer progressively got worse for a period of six months An operation was now suggested for the removal of the necrosed bone At this date, however, he was called up to the colours as a reservist, and after completing one month's service (including three weeks in France) he was sent to the Rochester row Military Hospital for treatment

Condition on admission—The patient was in a flabby, unhealthy condition, presenting an oval perforation of the hard palate roughly the size of a shilling, through which was exuding a foul yellow discharge, and his breath was very foul There were no external gummatous changes elsewhere about the body The nervous system was unaffected, as evidenced by normal reflexes Weight, 12st 4½lb There were no albumin and no signs of hepatic cirrhosis The heart and chest were normal

Treatment—A combined course of salvarsan intravenously, accompanied by mercurial injections intramuscularly was decided upon. Accordingly the patient was given three intravenous injections of 0 9 grm neosalvarsan, administered at intervals of a fortnight, accompanied by ten weekly injections of 1 gr mercurial cream, during which course his weight dropped to 11st 3lb He was now put on pot iodid gr 7 three times a day and daily inunctions of ung hydrarg drm 1 The pot iodid was gradually increased until 15 gr four times a day were tolerated without any ill effects The discharge through the perforation, however, was so foul that the patient had to be isolated The perforation gradually increased in size—this three months after admission to hospital The following necrosed pieces of bone were removed during this period at intervals the whole of the vomer, the perpendicular plate of the ethmoid, and the palatal process of both the palate and the superior maxilla of the right side The Wassermann reaction was positive It was now deemed advisable to administer an injection of 0 6 grm of the original salvarsan, which was tolerated without any reaction, pot iodid, now 20 gr four times daily, accompanied by daily mercurial inunctions, being continued For about ten days the destructive processes appeared to be no longer progressive The patient now developed alarming attacks of vomiting, and so a diet consisting of small quantities of milk at short intervals was resorted to The lower lid of the right eye became very œdematous, accompanied by almost alarming protrusion of the palpebral conjunctiva. It was considered possible that the patient was being overtreated and a rest of two weeks was ordered, during which time, however, the œdema, if anything, became more marked No exophthalmos Vision in that eye was rendered impossible, unless the lids were separated The sight then, however, was found to be normal The lacrymal duct was occluded, and bony crackling could be demonstrated when pressure was made over the right lacrymal bone, in which region a discharging sinus appeared The first molar tooth on the right side was extracted from the upper jaw, and the antrum, which now possessed no inner wall, thoroughly irrigated Necrosed bone was at the same time removed, comprising the outer wall of the alveolar process and part of the malar bone, thus opening up the antrum external to the alveolar process A leech was applied to the œdematous lower lid followed by fomentations for six hours, which reduced the swelling very satisfactorily

At this stage it was decided to try a course of hectine injections, with which the French syphilogists have claimed such good results Accordingly ten subcutaneous injections of 0 2 grm were given, the first three on alternative days followed by seven daily injections The patient's condition commenced to improve almost at once and the vomiting ceased The discharge became less, and the appetite improved Nobody was *more impressed than the patient himself*, who at this period had *become very despondent* In the first week his weight increased 7 lb, and at the end of the course of ten injections he was allowed to sit up

Encouraged by the very satisfactory results of this first course of ten injections, a second course was commenced on March 11th 1915, comprising ten daily subcutaneous injections of 0·2 grm hectine in the buttock During this course the patient increased in weight by 7½ lb After a fortnight's rest a third course, also comprising ten daily subcutaneous injections, was administered, during which he increased exactly 5 lb The gross gain in weight from prior to the hectine courses is indicated by the increase from a minimum of 10 st ¾ lb up to 12 st 8 lb—i e, 2 st 7¼ lb

Present condition—As can be surmised from the increase in weight, the general condition of the patient now is extremely satisfactory His appetite is normal, and he takes his daily exercise round a further course In Case 4, in which staphylococcus aureus was found, the treatment failed This was a surprise to me, as the presence of a definite pathogenic organism such as staphylococcus aureus in the pharynx and nose offered good hope of cure, a further course with the streptococcus, which was also present, gave no result

Four cases of acute recurrent nasal catarrh were treated In 2 the infection was of micrococcus catarrhalis, in 1 of streptococcus, and in 1 of staphylococcus aureus In Case 5 the nasal catarrh recurred nearly every evening, and was, I believe, dependent on pyorrhœa, for which condition the patient was sent to me for treatment The vaccine was made from the pus of the gums, and it was only after a few injections had been given that I learned of the catarrh by the patient asking me whether the injections could have cured the condition, from which he unexpectedly found himself free He had one or two relapses, but on the cure of the pyorrhœa the catarrh disappeared In treating nasopharyngeal conditions it is always necessary to search for pyorrhœa and to insist on adequate local treatment Case 6 was that of a barrister very active in political work, who had frequently to speak in the open air, with the constant result that a violent attack of catarrh came on, and he spent a sleepless night The condition had persisted for nine months In all he got 11 injections, varying from 50–150,000,000 micrococcus catarrhalis He became perfectly well, and has remained so for three years Case 7 (streptococcus) was that of a colleague who suffered much from sudden severe attacks of catarrh lasting a day or two, and recurring every few weeks He did not permit me to carry out the treatment systematically, because after two injections of 10,000,000 he remained free from trouble for three months One or two slight recurrences were easily relieved by further injections Case 8, of staphylococcus aureus, was one of so called "hay fever" occurring in a naval officer He suffered from it every dusty day in summer whether in town or country He never had it in winter or at any time afloat He received four injections in July, 1913, and remained entirely free from catarrh, though ashore, for the rest of the summer In 1914 he had a relapse, but I do not know the result of the treatment which was then resumed

Of the 3 cases of acute recurrent general catarrh, 2 were infections of micrococcus catarrhalis and 1 of a staphylococcus In Case 9, of micrococcus catarrhalis infection, the patient received eight injections, varying from 7–20,000,000, with the view of giving an immunity against future attacks The course was given during the winter months, and the patient had no attack after the first injection She had, however, a recurrence the following winter, and no permanent good resulted I think that the doses given were too small In Cases 10 and 11 the patients were "always catching cold,' as they put it Short courses of four injections of a staphylococcus and two of micrococcus catarrhalis respectively have given them satisfactory protection for the past nine months

I have only treated two cases of chronic bronchitis, one with micrococcus catarrhalis and one with streptococcus I do not think that either case was benefited to any appreciable extent but in neither case was a sufficient trial given One of these patients has just asked me to treat him again by the same method

The last case in the series was one of abscess of the lung A young woman, aged 26 years, after the operation of removal of the tonsils and of adenoids in the end of June last, developed signs of inflammation in the lower lobe of the right lung She was put under the care of Dr T G Moorhead, and subsequently, during his absence from Dublin, of my colleague Dr F X. Callaghan The inflammation pursued a varying course for some four weeks, consolidation occurred, followed by abscess formation. The diagnosis was confirmed by the help of the X rays The expectorated pus was examined, streptococcus and a staphylococcus being found Vaccines were prepared, and doses of 5–10,000,000 of the one, and 25–50,000,000 of the other given at two day and four day intervals A few doses of antistreptococcus serum were also given. The only other active treatment was the use, on Dr Moorhead's advice, of an inhalant containing formalin, chloroform, menthol, and pine oil This undoubtedly helped to empty the cavity and thereby to diminish toxæmia. For three weeks (up to August 28th) there was no improvement and the cavity extended, becoming easily mapped out by percussion on the anterior chest wall The propriety of operation was discussed from day to day, when improvement began and (on Sept 4th) the temperature settled to normal. For a long time the cavity was very obvious by percussion and auscultation, "cracked pot sound" being very marked, and cough persisted throughout the winter, but otherwise the patient's health was good I had the opportunity of examining her again a few weeks ago The cavity is much shrunken, it cannot be detected by percussion, though cavernous breathing is heard, there is apparently a fair amount of fibrosis round the cavity, there is still some cough, but the expectoration is not foul The patient s general health is excellent I cannot attempt to assign to each part of the treatment its proper share of credit, but the prospect at one time seemed hopeless or nearly so, and the result has been very satisfactory

I have not included in my series any cases of any form of pneumonia other than that just related, since in no other have I applied the treatment systematically It appears to be of little use to employ vaccines in the treatment of pneumonia unless the case comes under observation very early, an event which rarely happens

Taking my series as related, in 10 of the 14 cases treated the result was very satisfactory, in 1 there was a temporary improvement, and in 3 no result could be traced In 2 of these latter I am not satisfied that the trial was adequate Classifying the cases treated according to infection the results are as follows micrococcus catarrhalis 5, of which 3 became quite well 1 was benefited and 1 unaffected, pneumococcus 2, both became well, staphylococcus 1, became well, streptococcus 3, of whom 2 became well, and 1 was unaffected, streptococcus and staphylococcus 2, both became well, staphylococcus aureus 1, became well

When one remembers that many of these conditions had already proved their obstinacy, and that ordinary methods of treatment of chronic respiratory diseases are of very little avail I think it may be claimed that the results of vaccine treatment are distinctly encouraging

Dublin

widely applicable and more efficacious in these diseases When we are able to make as certain a bacteriological diagnosis of the cause of an infective lesion of the nose, throat, or bronchi as we are of the cause of a boil, vaccine treatment of respiratory diseases will be simple In the meantime we have high authority for believing that "probability is the very guide of life," and the same authority advises us, in matters of practice, to consider ourselves under an absolute and formal obligation, in point of prudence and of interest, to act upon a presumption or low probability, though it be so low as to leave the mind in very great doubt which is the truth [3]

Where no such presumption or probability can be found the question arises whether it is better to treat with one organism only or with a combined vaccine The former is the more scientific method, and is the line I usually prefer If, however, treatment produces no effect in a reasonable time, then the presumption in favour of the selected organism diminishes and may disappear, and another must take its place In the conditions of practice, however, one cannot always choose the most scientific method, and in many cases one must from the start use a mixed vaccine, or, as I prefer, combined treatment by two or more vaccines But the difficulties of administration are thereby greatly increased

In vaccine treatment two points are essential (1) proper dosage, and (2) suitable periods It is not always easy to form a just judgment on these points, even with a simple vaccine, and when two or more vaccines are employed simultaneously the difficulties are greatly increased It is impossible to analyse the effect and to assign to each vaccine its proper share Where the infection is truly mixed the negative phase of one organism may interfere with the positive phase of another, and the results are inextricably entangled When, however, it is necessary to treat with more than one organism it is better to keep the vaccines separate than to use a mixed vaccine By doing so one can keep a certain control of the respective doses, and one can at any rate give the vaccines at approximately suitable intervals

Something can be done to simplify the problem of diagnosis by care in the collection and examination of material As the seat of disease may be either the nose, the naso pharynx, the larynx, trachea, and bronchi, or the lungs, our methods of collection will naturally vary If the material is to be collected from the nose the orifices of the nostrils should be well washed with soap and hot water, and swabbed with a pledget of wool moistened with alcohol The patient, closing one nostril, should then blow his nose forcibly into a wide mouthed sterile bottle, the process should then be repeated with the other nostril If the bacteriological examination can be made without delay a sterile wipe or handkerchief may be substituted for the bottle, but the danger of contamination from the skin is greater

In the case of the naso pharynx, throat, or bronchi attention must first be paid to the cleansing of the mouth It should be well rinsed with hot sterile water and the teeth thoroughly brushed The patient is then directed to hawk or cough, as the case may be, and to spit into a sterile flask In the case of the naso pharynx, if secretion be plentiful, a culture may readily be obtained direct from the throat by the help of a platinum loop or a sterile swab When the patient is entrusted with the collection of the specimen himself he should be directed to collect it first thing in the morning In every case enough material must be obtained to permit of direct examination of smears as well as of cultural investigation

Sputum, from whatever source and whatever may be the methods employed in collecting it, should, before cultures are made, be cleansed by washing in clean water A convenient method, devised, I think, by Dr W E M Armstrong, is to put the sputum in a gauze strainer, such as is used on the tea table, and hang it for some time under a slow flowing tap This superficial washing will almost certainly wash off any organisms which merely adhere to the sputum, while it will leave behind those which have accompanied it from its source

The next step is the examination of direct smears, and from the study of these smears more than from the cultures one forms opinions as to the relative importance of the organisms present A preponderating number of one organism is important, but weight must also be given to the known causative power of each The presence of an organism not known to be normally present in the region under investigation must receive special attention

Cultures are next made I rely almost entirely on agar and blood agar plates and on broth tubes The blood agar is of particular use in the isolation of the streptococcus and the pneumococcus

I next proceed to discuss the results obtained in treatment of various conditions I only purpose dealing with cases in which the treatment was given to such a degree as to permit of some judgment being formed as to its effects I exclude, therefore, a number of cases in which its use was desultory or haphazard, as also a number in whose treatment I have only had a consultative or advisory duty Some, however are included in which, though a trial was given, it was hardly sufficient to come to a final judgment The series finds itself reduced by these weedings to 14 cases They were as follows Chronic naso pharyngeal catarrh, 4, recurrent acute naso pharyngeal catarrh, 4, recurrent acute general catarrh with bronchitis, 3, chronic bronchitis, 2 and pulmonary abscess, 1 The 4 cases of chronic naso pharyngeal catarrh were of long standing, and all the patients had undergone local surgical treatment of various kinds The infections were in 1 case pneumococcus, in 1 pneumococcus and micrococcus catarrhalis, in 1 streptococcus, and in 1 staphylococcus aureus and streptococcus The dosage employed was pneumococcus, 10–60,000 000, micrococcus catarrhalis, 50–200,000,000, streptococcus, 10–25 000 000, and staphylococcus aureus, 50–500 000 000 The number of injections varied from 6 to 18 The results in three of the cases were entirely satisfactory, in the fourth the treatment had no effect In Case 1 that treated by the pneumococcus alone, the condition had been very severe and protracted The patient was unable to breathe through his nose, and at night the catarrh was so severe that he could not sleep more than a few minutes at a time He used a dozen handkerchiefs in the day Progress was steady, and after ten injections all his symptoms had disappeared In Case 2, treated by streptococcus, relief was obtained at once, and only six injections were required It is possible that this patient will need face in order that the opposite hip may not interfere with the screen Likewise, in an operation on the side of the chest or axilla, you must choose the diameter which gives the best view, and, again, the position must be dorsal or ventral Here arises the difficulty If a bullet, for example, be situated on the outer aspect of the upper end of the thigh the forceps must approach it in a plane parallel to the plane of the screen (See Fig 1) Where it is possible to make the incision over the apparent position of foreign body on the skin the operation is a matter of seconds, as it is practically impossible with the foreign body carefully "centred" to miss it (See Fig 2)

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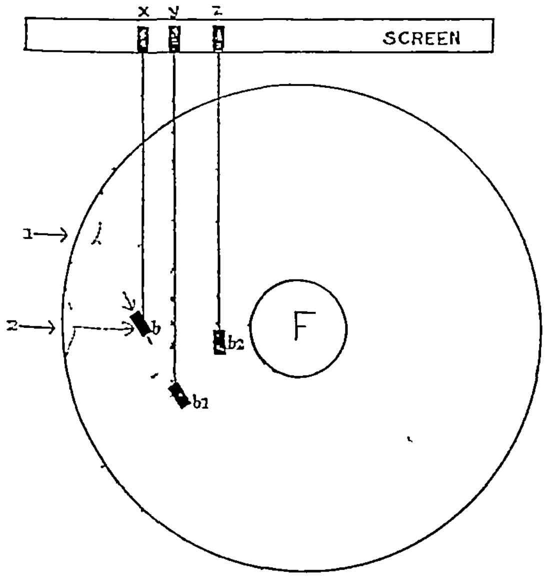
[3] Bishop Butler The Analogy of Religion Introduction

How, then, are we to find the most suitable site for the incision in cases such as are diagramatically represented in Fig 1? The method which I adopt might be described as that of "transmitted impulse" the part concerned is systematically "prodded" with either the finger or forceps under the rays, and the movements of the foreign body are studied For this purpose I use the business end of a pair of "Spencer Wells" forceps Working systematically from above downwards in a plane parallel to that of the screen, impulses are conveyed *vid* the soft parts to the foreign body, and when the point of maximum movement or excursion of this is attained the corresponding position on the skin is noted Here, if possible, the incision should be made but if this is not convenient the near vicinity should be selected The sudden increase in the excursion of the foreign body noted on reaching the correct lateral plane is diagrammatically explained in Fig 3 This method, though apparently unscientific, is astonishingly accurate A little experience will indicate the cases to which it is applicable, but briefly these are the upper part of the thigh, the side of the chest wall, the axilla, the scalp, and the face Small foreign bodies in the scalp and face can be well located in this way The head under the screen is slowly rotated, so that merely the thickness of the tissues overlying the bone can be inspected When the foreign body is seen it can be located by the method just described. Here it is now a rule to remove all fragments, however minute (within reason) Many might be well left alone, but occasionally as a result unpleasant things happen. A considerable time ago I had a patient in whom the side of the face was "peppered" with minute pieces of shell These were thought to be so trifling that it was decided merely to apply fomentations Intense œdema of the eyelids and conjunctiva supervened, which only ceased with the removal of a minute foreign body which had slightly splintered the external angular process of the frontal bone

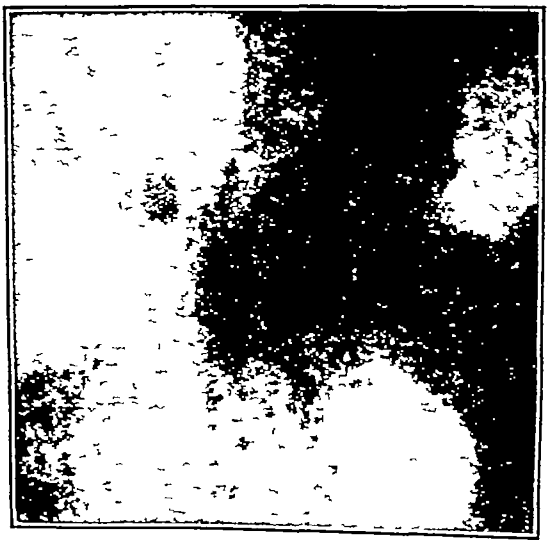
FIG 3



The figure represents section of the thigh F femur Impulses delivered *vid* the tissues to the foreign body at positions 1 and 2 may cause an equal amount of actual movement thereof The apparent movement on the screen is however much less in 1 than in 2. The sudden accession of movement seen on reaching the correct lateral plane is thus explained (For purposes of simplicity the rays are represented as being parallel.)
b Foreign body in resting position. b_1 Foreign body after impulse at 1. b_2 Foreign body after impulse at 2. Screen x-y = Apparent distance travelled by *b* on delivery of impulse at 1 x-z = Apparent distance travelled by *b* on delivery of impulse at 2.

The method of removing foreign bodies on the X ray table is thus not a substitute for localisation but a combination of localisation and extraction. In difficult situations I still employ stereograms as accessories, but detailed measurements are never made Foreign bodies in the near neighbourhood of bones are easily removed because their position with regard to fixed landmarks is easily and accurately given In this method, as will be understood from my earlier communications, the forceps point constitutes a fixed point of known position, and the study of its movements relative to those of the foreign body constitutes the secret of the speed and success of the method

FIG 4



Showing foreign body in the neighbourhood of the ischial spine

Two cases upon whom I operated recently are of sufficient interest, I think, to justify description They exemplify in a striking manner all that has been claimed for this method Both showed old and healed wounds, and it is always a matter of the greatest difficulty in these to decide if their complaints are real, imaginary, or assumed. In any case the quickest way usually to get them back to the firing line is, if possible to remove the source of the trouble

CASE 1 —A Belgian private in the 2nd Carabiniers was wounded by a shrapnel ball at Werchter near Louvain on Sept 12th, 1914 He was sent to the military hospital at

X RAY LOCALISATION AND THE REMOVAL OF FOREIGN BODIES ON THE X RAY TABLE

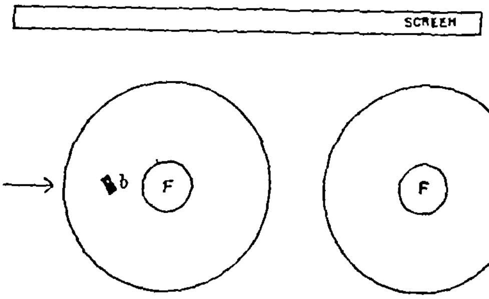
By JOHN R CALDWELL, M B, Ch B St And,
LIEUTENANT, ROYAL ARMY MEDICAL CORPS (SPECIAL RESERVE)

In these days one rarely glances through a journal of surgery without finding a description of some "new" method of localising foreign bodies These are nearly all modifications of the classical method of Mackenzie Davidson, and the principle underlying them all is the same The majority have as their object the determination in inches or centimetres of the depth of a foreign body in the tissues The radiographer thinks he has done his duty when he has stated that below a certain mark on the skin at a certain depth will be found the foreign body in question There is at present a tendency to overestimate the value of such information The almost unattainable ideal is an anatomical localisation Stereoscopy aims at such, but unfortunately the same picture is differently *interpreted* by different observers, and there are numerous inexplicable fallacies in the method I repeat that the value of X ray localisation in units has been overestimated, and that to be really useful the information provided by the radiographer should be in units, yes, but should also give an idea of the relations to neighbouring structures It has been suggested[1] that an atlas of transverse frozen sections of the human trunk and limbs might provide useful information upon which to use the data of "stereometry," but as the tissues vary so much in thickness and as there are so many sources of error the value of such would be very doubtful To this there is the exception of the eyeball, which varies in dimensions within limits so narrow that the cross thread localiser of Mackenzie Davidson has been of untold value

Some time ago I had on the X ray table a patient, paraplegic, in whom a bullet was found in the lumbar region 1 centimetre to the left of the spinous process of the fourth lumbar vertebra. The wound of entrance was slightly to the left of the second lumbar spine, and there were indications of fracturing of the lamina of that vertebra Localisation by a simple method revealed the fact that the bullet lay at a depth of 4½ centimetres, and the question to be decided was whether the bullet lay in the canal or dorsal to the lamina Clinically the paraplegia suggested the former, but, of course, it was conceivable that the bullet having fractured the lamina of the second lumbar vertebra had glanced down and lay separated from the canal by the thin plate of bone It will be at once understood that a variation in the thickness of the tissues overlying the spinous process, or in the length of that process by about half a centimetre (i e, the thickness of a lamina), made all the difference as to whether the bullet lay in or out of the canal Obviously the data supplied were little if any help

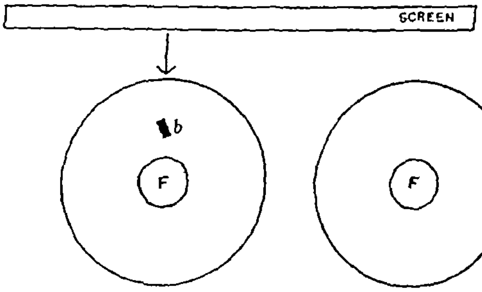
Where is the radiographer who has not, without over fatiguing his mental faculties, thought out for himself a method of localising foreign bodies, but of what real value is a very exact measurement? When the surgeon has discovered the bullet it may be found that the radiographer was correct to within a few millimetres, yet before the commencement of the extraction the information given could at the most give a very imperfect idea of the whereabouts of the offender Thus it is that the surgeon has called to his aid the "telephone probe," and some enthusiasts have gone so far as to say that in the near future no surgeon will attempt the removal of a foreign body without its aid A probe, whether telephone or otherwise, is a bad instrument at least in recent or septic cases, and in a war hospital it may safely be dispensed with Operating surgeons will be only too ready to agree that localisation still leaves much to be desired, and for reasons some of which have been given above

FIG 1



This figure illustrates sections say of the right and left thighs with a bullet (*b*) to the outer side of one The arrow indicates the position of the incision and the plane of the *forceps parallel to the screen.* F Femur

FIG 2



Illustrating *sections as before* and *showing* a *foreign* body (*b*) in front of the femur (F) The arrow indicates the position of the incision.

The method of removing foreign bodies on the X ray table while not overcoming these ills holds so many advantages that it becomes impossible for an experienced operator to fail in the removal of one in an accessible situation The advantages of being able to see the object of the search whenever you please are enormous, and this, combined with the intelligent appreciation of the principles of radioscopic localisation as described in my last two communications on this subject,[2] makes a tremendous difference on the speed of an extraction and the certainty of success

But it must not be supposed (as happens here frequently among those watching an operation) that it is as easy as it looks, and here I may be permitted to mention how difficulties arise in this method of working In the first place, it is not possible on the X ray table to put your patient into all the positions permissible on the ordinary table for the reason that the screen must always be considered In operating on the upper part of the thigh the patient must be either on his back or his

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[1] *Some Principles of X Ray Localisation,* W Cotton, M.D Practitioner April 1915

[2] The X Ray Theatre in War Hospitals THE LANCET April 24th 1915 p 854 Report on a Few Cases Illustrating the Removal of Foreign Bodies on the X Ray Table THE LANCET, May 15th 1915 p 1012.

With a knife an incision skin deep is then made posteriorly from the left margin of the original transverse incision to a spot close to and about the middle of the anterior portion of the sphincter ani muscle A similar skin deep incision is made on the right side and the V shaped piece of skin thus outlined is dissected off The raw surfaces thus created are then stitched in three layers, and as the greater portion of the sutures are buried I prefer to use 40 day No 1 and No 3 Van Horn catgut for stitching up A curved needle carrying a short length of No 1 catgut is inserted at the anterior limit of the incision on the left side avoiding inclusion of the skin and the *mucous membrane*, and the same armed needle is carried and made to traverse in a similar manner the anterior limit of the incision on the right side This suture is then tied and left long, and held forward by a pair of pressure forceps This act brings the raw mucous membrane edges of the vaginal flaps together centrally, and without transfixing the vaginal surface of these flaps the central cleft is closed by a continuous No 1 catgut suture, beginning at the rectum and extending forward By means of a continuous buried suture of No 3 catgut, beginning posteriorly close to the sphincter ani and extending forward, the deep portion of the wound is now brought together, and thereafter the skin—beginning posteriorly—and the entire wound closed by a continuous No 1 catgut suture, and just before tying this suture the catgut suture originally inserted at the anterior limit of the wound is cut short

In some cases the need for a ring pessary is obviated by combining amputation of the cervix uteri with the aforesaid operation

Harley street W

A CASE OF PAROXYSMAL HÆMOGLOBINURIA

BY HAROLD E THORN, M R C S , L.R C.P LOND ,
SURGEON R.N

A B , aged 18, in H.M S *Britannia* came under observation on March 22nd complaining that seven days previously his urine had suddenly become very dark in colour This lasted for three days and was succeeded by an interval in which he passed urine of normal colour The same deep tint, however, returned, and he noticed it for two days previously to reporting himself Whilst each of these attacks lasted there was pain in the lumbar region on both sides On the evening of March 22nd the temperature was 99° F but on every other day when under observation it was normal

On examination the patient appeared very healthy The urine was found to be dark in colour with a dirty deposit, which did not show any definite formation under the microscope No blood cells could be seen The reaction was acid and the specific gravity 1032 There was a large amount of albumin present but no albuminometer was available for its definite estimation The guaiacum blood test was strongly positive

The patient was put to bed and the next day he had some lumbar pain but the temperature was normal The urine was just pink and there was only a trace of albumin The reaction was still acid, specific gravity 1033 Two white blood corpuscles but no red cells, were found in the deposit Tubercle bacilli were not found The back did not show any abnormal physical signs The heart and lungs were normal The systolic blood pressure was 120 mm of mercury The fundus oculi was also normal Poikilocytosis was found and diminished rouleau formation in a blood film There was no œdema of the limbs or back On March 24th the urine had returned to normal and the patient was allowed to get up Until that day he had been on light diet, but he was then allowed ordinary food, with the exception of rhubarb Two days later (March 26th) the lumbar pain had disappeared He was sent back to duty Since then he has had two similar attacks, but was not seen by a medical officer owing to the fact that he went on leave for two weeks He says that the third attack started on April 1st after a long walk, and that the fourth attack followed similar exercise within the next fortnight He has now been quite well for eight weeks

The patient is fond of taking cold baths, but these have been forbidden him The attacks of paroxysmal hæmoglobinuria seem to follow exercise in every case, but a definite cause cannot be found The remarkable thing about the case is the large amount of albumin which was present in the urine on the first day on which the patient came under observation and the rapidity with which it disappeared

H.M S *Britannia*

Medical Societies.

ROENTGEN SOCIETY

X Ray Localisation Methods —Discussion on Methods of Protection of X Ray Operators

THE annual general meeting of this society was held on June 1st at the Cancer Hospital, Fulham road, Sir ALFRED PEARCE GOULD being in the chair

Captain J H SHAXBY R A.M C (T) read a paper on X Ray Localisation Methods He described two methods which had proved very serviceable in determining the position of foreign bodies the first in certain special cases, the second for general work. It was sometimes impossible he said from a determination of the depth alone of a foreign body to decide whether it lay above or below a broad flat bone such as the scapula The remedy was to take two photographs from widely different angles of view, and the present method aimed at securing this in the two plates of the localisation Briefly it differed from the usual methods in two respects (1) the anticathode instead of being more or less in the vertical line through the foreign body was placed markedly to one side, so that the views were both oblique, and (2) the displacement of the bulb between the two exposures was in a line perpendicular to the photographic plate instead of parallel to it. As a result there was a considerably greater displacement of the shadow of the foreign body relatively to the adjacent bone than was given by the ordinary process A simple formula involving the distances of the two shadows from the point on the plates vertically over the focus spot gave the position of the foreign body or a thread method similar to Sir J Mackenzie Davidson's might be employed The second photographic plate might be raised equally with the bulb keeping the distances of the [illegible] apart fixed or it might be placed in the same [illegible] first plate The point alluded to [illegible] the [illegible] spot was determined by a fuse wire grid [illegible] over the anticathode, superposition of the [illegible] nation of the unequal sized shadows of the [illegible] possible accurately to find the required [illegible] With apparatus which permitted of ready [illegible] and [illegible] of the bulb the method was quick [illegible] and the displacement of shadows large and [illegible] easy to measure accurately For ordinary cases the usual procedure of moving the bulb parallel to the plate was followed but the addition of a small auxiliary apparatus did away with the need for measuring the distance the bulb moved and also the distance from its focus spot

Antwerp, then to hospitals at Ostend Portsmouth, and Bournemouth When at Bournemouth he had an operation lasting three hours without success There he was kept for four and a half months and then returned to his depôt in France after which he was sent to us to have the ball removed

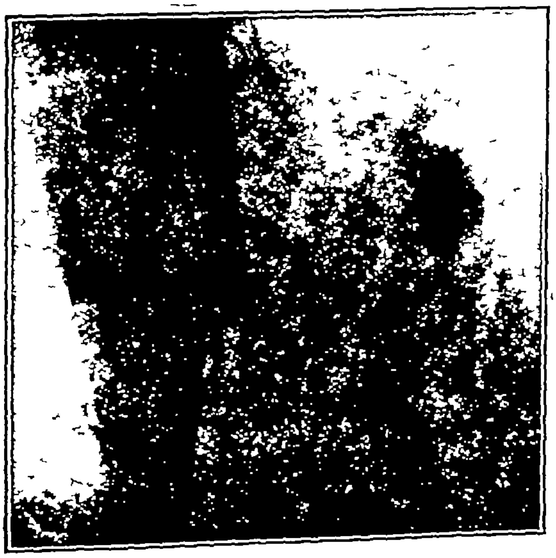
Upon admission he was somewhat lame and complained of pain on walking and inability completely to extend his thigh Examination revealed the cicatrised wound of entrance on the left buttock 1 inch to the left of the middle line and 2 inches behind the rectum There was an old operation scar on the buttock some 4 inches long On being put on the radioscopic table he sarcastically remarked that this was the eighth time and would probably be as fruitful in results as the others The radiogram revealed a ball in the neighbourhood of the ischial spine (Fig 4)

At the operation under spinal anæsthesia an incision 2 inches long was made alongside the old one and the fibres of the gluteus maximus were exposed Under the rays a pair of long closed forceps were pushed down and the ball grasped and extracted The operation lasted 14 minutes At the moment of writing (the fifth day) the patient is walking in the garden of the hospital

CASE 2 —A private in the Grenadiers, wounded on the same day and at the same place as the preceding patient, was treated at hospitals in Antwerp Ypres, Havre, and Tours Radiographic examinations were made on seven different occasions, but no operation was attempted

On admission here the patient was somewhat lame and complained of pain in the lower part of the thigh Upon examination the cicatrised wound of entrance was found on the outer side of the thigh at its middle The radiogram (Fig 5) revealed a flattened out shrapnel ball embedded in the hamstring muscles and a second one lying in the medullary cavity of the femur The opening in the bone made by the ball in its passage is seen some 4 centimetres above the ball

FIG 5



Showing (1) a flattened-out shrapnel ball embedded in the hamstring muscles and (2) one lying in the medullary cavity of the femur

At the operation the femur was exposed by an incision on the antero-external aspect of the thigh The opening in the femur was readily found, but it was impossible to approach the ball by that route Guided therefore by the rays a ¾ inch trephine was placed on the bone immediately over the foreign body and a circle of bone removed The ball was extracted with a pair of sinus forceps through an opening which just accommodated it The flattened out ball lying among the hamstring muscles was removed *via* a short posterior incision Up to the present (the fifth day) the patient's progress has been satisfactory in every respect

The outstanding feature of the method is surely its simplicity As a rule, the radiographer knows little about surgery and the surgeon less about radiography, but the profound knowledge of this is not an essential to the successful performance of projectile extraction

In conclusion, it is gratifying to know that the method is attracting the attention it deserves Those competent to pass an opinion who have seen foreign bodies extracted here have nothing but praise for a method so speedy and so successful Adverse criticism comes only from those who have neither seen nor practised, and who are thus scarcely competent to judge

Hôpital Sophie Berthelot Calais

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

A NOTE ON A MODIFIED FORM OF COLPO PERINEORRHAPHY

BY JAMES OLIVER, M D EDIN, F R S E

A PATIENT, aged 42, came under my care recently complaining of protrusion of the womb from the front passage and of the lower bowel The protrusion of the womb had been in existence for nearly 20 years, and when I saw her the replacement of the uterus and vaginal walls was effected with some difficulty The vaginal orifice was naturally very much relaxed I performed on her a modified colpo perineorrhaphy, and when the wound was quite healed the patient had a ring pessary placed, and thereafter neither the uterus nor the bowel caused her any inconvenience, and she was able to walk about in perfect comfort

To most patients the retention of the prolapsed uterus and vaginal walls by means of a Zwanke pessary, or a pessary which has to be supported by a band encircling the abdomen, is irksome and inconvenient, and an operation which enables them to wear a watch spring ring pessary with greater success and comfort is a decided boon The modified colpo perineorrhaphy, which I have found useful under such circumstances, consists in splitting the recto vaginal septum close to the posterior margin of the vagina by means of perineal sharp pointed scissors The point of the dependent blade of the scissors is inserted close to the extreme left margin of the vaginal orifice and carried transversely under the skin to the extreme right margin The same point of the scissors is then inserted under the skin at the extreme left margin of this transverse incision and carried upwards and slightly outwards for an inch or more, dividing the skin at the same time A similar severance of the skin is effected on the right side, and an anterior or vaginal flap is thereupon dissected up to an extent varying with the requirements of each individual case, the left and right corners of this flap being held forward at the time by two pairs of pressure forceps This flap is then divided centrally and vertically down to the rectum by the scissors From the inner side of each of these vertically divided flaps a triangular piece is removed by snipping with scissors from the centre of the rectum upwards and outwards to the anterior limit of the two vertical and lateral incisions the following procedure. The powder was poured on to three dozen glass beads in a large sterile glass flask, the latter being shaken to allow the powder to mix with the beads, 20 c.c. of saline made of freshly distilled water was then added and the flask shaken with a swirling motion for a few seconds, more saline was then added and the flask shaken for about half a minute, finally the remaining portion of the 100 c.c of saline was added and the flask was shaken again but not too vigorously A clear yellow solution was the result, and the time taken was about three minutes The solution was then neutralised with a 4 per cent solution of sodium hydrate, the quantity required to dissolve the 0 6 grm. being 4 8 c c. After neutralising another 150 c.c of saline was added, making the total amount 250 c.c. The strength of the salt solution used was 0 9 per cent.—that is, 8 5 grm of sodium chloride to 1 litre of distilled water It was injected at body temperature. With regard to neosalvarsan, neokharsivan, and billon, the same amount of water, 10 c.c., was used to dissolve a moderate or full dose, the solution being injected cold owing to the greater tendency to rapid oxidation. The method of injection was as follows A 10 c.c record syringe was used, the barrel was filled and the needle introduced into the vein, the piston being withdrawn slightly so as to see if the needle had entered the lumen of the vessel If it had the piston might be gradually pushed home. The skin over the vein was painted with a solution of iodine and chloroform 1/15 before and after the operation, and a piece of sterile gauze was placed over the puncture and sealed with collodion. The day before injection all the organs and urine of the patient were examined, and pil hydrarg, gr 4, given in the evening and mist. alba, 1 oz., in the morning At 7 30 A.M. breakfast consisting of tea and bread and butter, was allowed, and the injection was given in the forenoon If there were no immediate after effects the patient was given tea and bread-and butter at 4 30 P M Ordinary hospital dinner was allowed at 7 30 P M. if the patient still remained free from temperature, vomiting headaches, &c. He was kept in bed until the following morning The routine method of dosage was to give three intravenous injections of salvarsan or neosalvarsan at intervals of ten days The day after the first injection mercurial cream, grm 1, was injected into the buttock and carried out for nine consecutive weeks. 0·6 grm salvarsan or 0 9 grm. neosalvarsan was nearly always given as the first dose, 0 4 grm salvarsan or 0 6 grm. neosalvarsan was given as a second dose unless the patient had only a moderate dose at first, when a full dose was given A full dose was given for the third injection. The same procedure was being adopted with the substitutes kharsivan neokharsivan, and novarsenobenzol. Major Ffrench said that over a hundred cases, comprising primary, secondary and tertiary had now been treated with the substitutes, and that they had come to the conclusion that kharsivan and neokharsivan were somewhat more toxic than salvarsan and neosalvarsan He gave the following percentages of immediate after effects produced. Of 136 *injections of kharsivan* 60 per cent gave no reaction, 27 per cent gave slight reaction such as headache slight temperature, vomiting rigor, and diarrhœa, and 13 per cent gave severe reaction of the symptoms mentioned. Of the 124 injections of salvarsan, 63 per cent. gave no reaction 33 per cent slight reaction and only 4 per cent severe. Of the salvarsan cases, 20 per cent were primary 75 per cent. secondary, and 5 per cent tertiary Of the 25 injections of neokharsivan, 32 per cent gave no reaction 40 per cent. slight reaction and 28 per cent. severe, 20 per cent were primary, 48 per cent were secondary and 32 per cent were tertiary Compared to neosalvarsan, of the 75 injections 72 per cent gave no reaction 21 per cent slight, and only 7 per cent. severe The primary were 40 per cent, secondary 26 per cent and tertiary 34 per cent Of novarsenobenzol 42 injections were given, 76 per cent gave no reaction, 19 per cent slight reaction, and 5 per cent severe There were 12 5 per cent primary 12 5 per cent. secondary, and 75 per cent tertiary The greatest number of severe reactions occurred in the secondary and late primary cases He said that it was most satisfactory to state that they had not experienced any serious results in the use of these substitutes and that they believed that kharsivan and neokharsivan were very excellent substitutes (for salvarsan and neosalvarsan) and that so far as their experience had gone they might be safely recommended for the treatment of all forms of syphilis

Reviews and Notices of Books.

Heredity and Environment in the Development of Man

BY EDWIN GRANT CONKLIN, Professor of Biology in Princeton University London Humphrey Milford. 1915 Pp 533 Price 8s 6d net

THIS interesting volume on an ever expanding subject is composed of the Norman Wait Harris Lectures for 1914, which were given at Northwestern University and subsequently repeated at Princeton University The lectures were founded in 1906 through the generosity of N W Harris, of Chicago, and are to be given annually Such diverse subjects as personalism, university administration, the age of mammals, democracy and poetry, the milk question, and the constitution of matter have already been dealt with by previous lecturers The purpose of the lectures is "to stimulate scientific research of the highest type and to bring the results of such research before the students and friends of Northwestern University, and through them before the world By the term 'scientific research' is meant scholarly investigation into any department of human thought or effort without limitation to research in the so called natural sciences, but with a desire that such investigation should be extended to cover the whole field of human knowledge"

The text consists of six chapters or lectures, illustrated by nearly 100 figures The subjects dealt with are (1) Facts and Factors of Development, (2) Cellular Basis of Heredity and Development, (3) Phenomena of Inheritance, (4) Influence of Environment, (5) Control of Heredity, Eugenics, (6) Genetics and Ethics

As a result of the doctrine of organic evolution it has become plain that man s place in nature has been clearly defined, and the resemblance between men and the lower animals has come to have a new significance It is recognised that life processes are everywhere the same in principle, though varying greatly in detail, so that all the general laws which apply to animals and plants apply to man It is on this foundation that the recent wonderful advances in experimental medicine have become possible

If the origin of species was the greatest biological problem of the past century, assuredly the origin of individuals is the greatest biological subject of the present one This is the author s theme He deals first with the phenomena of development including such trite subjects as the germ cells, fertilisation, cleavage, embryogeny organogeny, oviparity and viviparity, and development of functions He shows that every living being is a complex system in dynamic equilibrium and manifests the following features. It contains protoplasm, and its equilibrium is maintained by the physiological processes known as metabolism, reproduction, and irritability The development of functions goes hand in hand with the development of structures, indeed, "function and structure are merely different aspects of one and the same thing —namely, organisation' As to the origin of the mind, or rather of the soul, "the only possible scientific position is that the mind (or soul) as well as the body develops from the germ. The mind develops by gradual and natural processes from a simple condition which can scarcely be called mind at all' to the negative The appliance consisted of a small frame set up perpendicularly to the photographic plate and made of material transparent to X rays, this supported a series of parallel lead wires, arranged very much like the laths of a "Venetian" blind let down a little crookedly (Messrs Newton and Wright, Wigmore street, were the makers) The apparatus was mounted so that it could be easily clipped on to a plate envelope or casette, one end of the first wire being as close as possible to the plate The slope of the wires was such that the other end of this wire was 1 cm. from the plate holder, the second wire, parallel to the first, lay 1 cm from the plate at one end and therefore 2 cm from it at the other The distance of the third wire ranged in the same way from 2 to 3 cm, and so on for any convenient number of wires The negative after the two exposures of the localisation showed two shadows of the foreign body and also two shadows of the lead wires With a pair of divider compasses the displacement of the bullet shadows was set off, and the compasses were then moved to the wire shadows If it was found, for instance, that a point a quarter of the way along one shadow of the fourth wire was at the set-off distance from the other shadow of the same point, then, very obviously, the bullet was at the same distance from the plate as this determined point on the wire system—a distance, that is, of 3 25 cm The only care required in affixing the appliance to the plate was to put it so that the two shadows fell on opposite sides of its base, so that they did not overlap and give a confused pattern For intensifying screen work or long exposures it was not advisable to expose the localiser throughout, or the density would become too great for convenient examination, the part of the plate where the wire shadows were to fall might be covered by a metal screen during the greater part of the process, the localiser being slipped into place only for the end of the first exposure and the beginning of the second

Mr SIDNEY RUSS, D Sc, in opening a discussion on Methods of Protection of X ray Operators, drew attention to the special dangers attending X ray screen examinations Efforts were made to protect the operator by enclosing the X ray bulb in a box covered with absorptive material, except in the path of the vertical rays used, the fluorescent screen over which the operator leant in order to interpret the image there presented was backed by lead glass to protect the face of the operator, gloves were also provided for use when manipulations of the patient had to be made while irradiation was going on He directed attention to the extent to which the rays were cut off by the devices at present employed He had recently made some measurements upon the percentage of radiation transmitted through various samples of protective material, which were at present being used in the army X ray installations Considering first of all the bulb, it was usual for this to be enclosed in a wooden box lined within or covered by lead rubber or lead itself There was no uniformity in the thickness or quality of lead rubber employed, with the result that the percentage of stray radiation was in some cases as low as 0 1 per cent, and in others as high as 5 per cent, of that of the primary beam of rays With regard to the protective lead glass used in the fluorescent screens the degree to which the rays were absorbed was found to depend very much upon the quality of the glass A small increase in the amount of lead contained in the glass made a very large difference in its absorbing power, so that the quality of the glass in this respect was an important consideration It was found by measurement that with the thickness of glass frequently in use at present as much as 4 per cent of the energy of the beam reaching the fluorescent screen was received by the operator What, then, were reasonable limits of safety in this respect? Dr Russ thought it difficult for those engaged in X ray work to realise the enormous amount of radiation given out by modern bulbs, this was partly because the methods in use for the measurement of X rays were relatively gross methods When an instrument such as an electroscope, which was a very delicate detector of X rays, was moved about in the neighbourhood of an X ray bulb which was accorded a reasonable amount of protection, it was astonishing to find what an amount of stray radiation there still was It should be remembered that whenever this stray radiation was present the air became highly ionised, and upon this the ordinary methods of ventilation had no effect It did not seem unreasonable to hope that in the not too distant future due attention would be paid to the atmosphere in which the radiologist conducted his examinations

Dr N S FINZI referred to the enormous output by the modern X ray bulb, not only of primary but also of secondary radiations This was shown by an interesting experiment If a tube were placed in a protective box that completely enclosed it except for the opening guarded by the diaphragm, very little secondary or other radiation was observable so long as the diaphragm was quite closed, but the moment the latter was opened, though only a very little, a strong secondary radiation could be detected anywhere in the immediate neighbourhood of the tube This showed that while the usual protective box cut off nearly all the primary radiations there were the secondary rays to be considered which might be a great danger to the radiologist

Mr J H GARDINER, F C S, gave the results of experiments to determine the quality of the secondary radiations given off by various materials Some surprising results were secured, for instance, paraffin wax gave off a more penetrating radiation than copper or silver To him it seemed that any method of protection to be efficient must take account of the secondary radiations

Dr G B BATTEN considered this matter of X ray protection as one of the first importance at the present time when so many radiologists were working many hours every day in the military hospitals, and one of the greatest dangers was that in the absence of any definite rules it was more than likely that the protective measures in many of the X ray outfits supplied to the War Office fell short of what was desirable He considered that a committee of the Roentgen Society should formulate a set of rules for X ray protection which would be a guide to makers and users of X ray apparatus [1]

At the close of the meeting Dr W IRONSIDE BRUCE gave a demonstration of his method of accurately finding a foreign body in the tissues after it has been localised by the X rays The apparatus was described in THE LANCET of Feb 6th, 1915, p 275

LONDON DERMATOLOGICAL SOCIETY —The annual general meeting of this society was held on June 15th at St John's Hospital for Diseases of the Skin Dr W Griffith, the President, presented the council's annual report The balance sheet, which was presented by Dr W Knowsley Sibley, the honorary treasurer, was received and adopted The following officers were elected for the ensuing year —President Dr J L Bunch Vice Presidents Dr Morgan Dockrell and Dr W Griffith Honorary treasurer Dr W Knowsley Sibley Honorary secretary Dr Simonds Gooding Council Dr M K. Hargreaves, Dr R Prosser White (Wigan), Mr A T Bremner (Leicester), Mr C R Kempster, Mr C H Mills, and Mr E G Reeve —At the clinical meeting which followed a series of interesting cases were exhibited Dr Morgan Dockrell showed a case of Pityriasis Rubra Pilaris, and demonstrated the histological sections – Major E G Ffrench, R A.M C, read a paper entitled "The Substitutes for Salvarsan and Neosalvarsan" He said that according to a report in THE LANCET of April 10th, 1915, by the secretary of the National Medical Research Committee, the chemistry of kharsivan and neokharsivan was said to be identical with salvarsan and neosalvarsan, the details of their preparation being identical He said that he did not propose to discuss the chemistry of the preparation of these products, but rather to confine himself to observations made and the clinical results obtained after their use He also mentioned a third substitute—viz, novarsenobenzol "billon," which was a French preparation manufactured by *Poulenc Frères* Billon he said was a darker yellow colour than neosalvarsan, a yellow powder somewhat darker than the 914, dissolving readily in water and forming a clear yellow solution. For use it was dissolved in 10 c.c. of freshly distilled water and injected intravenously immediately afterwards Neosalvarsan formed a clear yellow solution and dissolved readily He first saw this concentrated solution tried with success by Professor John Fordyce, of the City Hospital, New York, in 1913, and since then he had adopted the method Neokharsivan was a reddish brown powder and dissolved quickly forming a reddish brown solution Kharsivan was a yellow powder which did not dissolve readily in water He recommended made has been very real, so much so that the chemistry of colloids has now many applications in the industries. After a very clear account in general of the colloids, and a sketch of the researches which have led up to the present position of the study, Dr. Taylor reserves four chapters to their applications. Thus, amongst the semi-colloids are included casein and the soaps. He then proceeds to the modern dyes, discussing their colloid nature, the mutual precipitation of the colloid dyes by other colloids, mordants, lakes, and so forth. Then follows a chapter on tanning, the soil and its purification, in which colloidal processes are undoubtedly concerned, if only in a mysterious way. Lastly, a very interesting chapter is the final one on the applications of colloid chemistry to physiology and biology, as evidenced in the rôle of hæmoglobin in the blood, the action of enzymes, the phenomena of catalysis, and agglutination. All these questions claim attention from the point of view of colloidal chemistry, and this book will be cordially welcomed as the first English text-book on the subject, and as one that sets up an admirable model for others to work upon who, as researches develop, may be tempted to expand the subject.

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[1] This suggestion was adopted and the council of the Roentgen Society have undertaken to give effect to it.

A Text-book of Insanity and Other Mental Disorders.

By C. A. MERCIER, M.D. Lond., F.R.C.P. Lond., F.R.C.S. Eng. Second edition. London: George Allen and Unwin, Limited. Price 7s. 6d.

WE remember Dr. Mercier to have defined science as order, system, organisation, arrangement—in short, as the recognition and application of law. His text-book was designed to make our knowledge of insanity in this sense scientific and to arrange the subject in accordance with an orderly system. The second edition which has now appeared carries the attempt farther, and aims to provide a systematic arrangement of the whole subject and of its several parts, and though Dr. Mercier's may not be the best arrangement, it is at any rate an orderly and systematic one pursued with considerable detail.

The first requisite for the study of a subject is to have a clear notion of the subject to be studied, and from the beginning we can see what Dr. Mercier would be at. Considering that it has hitherto been a *general* assumption, both in medicine and in law, that insanity is disorder of mind (an assumption which is widely held and is embodied in Acts of Parliament), the author strenuously contends that insanity has in common use several meanings which are not distinguished, and that in every one of these meanings the most important ingredient is disorder, not of mind, but of conduct. The argument is *that what matters* is not what a patient believes or thinks, but what he says and does. It is disorder of conduct on which the main emphasis is laid, and certain of its results are discussed and described in a way and with a fulness constituting, if memory serves us, new features in a book on insanity.

Disorder of mind is, however, an ingredient or constituent of insanity, and we agree with Dr. Mercier that *the* study of insanity should be preceded by a study of normal psychology. Experience appears to have convinced him that the study of the normal *mind* and the explanation of the constitution of the normal mind, as given in the text-books of psychology, do not serve the purposes of the student of insanity, and he formulates a new scheme of the constitution of mind specially adapted to the needs of the student of insanity. The scheme may be right or wrong, but among the causes of insanity usually recognised there are too many disconnected surmises, and Dr. Mercier's plan finds a place for those processes of mind whose disorders come under the notice of the physician. The causes of insanity are here reduced to two complementary and relative sets—heredity and stress—each of which is systematically treated, the *manner* in which *they act as causes* is *suggested*, and the stresses are arranged in a systematic manner. Classification is Dr. Mercier's aim here, and no classification of the causes of insanity hitherto proposed has been satisfactory. Dr. Mercier asserts that confusion and cross classification arise from the failure to distinguish between the various meanings of the word insanity, which may mean a disease or may mean a symptom, and that when these meanings are disentangled, when symptoms are classified by themselves, diseases by themselves, and acute and chronic conditions by themselves, the difficulties of classification will be surmounted. Dr. Mercier suggests three valid arrangements free from cross classification in substitution for a single arrangement in which the three are blended, but we are not certain that he will wholly escape the reproach of cross classification. Confusion, too, may be introduced in one or two places by the use of terms with an unusual significance, or at any rate with a significance that is not generally accepted. In the course of the book some clinical types of insanity, hitherto, we believe, unrecognised, are described for the first time.

The book suffers from compression. The author tries to say too much in too small a space. He allows his criticism of his colleagues for acquiescence in the claims of the German school to become too apparent. He is impatient, because he has found it impossible to obtain recognition for the importance of disorder *of conduct in* relation to insanity, insanity being usually treated as disorder of mind even when psychology is seen to be at fault. He is sore because his views, which amount to a revolution in the concept of insanity and in the treatment of the subject, remain undiscussed. The book appears to have been written in an angry mood from title to index, as if the author were at enmity with every other writer on the subject, and the warning to examinees not to read the whole lest they should know more than their examiners is droll but very aggressive. Instead of an index, we find an argument why this should be missing. The gibe at the reviewers that the absence of an index will hamper *their* work has some point, for many books are in these days of gross over-production noticed in a perfunctory manner by critics whose knowledge of the contents is much derived from the "contents page." But when Dr. Mercier *writes* "To add an index to a book that is logically *arranged* is to take for granted that the reader *is not intelligent* enough to appreciate a logical *argument*," does he see that he may demand *from his reviewer* the perusal of the whole of *his work*? The author of a book is not necessarily the best judge of whether it is logically *arranged*, and no arrangement can necessarily be exactly the best one. A reviewer might look for a sequence of ideas which would seem *logical to him*, might find that sequence broken and conclude that some points were missing, when, in accordance with the author's view of logic, those points were considered elsewhere. In *the absence* of an index how is the

Further, says the author, there is no more reason for supposing that the mind is supernaturally created than that the body is, the mind being related to the body as function is to structure The development of the mind is treated under the following heads (*a*) Sensitivity, (*b*) tropisms, reflexes, instincts, (*c*) memory, (*d*) intellect, reason, (*e*) will, (*f*) consciousness The first lecture is brought to a close by a short chapter on factors of development, including an account of the doctrines of preformation and epigenesis The author's teaching may be thus summarised The intrinsic factors of development reside in the organisation of the germ cells, the extrinsic are represented in environmental forces and conditions, the intrinsic factors are commonly called heredity, they in the main direct and guide development, while the environmental factors furnish the conditions in which development takes place and modify, more or less, its course

In discussing the cellular basis of heredity and development the author's position is that all the phenomena of life, including heredity and development, are cellular phenomena in that they include only the activities of cells or of cell aggregates Heredity originally meant "heirship or transmission of property from parents to children" In the field of biology it has been defined erroneously, says the author, as "the transmission of qualities or characteristics, mental and physical, from parents to offspring" We are told roundly that no "qualities" or "characteristics" are "transmitted" as such from one generation to the next The following is the author's definition and summary "Heredity may be defined as the appearance in offspring of characters whose differential causes are found in the germ cells Heritage is the sum of all those qualities which are determined or caused by this germinal organisation Development is progressive and coördinated differentiation of this germinal organisation, by which it is transformed into the adult organisation Differentiation is the formation and localisation of many different kinds of substances out of the germinal substance, of many different structures and functions out of the relatively simple structures and functions of the oosperm" The germ is thus the undeveloped organism which forms the bond between successive generations, the person is the developed organism under the influence of environmental conditions—"the person is merely the carrier of the germ plasm, the mortal trustee of an immortal substance"

An elaborate account of germ cells is given, and the significance of the successive events is discussed under the headings fertilisation, cleavage and differentiation, origin of the sex cells and sex determination The author asserts that sex is irrevocably determined at the time of fertilisation As to the mechanism of heredity, as contrasted with the mechanism of development, it consists in the formation of particular kinds of germ cells and in the union of certain of these cells in fertilisation Germ cells have a certain "specificity" Germ cells of different individuals are not all alike, and such differences are due to one or more differentiating causes or factors—intrinsic or extrinsic—though experience has shown that they are generally intrinsic in the germ The author shows that in woman, where "there are probably 48 chromosomes and after synapsis 24 pairs of maternal and paternal ones, the possible number of permutations in the distribution of these chromosomes to the different egg cells would be 2^{24}, or 16,777,036, and the possible number of different types of fertilised eggs or oosperms which could be produced by a single pair of parents would be $(16,777,036)^2$, or approximately three hundred thousand billions" It would seem as though the production of unique individuals were the chief purpose and result of sexual reproduction That the chromosomes play a large and dominant rôle is admitted, and the author compares their behaviour in maturation and fertilisation to the shuffle and deal of cards in a game and apparently with the same object—viz, never to have the same distribution twice A careful exposition is given of the reasons for assuming that the chromosomes are important factors in heredity and differentiation

As to the phenomena of inheritance, the author says that "like does not produce like but only somewhat like" Hereditary resemblances are first dealt with, including racial characters and individual characters Under the latter heading we find interesting references to morphological features, teratological, pathological, and physiological peculiarities, and psychological characters To Francis Galton is due the credit of being one of the first to bring order out of chaos by dealing singly with traits or characters instead of treating all together "Mutations" and "fluctuations" are dealt with, and in the end the conclusion is arrived at that every individual is unique—every living being apparently is the first and last of his identical kind The whole chapter on Mendelism is excellent and worthy of the most careful study as a sound, terse, and luminous exposition of this very practical doctrine, indeed, the author regards "the principles of heredity as established by Mendel as almost as important for biology as the atomic theory of Dalton is for chemistry"

The influence of environment on heredity, or, in the words of Galton, the two sets of factors, "nature" and "nurture," are considered fully, and the author finds that developed characters, whether "acquired" or not, are never transmitted by heredity, the hereditary constitution of the germ not being changed by changes in such characters It is possible to guide phenomena of heredity and evolution Accepting this statement, the author gives in the fifth chapter an interesting account of the "control" of heredity and of eugenics, dealing with such well known subjects as the influence of environment in producing new races, artificial selection, methods of modern genetics, and control of human heredity The last chapter, on genetics and ethics, or at least a portion of it, was published in 1913 under the title "Heredity and Responsibility"

We have great pleasure in commending the study of these instructive and suggestive lectures to all who are interested in the problems of heredity and environment as they affect the development of animals and man Much old ground is necessarily traversed, but the comprehensive way in which the subjects are treated makes these repetitions illuminating

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The Chemistry of Colloids

By W W TAYLOR M A D Sc London Edward Arnold 1915 Pp 328 Price 7*s* 6*d* net

THE study of the chemistry of colloids grows in importance day by day, and it seems strange that until quite recent years very little progress has been made since Graham's experiments in the early "sixties" But the recent progress

Health Series of Physiology and Hygiene, a series of popular works intended to present in an attractive form for pupils in the elementary schools accurate information on the hygiene of daily life The book is freely illustrated by photographs and drawings in order that important matters relating to health may be impressed upon the eye of students At the end of each chapter a number of problems are set on the subject matter dealt with in the text It is intended that problems shall be worked out in the class room and discussed freely between pupils and teachers This method of engaging the interest and teaching the practical applications of a lesson has been found to bear excellent fruit in schools in America in which the system has been adopted As an example of the problems set we give the following from the end of Chapter VI , which deals with the heart and blood "Can you tell when you look at a person whether or not his blood is pure? Why should blood cells be kept in good fighting condition?" Both authors have the faculty of making common place details attractive, and of investing even dry bones with picturesqueness The special senses are described as gateways to the mind The excretory functions are described in a chapter entitled "How the Body Cleanses Itself." The cells are called the little workers of the body and disease germs the enemies of the body The authors are to be congratulated on their courage in essaying to explain some of the most difficult problems in physiology and pathology to the half developed minds of children, it would in many cases have been simpler to have shirked these questions or to have circumvented them by subterfuges and inaccuracies We sincerely hope that this little work will find its way into the hands of teachers in our own elementary and secondary schools

Materia Medica and Pharmacy for Medical Students, with an Appendix on Incompatibility By REGINALD R BENNETT, B Sc Lond , F.I.C , Pharmacist and Teacher of Pharmacy to University College Hospital, London Third edition London H K Lewis 1915 Pp 248 Price 4s 6*d* net —The third edition of this useful and practical little work has been completely revised and brought into conformity with the new Pharmacopœia The pharmacological classification of the previous editions, however, has been retained, and the apothecaries' system of dosage has been included in parentheses after the metric system, which is that now used in the Pharmacopœia

A Hausa Phrase Book, with Medical and Scientific Vocabularies By ALLAN C PARSONS, M R C S , L.R C P Lond , D P H. Oxon , Sanitary Officer, Gold Coast Oxford University Press (Humphrey Milford) 1915 Pp 164 Price 7*s* 6*d* net —This book contains a series of phrases with Hausa translation, intended for those who wish to gain a speaking acquaintance with that language It is divided into three parts Part I , phrases in general use, consisting of miscellaneous idioms and phrases relating to household management, travelling, stable management and hunting, Part II , departmental phrases, political and administrative, military and police, public works, forestry and agriculture customs, commercial, mining, nursing, and hospital management and medical terms Part III contains English Hausa and Hausa English vocabularies of medical and scientific words From the point of view of the would be learner the chief criticism we would make is on the absence of any anatomical dissection of the language, in consequence of which the sentences seem to call for individual memorisation, throwing the same strain upon a retentive memory that is needed for mastering Chinese ideographs It would be a huge task for the student wishing to make practical use of the book to turn up a sentence that would serve him to express the particular idea in his mind, whether assertion or question In a book of this description we think the more scientific plan would be to build up progressive models of expression which could be varied with an increasing vocabulary by the mere change of one or two words Another difficulty is that no scheme of phonetics is appended to enable the reader to estimate the correct pronunciation of the Hausa words From the point of view of the printing, also, we think that it would have been much better to use different types for the English and the Hausa The book, doubtless, will be of service to residents in the Hausa speaking districts of the West Coast of Africa after they have already made some acquaintance with the language

JOURNALS

The British Dental Journal —In the June issue of this journal there is a paper by Mr E D Davis on the Pathology and Treatment of the Maxillary Antrum The author considers that antral suppuration is but seldom traceable to dental causes, and when due to such causes he considers that the third molar is most commonly the offending tooth Alveolar puncture, in his opinion, is highly unsatisfactory, and even when the cause is dental in origin he thinks that extraction of the tooth followed by syringing the antrum from the nose gives better results than irrigation through the tooth socket Mr Wesley Barritt has an interesting paper on Synthetic Drugs and Chemicals, and Mr Claude Colyer a letter on Army Dentistry, in which he suggests some methods of treatment based upon his experience with the Expeditionary Force

THE METROPOLITAN WATER-SUPPLY

THE report on the condition of the Metropolitan water supply during the month of February, 1915, was issued last week The results are of more than usual interest owing to the fact that in the Thames basin the rainfall during February was 4 57 inches, which is 2 66 inches above the average mean rainfall for that month during the previous 32 years The statement shows that the Thames water was in good condition from the 1st to the 3rd and from the 24th to the end of the month , on the remaining days, however, it was more or less coloured and turbid while the increased water was flowing The samples of water collected at the different works were clear, bright, and free from suspended matter, showing that the storage and filtration systems adequately deal with the increased suspended matter and colouring in the raw water caused by a higher rainfall In Dr. A C Houston's official report on the chemical and bacteriological examination of the water supply there is an abundance of detail, and the numerous tables show what an enormous amount of laboratory work is done in this direction Owing, however, to the heavy cost of publication the figures given in the report must be regarded, Dr Houston states, as summaries and averages only of complete details In regard to chemical examination, the *raw* Thames waters deteriorated and the Lee water also except as regards albuminoid nitrogen, while the *raw* New River water improved The three *raw* waters compared with the averages of reviewer to be assisted? Dr Mercier is surely too reasonable to say "let him read the whole book and read it steadily and carefully," for that is an unfair demand on a reviewer a man does not drink a bottle of wine steadily and carefully before saying if it is a sound and palatable fluid

This is a pugnacious, dogmatic, and very clever book, and the general practitioner will certainly obtain from it valuable lessons as to his conception of insanity It is readable from first to last

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The Diseases of Children

Edited by Dr M PFAUNDLER, Munich, and Dr A SCHLOSSMANN, Düsseldorf English translation edited by HENRY L K. SHAW, M D Albany, N Y, and L LA FETRA M D, New York. Vol VII *Diseases of the Eye in Infancy and Childhood* By Dr OSKAR EVERSBUSCH, Munich *Disorders of Speech and Phonation* By Dr MAX NADOLECZNY, Munich London and Philadelphia J B Lippincott Company 1915 Pp 499 Price 21*s* net

IN the seventh volume of Pfaundler and Schlossmann's "Diseases of Children," translated by Dr Shaw and Dr La Fetra, the treatise on the Diseases of the Eye in Children, written by the late Dr Eversbusch of Munich, is probably the most exhaustive which has appeared It necessarily contains little which is not to be found in any of the larger text books of ophthalmology, but it segregates the diseases which are found in children and thus serves a good purpose in emphasising this particular aspect of the subject Whether the task was quite worth doing in this elaborate fashion is a matter of opinion, but at any rate it has been done well The first chapter deals with congenital anomalies and deformities of the eye It is a fairly complete account Here and elsewhere authors are mentioned, but no references are given The second chapter, entitled the "Development of the Infantile Eye," really deals with the anatomy of the eye in the child, and contains much information otherwise difficult of access and little known The examination of children with ocular affections is treated rather scantily, a knowledge of the ordinary methods of examination being presumed Then follow chapters on diseases of the eye and adnexa, arranged after the usual fashion of ophthalmic text-books There is a special chapter on disturbances of pupillary movements The discussion of the diseases is essentially clinical, very little reference being made to pathology Treatment is very fully dealt with

The second part of the volume is taken up with the consideration of a comparatively small but none the less important section of the diseases of children—viz, disturbances in the realm of speech After a preliminary chapter on the development of the faculty of speech, viewed both physiologically and psychologically, the author proceeds to investigate its disorders by dividing them into two main groups—arrests of development of speech and disorders contracted after speech is acquired In the former category are placed three subclasses—viz 1 Arrests of development on the peripheral sensory side, such, for instance, as total or partial deafness, with or without total or partial blindness 2 Arrests of development of central sensory origin, including word deafness, word dumbness, voluntary whispering, agrammatismus and akataphasia (inability to form sentences syntactically correct), and various forms of stammering The author defines the last of these as "inability of uttering or correctly forming certain sounds or sound combinations," hence there may be vowel stammering, stammering in labial sounds, in dental, palatal sounds, L and R stammering, &c 3 Arrests of development in the peripheral expressive mechanism, including lisping in its various forms, and snuffling The second main group is concerned with disorders arising after speech is acquired, such as stuttering, which is defined as "a spastic neurosis of coördination interfering with the pronunciation of initial syllables or of words in the middle of a sentence The articulation of every sound is correct" In the same group are disorders of speech at puberty, those associated with various nervous diseases such as chorea, epilepsy, hysteria, and tic, also those that are found in cases of imbecility, and in organic conditions such as encephalitis, infantile cerebral paralysis, facial paralysis, disease of other peripheral nerves and muscles, and so on, mainly, therefore, a symptomatological group There is a special subsection on the varieties of mutism

We do not know any treatise in which the manifold disorders of speech in children are so minutely described and their treatment so carefully and practically demonstrated If the practitioner has hitherto been too often content to assure the anxious parents that the child will "grow out of its defect" a perusal of this book will teach him the urgent necessity of painstaking diagnosis and of systematic treatment The whole subject has been too much neglected by medical men, with the result that it has become the happy hunting ground of charlatans and quacks of every description This division of the volume can be cordially recommended to the earnest attention of the inquiring general practitioner, as well as to the neurologist and psychologist Further, those who are concerned with pedagogy and with phonology might read the book with profit, though we agree with the author in his contention that official medicine should take the subject up from henceforward, for the treatment of disorders of speech should be scientific, not empirical

The work is excellently printed, though on unnecessarily heavy paper There are 20 admirable coloured plates and numerous good illustrations

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LIBRARY TABLE

The Vicious Circles of Neurasthenia and their Treatment By JAMIESON B HURRY, M A, M D Cantab With illustrations London J and A Churchill 1915 Pp 90 Price 3*s* 6*d* net —The establishment of vicious circles in disease is a familiar clinical fact Dr Hurry takes neurasthenia, and works out the action of the vicious circle in the different systems of the body affected in that disease He exemplifies the mode of action in the case of the vascular, respiratory, digestive, and genito urinary systems, as well as in the psychical sphere A large number of quotations from other authors, in practically every one of which the words "vicious circle" occur, are adduced *to* "guard against any possible charge of obsession in reference to the rôle of the circle" The breaking of the circle by treatment is discussed along accepted lines If there is little that is novel in the book, it furnishes good illustrations of the widespread influence of pathological inter relations as displayed in the particular case of neurasthenia

The Body in Health By M V O SHEA and J H KELLOGG Illustrated New York The Macmillan Company 1915 Pp 324 Price 3*s* 6*d* —This little volume represents the latest addition to the

THE LANCET.

LONDON: SATURDAY, JUNE 26, 1915.

Midwives and Moral Character.

A RECENT decision of the High Court with reference to a midwife who had been struck off the official register by the Central Midwives Board was calculated to give the impression that the decision of the Board had been reversed upon appeal as to an important question of principle. This, however, we believe, is not the case. The matter was brought before the Central Midwives Board at a recent meeting, when a letter was considered which had been addressed to the Board by the honorary secretary of the Midwives' Institute. This letter referred to the fact that the charge upon which the Board had ordered the midwife's name to be removed from the Roll was one of immorality, and acknowledged that the reversal of the Board's decision was on account of a technical omission in connexion with the proceedings taken. It went on, however, to point out that the result of the case was likely to lay the decision of the judges open to very serious misconstruction in the mind of the general public. The secretary of the Midwives' Institute had therefore been instructed to forward to the Board a resolution passed by the Institute that "The Midwives Institute respectfully asks the Central Midwives Board to make a pronouncement, which can be reported in the press, that in spite of the High Court's reversal of the Central Midwives Board's decision in a recent case, the Board will, as it has heretofore done, continue to support the moral as well as the professional status of practising midwives." The reply to this, which the Board resolved to make at the meeting referred to, is decisive and eminently satisfactory. It refers to the judgment of the court as having reversed the Board's decision with regard to the midwife in question, but describes it as having confirmed the Board in its position as the authority determining what is or is not misconduct in a midwife, and as having decided that misconduct is not to be limited to misconduct in a professional sense. The Board further defining the principles upon which it is prepared to act in such matters, stated its opinion that conduct which before enrolment would render it impossible to certify that a candidate was of "good moral character" renders her, after enrolment, liable to be removed from the Roll for "misconduct", and the Board declared that there was no likelihood that it would depart from this position.

The declaration thus made is, as we have said, eminently satisfactory. To have found that the Board had been compelled by legal decision to abandon all consideration of the moral character of a midwife after once admitting her to practice among the women who might seek her aid, would have been more than disconcerting. It would have been disastrous, and we can well understand the desire of the Midwives' Institute to obtain a pronouncement which, through the medium of the press, should do much to correct the wrong impression likely to be conveyed by the report of the appeal referred to. The practice of a midwife, implying attendance upon women and to treating them in, and in connexion with, pregnancy and childbirth, brings her in contact with females of the humbler classes of society, with married women of the strictest respectability, and with those in very different circumstances. It is difficult to imagine any person whose opportunity for mischief among her sex would be greater if she herself were to be of loose morals and at the same time endowed with the training and skill which the Midwives Act, 1902, was passed to promote. The Act itself clearly states the intention of those who framed it, for in Section 2, where it provided for the immediate admission to the roll of persons having certain stated professional qualifications, it declared that the possession of these must be supplemented by the possession of a "good character". It is in accordance with the intention thus expressed that in the regulations under which midwives are now admitted a good moral character is stipulated for, and it would be altogether illogical and absurd if the power to remove from the Roll on account of proved immorality were withheld. It is not, however, only the desirability of a right to remove undesirable persons from the official roll which we are now discussing. We are rather insisting upon the performance of the duty to remove such persons, both for the sake of the pregnant women who may come under the midwives care, and for the credit of the women who have made midwifery their profession.

The Midwives Act sought to confer a benefit upon women at large by providing for them a body of trained and enrolled members of their own sex to attend them in labour. Incidentally, it deprived many members of the medical profession of a not unimportant percentage of their usual emoluments, while leaving them in the doubtful and unsatisfactory position of consultants to whom resort is to be had compulsorily in emergencies. It did more, however, than to provide for the training of midwives, and to hand over to them a share in a particular branch of medical practice. It conferred upon them a privilege, denied to medical men, of practising without any competition from the unqualified of their sex. Any man, however ignorant, however dishonest or immoral, may impose upon the ignorant by pretending to treat disease, so long as he does not pretend that he has medical qualifications. He may make a profit, indeed, by boasting that he does not possess them. But for the past five years women not certified under the Act have not been

1914 yielded results worse than their respective averages as judged by the albuminoid nitrogen, permanganate, turbidity, and colour tests, while all the *filtered* waters yielded also worse results In the bacteriological examination all three *raw* waters contained more bacteria than their respective averages in the previous year The *filtered* waters, generally speaking, yielded not unsatisfactory results It is shown that in February, 1915, whereas 100 0, 90 0, and 80 0 per cent of the samples of *raw* Thames, Lee, and New River water respectively contained typical B coli in 1 cubic centimetre (or less), 62 7, 80 0, and 59 4 per cent of the *filtered* samples derived from these rivers contained no typical B coli even in 100 times as much water—namely, 100 cubic centimetres Even, therefore, under conditions of pressure when a greater demand is made upon the capacity of the purifying installations the water reaches the consumer in a bacteriologically safe condition This speaks eloquently of the high efficiency of the methods of purification adopted, storage and filtration, and the scientific investigations made on these questions by Dr Houston in the past may well entitle him to be proud of the satisfactory practical results to which that work has led

Reports and Analytical Records

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TWO AGREEABLE COCOAS

(MESSRS CADBURY BROS , BOURNVILLE, BIRMINGHAM)

Cocoa is fulfilling an important rôle just now, inasmuch as its nutrient and mildly stimulating qualities are much appreciated by our soldiers, both those actively serving and the wounded We have received from the above firm two samples of cocoa which upon making an analysis show certain differences in composition Bournville cocoa (flavoured) gave the following results moisture, 4 87 per cent , mineral matter, 8 60 per cent , fat, 26 55 per cent , alkalinity of ash in terms of potash, 3 94 per cent The unflavoured essence gave the following results moisture, 3 30 per cent , mineral matter, 5 05 per cent , fat, 25 62 per cent , alkalinity of ash in terms of potash, 0 70 per cent Both are high grade, attractively flavoured cocoas, the Bournville showing an increased "solubility" over the unflavoured specimen, due to the presence of a larger percentage of salts, as revealed in the analysis of New Orleans and in a less degree at the Pacific port of Seattle It has even been suggested that if careful search were made at other ports more infected rodents would probably be discovered Dr Rucker does not include in his enumeration of the sources of the plague danger the focus of enzoötic plague existing among the ground squirrels which infest the State of California, although up to quite recently infected animals have been caught in that region There is risk that around the towns at least rats may become infected by entering the burrows of the ground squirrels and convey the infection into human dwellings In discussing the action to be taken for resisting the invasion of the United States by plague, Dr Rucker classes the measures under four headings—namely, enforcement of maritime quarantine, the prevention of the embarkation and disembarkation of rats at ports, the immunisation of the human population by inoculation with Haffkine s prophylactic, and lastly the rendering rat proof of all dwellings and work places As to maritime quarantine alone it cannot, he says, prevent the diffusion of the disease, and if carried out it must be done at the expense of commerce The prevention of access of rats to ships, however valuable in itself, cannot be absolutely relied upon to keep away the disease altogether As regards general protection of the human population by prophylactic inoculation, experience has shown that it is impossible to secure this to any great extent except where virulent and fatal epidemics have already caused ravages among the people and created panic There remains, therefore, in Dr Rucker's opinion, only the carrying out of general rat proofing of all dwellings and places of business, a measure on which he believes implicit confidence can be placed to prevent any serious consequences even if infected rats should secure a landing and infect the local rat population Lastly, Dr Rucker expresses the opinion that persons who live or work in rat proof buildings need have no fear of plague

CHILDBIRTH AMONG CENTRAL AFRICAN TRIBES

IT has been said that among savage tribes the act of parturition is less painful than among civilised people, and even that it is painless and free from danger, so that any assistance or medical aid is unnecessary Dr Carlo Pulieri, who for eight years practised in the Belgian Congo, has written an interesting letter on this point to *La Clinica Ostetrica* (May 30th), in which he declares that black women suffer as much as white and like them are subject to all the embarrassments of their condition, and that if they had the will and means to avail themselves of skilled assistance the mortality both of mothers and children would be sensibly diminished Besides the fact that they have no faith in medical aid, the inveterate prejudices and beliefs of the natives prevent them having recourse to it Among certain tribes, for example, childbirth is surrounded by the greatest mystery, nor may the husband be present, while the parturient woman, when the pains begin, betakes herself to some secluded corner in the forest with one of her friends and gives birth to her offspring there, seated on the ground with her back against a tree or leaning against her friend s breast The placenta being expelled, the cord is cut with any knife that is to hand, the placenta buried and the woman having been cleaned up with leaves, walks back to her hut with her baby in her arms At other times labour takes place in the hut itself, but always on the ground in the position above described The friend gets ready boiling water and performs any little services that previous experience suggests to her, bleeding is restrained by bathing with hot water and on the cut end of the cord some earth is placed or the powder of a particular kind of red wood mixed with palm oil The same composition is also smeared on the large fontanelle, probably as a protection All this, however, does not take place without groans, weeping, and gestures of despair, which afford very clear indications of the suffering the woman is undergoing This description applies to a normal labour, but it is far otherwise if everything is not straightforward A shoulder presentation, for example, would mean certain death for both mother and child In less difficult cases, or where there are serious complications, the attentions of the friend are unfortunately exercised in such a manner as to attempt useless and dangerous manual efforts to deliver so that the woman s life is in serious peril On one occasion a woman was brought to Dr Pulieri at the hospital, who had been left for three days with the fœtal head out of the vagina, none of those present being able to extract the child. Manual delivery of the placenta is never practised, and no one troubles to ascertain whether expulsion is complete, the woman being often left for days with the afterbirth in the vagina or hanging half out Shortly before he left an American missionary sent him a woman who had been suffering for four days She had a temperature of 39 6° C, thready pulse, œdematous and bleeding genitals, enormously distended bladder, and the fœtal head fixed in the pelvis Dr Pulieri pushed up the head, emptied the bladder, and extracted the dead child, but the woman died a few hours afterwards No one present at the labour knew anything about retention of urine, or would have possessed any means of preventing or relieving it It is indisputable, says the writer, that labour among savage tribes is more easy than with us, conditions of climate, life, habits, and age eliminate many complications Deformed pelves are very rare, the women are very young, and infection is not common among them But these women suffer during labour, and although sepsis is rare there are cases in which it is severe and certainly due to lack of proper assistance

THE TREATMENT OF ACUTE LOBAR PNEUMONIA

IN a recent number of the *Polyclinic* Mr A J Mathison describes what he considers an almost certain specific for the treatment of acute lobar pneumonia Its use may be confidently expected to result in recovery he says, unless the patient has already been ill several days Of his own 65 patients all but one recovered, 13 had normal temperatures within a few hours The treatment consists in giving the following mixture regularly from the moment of diagnosis until the temperature becomes normal —

℞	Potassii iodidi	ʒ i
	Creasoti	ʒ ss
	Spir rectif	ʒ ii
	Ext. glycyrrh liq	ʒ iii
	Aquam ad	℥ vi

M A tablespoonful to be taken every four hours

The treatment produces an abortive type of pneumonia in most cases Local applications to relieve pleuritic pain may be added, good nursing, though permitted to practise as midwives, even if they do not pretend to be registered as such. Midwives, therefore, now are members of a specially protected body. It is, however, of high importance that those enjoying unique and exclusive rights should be beyond question worthy to enjoy them. And in the case of midwives the privilege must be thoroughly deserved by the possession of an unblemished character. This is necessary for the sake of the patients treated and for the protection of the public. It is also, as is shown by the recent action of the Midwives' Institute referred to above, entirely in accord with the wishes of the midwives themselves. There is good cause for satisfaction in the fact that this representative body should have shown itself jealous for the honour of those for whom it is qualified to speak, and by its prompt action should have strengthened the hands of the Central Midwives Board in the fulfilment of its disciplinary functions.

The New Salvarsan Products

A COMMUNICATION was made on behalf of the Medical Research Committee to THE LANCET of April 10th with regard to the control which the committee, at the request of the Board of Trade, is exercising in the present national emergency over the French and British preparations of salvarsan which are issued for sale in this country. It was then announced that the committee were satisfied that the products tested biologically under their direction were not inferior in safety or in efficacy to the original German preparations. From a further communication, which we publish in this issue, it will be learned that both laboratory and clinical trials had proved satisfactory in the hands of the Medical Research Committee before the issue of the new salvarsan products was authorised, and as these have been now for some months at the disposal of the medical profession in this country, it seems to us quite timely that the committee should seek to collect from those who have had experience of their use a detailed record of their practical application.

We have nothing to add to the arguments set out by the Medical Research Committee to show that the making of accurate reports of all cases under treatment with the new salvarsan products will be of the greatest value, both now and hereafter. The results of the administration of salvarsan can at present be only imperfectly explained, and the only possible way to arrive at more perfect clinical treatment is by keeping careful notes of all cases, so that by collating those notes from time to time we may arrive at common lessons pointing the way to improvement. The communication which we publish this week says that, to appraise the significance of clinical experience after the employment of a particular batch of any given preparation, it is of great importance to have as complete a record as possible of the other cases which have been treated with the batch in question, for records of this kind, when referred to the scientific workers engaged on behalf of the Medical Research Committee in the biological testing of the products, would allow a study of the closeness of the correlation which may exist between the results of clinical observers on the one hand, and laboratory experts on the other. With such help it would become clearer whether the system of controls which has hitherto been applied, and which has followed the lines laid down by the experience of EHRLICH and his co-workers, requires any modification.

We join heartily in the request of the Medical Research Committee that records of this kind may be sent to the secretary of the committee, St. Stephen's House, Westminster. In the treatment of any disease by a series of preparations it is obvious that three possible sources of error and confusion must exist. The preparation, however carefully standardised, may not have constant virtues; the technique of administration will vary in its perfection; the patient has his fluctuating physiological properties and his idiosyncrasies. These sources of error and confusion can be restricted steadily, and can even be reduced to a point where they become negligible, but only by a steady comparison of carefully recorded results, and the more results that are available, and the greater the precaution that is taken to render them trustworthy, the sooner is the element of empiricism removed from practice.

Annotations.

"Ne quid nimis."

THE PLAGUE MENACE IN THE UNITED STATES.

WE have on several occasions drawn attention in these columns to the threatened danger of an invasion of the United States by plague. At the present moment the matter appears to be giving rise to some anxiety even in American official circles, and Dr. W. C. Rucker, Assistant Surgeon-General of the United States Public Health Service, has lately set out certain facts and considerations bearing upon the subject in an article published in our American contemporary, *Public Health Reports*. Dr. Rucker points out that plague spreads more frequently from one country to another by water than by land, and that this diffusion is due to rats which travel on board ship from infected to healthy ports. At the present moment plague is widely spread over almost the whole of the known world, and as the United States are in frequent communication with foreign countries by shipping the arrival of infected rats is both possible and probable. Plague is at present occurring in the island of Cuba, and danger is also apprehended from infected ports in Brazil as well as from others in Peru and Ecuador. There is also frequent communication with the infected ports of India and the Far East as well as with those in North Africa and the Near East. No human cases so far as is known have occurred during the present year in the United States, but infected rats are still being found from time to time in the port of the heart from its normal site the sinus, to this secondary and less rhythmic centre was thought to be one likely to be distinctly rare. But this opinion is now less strong than since graphic methods of examination allow of its recognition. It gives rise to no symptoms, it does not influence rate, and for these reasons no doubt is less often recognised than would otherwise be the case. There are two conditions which may induce it. One is where the sinus rhythm is so slowed that this less rhythmic secondary centre is allowed the opportunity of initiating its otherwise dormant rhythm. The other is where the nodal rhythmicity is heightened in proportion to that of the sinus. Instances of both these kinds are known. In a recent issue of *Heart* Dr. E. E. Laslett reports one where the nodal rhythm is provoked through sinus slowing. Its rate was 55 to 58 per minute. Examples of heightened nodal rhythm replacing the sinus have been recorded by Cowan, and in several of his cases microscopical examination showed definite inflammatory changes involving the nodal tissue. Another case has been reported (Lea) where similar increased nodal rhythm occurred. In this case, however, its rhythmic rate so closely approximated to that of the sinus that the slight changes of sinus rate due to respiration, a quickening in inspiration and slowing in expiration, resulted in alternate phases of sinus and nodal rhythm, sinus (normal) rhythm occurring during inspiration, nodal rhythm during expiration. The nodal rhythm may not be without practical interest in spite of its offering no subjective symptoms, since it has also been shown that phases of this character may occur in certain stages of chloroform anæsthesia. These latter observations have at the moment been confined to animals only, but their significance remains to be estimated clinically.

THE ETIOLOGICAL FACTOR IN CEREBRO-SPINAL FEVER.

In another column we publish an article by Dr. H. Donaldson under the title of "A Contribution to the Study of the Etiological Factor in So-called Cerebro-spinal Fever." He makes various observations in regard to the bacteriology of cerebro-spinal fever which are not in accordance with the views generally held, but which are certainly suggestive and if corroborated by other observers would necessitate considerable modifications of the opinions hitherto set forth as to the etiology and nature of the disease. Dr. Donaldson's observations were made during the outbreak of cerebro-spinal fever in Reading, and he examined the cerebro-spinal fluid in about 60 cases, so that his experience is considerable. At the outbreak of the disease he believed, like many others, that the meningococcus of Weichselbaum was responsible for the disease, but he now enunciates a new theory. He relates two cases, one of pyæmia with a history of preceding gastro-intestinal disturbance followed by a prolonged illness, and a second which, while showing symptoms of meningococcal infection, might have been attributed to middle-ear disease followed by an abscess in the brain. From each of these cases similar organisms were isolated. Dr. Donaldson then proceeds to state that in all the fluids and purulent exudates from cases of cerebro-spinal meningitis which he examined he observed one common factor—namely, the presence of diphtheroid rods together with Gram-positive and Gram-negative diplococci; all the various types of form were reproduced in cultures from the two cases to which we have just referred, and he therefore concludes that they were due to the same infection as that which was responsible for the epidemic that occurred in Reading. After a full description of the cultural characters of the organisms, their morphology and staining reactions, and the results of inoculation experiments in animals, the [illegible] that the causal organism of the epidemic dealt with was a diphtheroid closely related to the Klebs-Loeffler bacillus. This diphtheroid [illegible] is a pleomorphous organism, of which many forms resemble Hofmann's bacillus; [illegible] like the meningococcus. He maintains that this organism is very widely spread in nature, that the diphtheroid is its most resistant form, and that it is this form and not the meningococcal one which is transmitted from one to another. Dr. Donaldson's propositions deserve careful study, but we consider that further observations are necessary, and hope that other bacteriologists may be stimulated, as opportunity arises, to investigate along these lines. The suggestion that the scourge of a new disease [illegible] place among epidemics is [illegible] requires further evidence before it can be accepted, but Dr. Donaldson has certainly given sufficient cause for attention and investigation.

ALKAPTONURIA, WASSERMANN'S REACTION, AND OSTEITIS DEFORMANS ALKAPTONURICA.

In a monograph of [illegible] pages illustrated with 19 reproductions of skiagrams and numerous curves and figures, Dr. G. Söderbergh[1] gives a new clinical account of the four cases of alkaptonuria hitherto described in Sweden, drawing particular attention to the fact that alkaptonuria without a previous syphilitic infection may give rise to a positive Wassermann reaction and to a chronic deforming arthritis in many ways comparable to Paget's disease of the bones and joints. As is well known, alkaptonuria is characterised by the occurrence of homogentisic acid, $C_6H_3(OH)_2CH_2COOH$, otherwise known as dioxyphenylacetic acid, in the urine. This acid is partly endogenous in origin, as derived from the tissues, and partly exogenous, as derived from the proteins of the food. It is known to have two mother-substances or precursors—namely, tyrosin ($C_6H_4OH.CH_2.CHNH_2.COOH$) and phenylalanin ($C_6H_5.CH_2.CHNH_2.COOH$). If an alkaptonuric person is fed with lævo-rotatory phenylalanin, about 80 per cent. of the substance is excreted in the urine as homogentisic acid. The disorder is known to be very chronic, mainly affecting males, and to be familial in incidence. Hitherto alkaptonuria has been regarded as a harmless type of abnormal metabolism, a metabolic "sport," as breeders would say. Söderbergh, however, lays stress on the troublesome and pathological associations it may have with the very rare disease ochronosis which often complicates its later stages, with the chronic arthritis to which Allard and Gross drew attention in 1908, with the cardio-vascular disease emphasised by Kolaczek in 1910, and with the occurrence of a positive Wassermann reaction in the blood. He gives a full account of the four Swedish cases of alkaptonuria with ochronosis, one of them a new case of his own. This patient, a peasant aged [illegible], exhibited a roundish kyphosis and rigidity of the whole dorsal and upper lumbar spinal column, thickening of the spine of the right scapula with varying a welcome aid, is not essential, no powerful therapeutic measure, such as cold bathing, should be used with the treatment, which is as specific for pneumonia as quinine is for malaria The diagnosis of Mr Mathison's cases seems to have been made on the symptoms and physical signs they presented, without the aid of bacteriology The simplicity of the treatment he recommends is no less striking than the success with which it would seem to have met in his hands and in the hands of other medical practitioners he names, a modern Tertullian might even be tempted to say of it, *Credo quia absurdum*

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[1] Zur Klinik der Alkaptonurie. Nordiskt med. Arkiv, Stockholm, 1915, Inre Medicin, Afd. II, No. 12.

AN EDUCATIONAL LUNCH-ROOM

A VERY interesting experiment which at the present time might well be tried in this country has recently been started by the Department of Health in New York An educational lunch room has been opened for the use of the employees of the department, the object of which is primarily to provide a wholesome luncheon at cost price, and secondarily to educate the patrons in the subject of food and nutrition From a copy of a specimen menu which we have received some idea is obtained of the luncheon served and of the methods followed to educate the customers in all questions relating to food values This programme is divided into five columns First is given the name of the dish, then the price, then the quantity, next the calorific value, and finally the protein content A few examples are as follows 4 oz of lean beef are provided, costing 20 cents, the calorific value of which is 140 and the protein value 30, an average helping of potatoes, costing 5 cents, gives 150 calories and 4 grammes of protein, 3 oz of ham, costing 15 cents, give 260 calories and 20 grammes of protein, and so on These specimen meals show at once the foods which do or do not supply a sufficiency of calories or proteins, and the most economical way therefore in which each can be obtained The experiment will be watched with interest, and though progress may possibly be slow yet the subject is more likely to be appreciated by this objective teaching of the lunch room with its scientific menu or "food wisdom" notes than in any other way

GASTRIC HEADACHE

THE condition popularly known as "sick headache" or "bilious headache" has received little attention Probably because the attacks are transient and do not endanger life or injure health it is regarded as one of those minor ailments scarcely worthy of the investigator Yet it is a very common affection, and, as those who suffer from it well know, a most distressing and at times disabling one In the *American Journal of the Medical Sciences* for May Dr W F Cheney has brought forward evidence that at least one form of headache, probably known as "sick headache," is due to gastric disorder This affection he terms "gastric headache" The symptoms are well characterised The headaches are usually periodic, and may occur but once in a month or a week They usually come on while the patient is in good health and are of variable duration, but rarely last more than 24 hours He may awaken with the pain in the morning, which grows worse as the day goes on, or it may come on in the evening, persist during the night, and wear off after he rises The pain may take the form of hemicrania or involve the whole head Sometimes nausea and vomiting accompany the pain, giving rise to the term "sick headache," but in other cases no gastric disturbance is even suspected On the other hand, there may be evidence of gastric disorder, such as belching or water brash, or a sense of distension after meals, an abnormal appetite, or a persistent sour taste in the mouth In a third group habitual indigestion of the hyperchlorhydria, atony, or chronic gastritis type is complained of At the times of the headache the gastric symptoms are intensified Dr Cheney has investigated the gastric functions by means of test meals and found that the most frequent disturbance is loss of gastric motility Gastric secretion may or may not be normal, but the important fact is delay of food in the stomach If patients with this abnormality indulge in an unusually heavy meal or eat when tired or exhausted by mental or physical exertion headache is likely to result The following is an example A well nourished man, aged 40 years, had suffered from headaches for seven or eight years. At first they occurred about once a week, but recently as often as every second or third day. Nausea usually accompanied headache, but rarely vomiting The appetite was poor and much gas was belched after eating Physical examination was negative, but after the Ewald test meal the total amount of stomach contents obtained was large, 176 c c, and even after its removal a loud splash could be elicited The total acidity was 72, with free HCl 36 and combined HCl 20 On inflation the greater curvature was found 4 cm below the navel, but there was no peristaltic wave The diagnosis was atony with hyperchlorhydria A soft non irritating diet with restriction of acid and highly seasoned foods was advised, and nux vomica was given after meals As the patient spent long hours in an office he was urged to take more exercise out of doors The headaches practically disappeared and recurred only at long intervals after an indiscretion in diet or work Dr Cheney does not suggest how the loss of gastric motility produces headache. The explanation seems to be that it leads to the formation of some toxins which are absorbed into the system The foul tongue and breath—which may be observed in these cases and which he does not mention—point to this He says that constipation is frequently present, but the condition is commonly observed in a most severe form without any constipation However, a purgative, especially one which is an intestinal disinfectant, such as calomel, seems to shorten the attacks Dr Cheney has shown that these headaches are often due to gastric disorder, but we would suggest that the toxæmia on which they depend may also be due to some intestinal disturbance, or even to hepatic trouble—to revert to the old view

THE NODAL OR A-V RHYTHM

BY nodal rhythm there is meant synchronous or almost synchronous contractions of the auricles and ventricles Instead of the latter succeeding the auricular systole at an interval of 0 12 to 0 16 second the two chambers contract together, due to the excitatory impulse reaching both chambers at the same time This impulse originates at the A V node, situated at the upper end of the bundle of His and equidistant, functionally, from each chamber Such a dislocation of the "pacemaker" of the heart from its normal site the sinus, to this secondary and less rhythmic centre was thought at one time to be distinctly rare But this opinion is now less strongly held since graphic methods of examination allow of its recognition It gives rise to no symptoms, it does not influence rate, and for these reasons no doubt is less often recognised than would otherwise be the case There are two conditions which may induce it One is where the sinal rhythm is so slowed that this less rhythmic secondary centre is allowed the opportunity of initiating its otherwise dormant rhythm The other is where the nodal rhythmic activity is enhanced in proportion to that of the sinus Instances of both these kinds are known In a recent issue of *Heart* Dr E E Laslett reports one where the nodal rhythm is provoked through sinal slowing Its rate was 53 to 59 per minute Examples of heightened nodal rhythm replacing the sinus have been recorded by Cowan, and in several of his cases microscopical examination showed definite inflammatory changes involving the nodal tissue Another case has been reported (Lea) where similar increased nodal activity occurred In this case, however, its rhythmic rate so closely approximated to that of the sinus that the slight changes of sinal rate due to respiration, a quickening in inspiration and slowing in expiration, resulted in alternate phases of sinal and nodal rhythm, sinal (normal) rhythm occurring during inspiration, nodal rhythm during expiration. The nodal rhythm may not be without practical interest, in spite of its offering no subjective symptoms, since it has also been shown that phases of this character may occur at certain stages of chloroform anæsthesia. These latter observations have, at the moment, been confined to animals only, but their significance remains to be estimated clinically

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A very interesting experiment which at the present time might well be tried in this country has recently been started by the Department of Health in New York An educational lunch room has been opened for the use of the employees of the department, the object of which is primarily to provide a wholesome luncheon at cost price, and secondarily to educate the patrons in the subject of food and nutrition From a copy of a specimen menu which we have received some idea is obtained of the luncheon served and of the methods followed to educate the customers in all questions relating to food values This programme is divided into five columns First is given the name of the dish, then the price, then the quantity, next the calorific value, and finally the protein content A few examples are as follows 4 oz of lean beef are provided, costing 20 cents, the calorific value of which is 140 and the protein value 30, an average helping of potatoes, costing 5 cents, gives 150 calories and 4 grammes of protein, 3 oz of ham, costing 15 cents, give 260 calories and 20 grammes of protein, and so on These specimen meals show at once the foods which do or do not supply a sufficiency of calories or proteins, and the most economical way therefore in which each can be obtained The experiment will be watched with interest, and though progress may possibly be slow yet the subject is more likely to be appreciated by this objective teaching of the lunch room with its scientific menu or "food wisdom" notes than in any other way

GASTRIC HEADACHE

The condition popularly known as "sick headache" or "bilious headache" has received little attention Probably because the attacks are transient and do not endanger life or injure health it is regarded as one of those minor ailments scarcely worthy of the investigator Yet it is a very common affection, and, as those who suffer from it well know, a most distressing and at times disabling one In the *American Journal of the Medical Sciences* for May Dr W F Cheney has brought forward evidence that at least one form of headache, probably known as "sick headache," is due to gastric disorder This affection he terms "gastric headache" The symptoms are well characterised The headaches are usually periodic, and may occur but once in a month or a week They usually come on while the patient is in good health and are of variable duration, but rarely last more than 24 hours He may awaken with the pain in the morning, which grows worse as the day goes on, or it may come on in the evening, persist during the night, and wear off after he rises The pain may take the form of hemicrania or involve the whole head Sometimes nausea and vomiting accompany the pain, giving rise to the term "sick headache," but in other cases no gastric disturbance is even suspected On the other hand, there may be evidence of gastric disorder, such as belching or water brash, or a sense of distension after meals, an abnormal appetite, or a persistent sour taste in the mouth In a third group habitual indigestion of the hyperchlorhydria, atony, or chronic gastritis type is complained of At the times of the headache the gastric symptoms are intensified Dr Cheney has investigated the gastric functions by means of test meals and found that the most frequent disturbance is loss of gastric motility Gastric secretion may or may not be normal, but the important fact is delay of food in the stomach. If patients with this abnormality indulge in an unusually heavy meal or eat when tired or exhausted by mental or physical exertion headache is likely to result The following is an example A well nourished man, aged 40 years, had suffered from headaches for seven or eight years At first they occurred about once a week, but recently as often as every second or third day Nausea usually accompanied headache, but rarely vomiting The appetite was poor and much gas was belched after eating Physical examination was negative, but after the Ewald test meal the total amount of stomach contents obtained was large, 176 c c, and even after its removal a loud splash could be elicited The total acidity was 72, with free HCl 36 and combined HCl 20 On inflation the greater curvature was found 4 cm below the navel, but there was no peristaltic wave The diagnosis was atony with hyperchlorhydria A soft non irritating diet with restriction of acid and highly seasoned foods was advised, and nux vomica was given after meals As the patient spent long hours in an office he was urged to take more exercise out of doors The headaches practically disappeared and recurred only at long intervals after an indiscretion in diet or work Dr Cheney does not suggest how the loss of gastric motility produces headache. The explanation seems to be that it leads to the formation of some toxins which are absorbed into the system The foul tongue and breath—which may be observed in these cases and which he does not mention—point to this He says that constipation is frequently present, but the condition is commonly observed in a most severe form without any constipation However, a purgative, especially one which is an intestinal disinfectant, such as calomel, seems to shorten the attacks Dr Cheney has shown that these headaches are often due to gastric disorder, but we would suggest that the toxæmia on which they depend may also be due to some intestinal disturbance, or even to hepatic trouble—to revert to the old view

THE NODAL OR A-V RHYTHM

By nodal rhythm there is meant synchronous or almost synchronous contractions of the auricles and ventricles Instead of the latter succeeding the auricular systole at an interval of 0 12 to 0 16 second the two chambers contract together, due to the excitatory impulse reaching both chambers at the same time This impulse originates at the A V node, situated at the upper end of the bundle of His and equidistant, functionally, from each chamber Such a dislocation of the "pacemaker" that probably the ligaments become irritated by the failure of the fatigued muscles to support them, and that some degree of synovitis may arise in the tarsal joints. The foot trouble often followed an acute illness. Dr. Lovett regards the wearing of boots, which always to some extent deform the foot, as the predisposing cause. They practically always compress the forefoot and narrow the basis of support. But he considers the chief evil the curve of the sole of the boot which is made as if all feet had a rather low arch. Consequently a fair proportion of the community wear boots which impede the muscular action of the feet and do not compensate for this by supporting the arch of the foot, which is higher than that of the boot. In most cases this does no harm, because the individual is vigorous enough to overcome the disadvantage. From these views the treatment follows. The sole of the boot should have the curve which will support the arch of the foot. In the slighter cases where an obviously bad boot has been worn, it may be possible to get a boot with the requisite arch. More often the arch must be raised higher than this, which is readily done by splitting the leather forming the shank, removing the small piece of iron or stiffening which exists in most boots, and replacing it by a piece of steel with a higher and longer curve. If the foot is too pronated when the patient stands, especially if there are symptoms of strain at the inner side, the inner side of the heel may be made ¼ inch thicker than the outer, thus changing the bearing of the foot towards its outer border.

PROLONGED ANÆSTHESIA

THE question asked by a correspondent, "Which is the longest period over which an anæsthetic has been known to be given for one operation?" has perhaps not much more than an academic interest. The practical form in which the question of length of *possible* anæsthesia arises is, "For how long can this particular patient be safely anæsthetised?" This is a problem which is frequently met, and the correct answer may be more confidently expected from an expert anæsthetist than from the physician or surgeon from whom it is generally demanded. It frequently happens that if an anæsthetist is confronted with a case of serious illness requiring operation, and is asked whether an anæsthetic can safely be administered, he has to give a qualified reply, such as "Yes, if the operation will not last more than such and such a time." In cases where the patient's general condition is normal the question of length of time rarely arises as a serious point, for most surgeons nowadays are fully alive to the importance of curtailing the operation period so far as is possible and compatible with care in operating. It is rarely, indeed, that any procedure requires four hours or more for its completion as in the case described by our correspondent. In ordinary work even long abdominal cases rarely exceed three hours, and one anæsthetist of wide experience has never had to administer for longer than three and a half hours for one operation in the whole of his career. The length of time that a patient could actually be kept anæsthetised and still recover would vary, of course, according to the nature of the operation, for it is the combination of operative shock and the effects of the anæsthetic that would be responsible if recovery did not ensue. And here the nature of the anæsthetic comes into the question. The modern methods of combined alkaloids, local analgesics, and general anæsthetics enormously extend the possible duration of safe anæsthesia. Many patients operated on by these methods are anæsthetic for several hours, for long, that is to say, after the operation has been finished. When the narcosis is of only a light degree anæsthesia can be safely maintained over very long periods even without the aid of local analgesics, and simply by the administration of very diluted chloroform vapour. And probably if obstetric operations are included in our correspondent's query the record will be found to be easily held by a case of this kind. In a difficult confinement case, where it is desirable to postpone instrumental delivery as long as possible, the expert anæsthetist will maintain light narcosis for over six hours, finishing with full surgical anæsthesia during the seventh, and the patient will recover quite well. For experimental purposes animals have been kept continuously under chloroform during more hours than this and on repeated occasions, but this was with no concurrent surgical operation. A story associated with the question of long operations is told of two eminent Scotchmen. The late Sir B. N—— was informed by his anæsthetist, Mr. C——, that the patient, about to undergo laparotomy, was not a good subject for prolonged anæsthesia. "Very well," replied the great man, "but remind me when I've finished just to scrape that patch of lupus on his nose before he comes round." After an hour the patient's condition was poor and the anæsthetist duly drew attention to it. A little later he stated that the condition was serious. Imperturbably the surgeon continued an elaborate anastomosis, until some furious bleeding in connexion with deep-seated adhesions brought the patient to death's door. The anæsthetist now tactfully pointed out that spontaneous respiration had almost ceased. Soon life was extinct, but an elaborate stitching and detailed closing of the abdomen were solemnly executed. Now came Mr. C——'s turn. "You'll not forget, Sir B——, to scrape the corpse's lupus."

A SPECIAL meeting of the Society of Medical Officers of Health will be held at No. 1, Upper Montague street, Russell square, at 5 P.M., to-day, Friday, June 25th, when a discussion will be opened on Thrift in Our Food supplies, by Dr. H. Meredith Richards, vice-chairman of the National Health Insurance Commissioners of Wales. The meeting and discussion will be open to all persons who are interested in this important question.

THE Cavendish lecture, on the Great Bowel in Health and Disease, by Professor Arthur Keith, will be delivered at the West London Hospital to-night (Friday, June 25th), at 8.15 P.M., and will be followed by the annual conversazione.

THE annual general meeting of the Poor-law Medical Officers Association of England and Wales will be held on Tuesday, July 6th, at 4 P.M., in the Council Chamber of the British Medical Association, 429, Strand, London, W.C. The presence of all Poor-law medical officers is invited.

SIR Alfred Pearce Gould has been elected Vice-Chancellor of the University of London for the year 1915–16 in succession to Sir Wilmot Herringham.

THE Royal Society of Medicine has conferred on Sir John Williams, Bart., M.D., G.C.V.O., the Honorary Fellowship of the Society.

its inferior margin, rounding of the lower margin, and increased thickness of the bone generally, the iliac crests were thickened also Examined with the X rays, his bones generally and the basis cranii in particular showed increased translucency, the edges of the lumbar vertebræ were pressed outwards and thickened Ochronosis and a strongly positive Wassermann reaction were found to be present Söderbergh gives 48 pages to the relation between alkaptonuria and Wassermann's reaction, with experiments to illustrate the connexion between the two His own patient gave a negative reaction after a month's treatment with mercury and iodide, then 15 grammes of racemic tyrosin were administered in six hours, and within 23 hours the patient once more gave a positive Wassermann reaction The second patient gave a similar result when fed with tyrosin, the fourth patient gave a weakly positive reaction, while in the case of the third patient the tyrosin was by accident not exhibited at the right hours, and the negative reaction remained unaltered by its administration None of the four patients gave any sign or history of syphilitic infection apart from the evidence furnished by Wassermann's reaction The effect of 15 grammes of lævorotatory tyrosin on the reaction of two syphilitics and one healthy person was negative Söderbergh quotes a series of laboratory experiments proving that increasing quantities of homogentisinic acid inhibit hæmolysis in hæmolytic systems either with or without antigen, increasing amounts of the acid may produce a kind of deviation of the complement, and may convert a weakly positive into a strongly positive serum and a negative serum into a positive In relatively small amounts the acid may sometimes appear to promote hæmolysis, further light on this point is required Phenylalanin gave results similar to those obtained with homogentisinic acid, but even more irregular Attention is drawn to the fact that the production of the acid in the body, or at any rate its excretion in the urine, is very irregular at different hours of the day and on different days, whether the patient is starving or on a constant diet These variations Söderbergh attributes to variations in the endogenous production of the acid, the acid is produced in the tissues and not in the intestine, and it is argued that other substances (such as phenylalanin and perhaps benzoquinone acetic acid) may also influence the Wassermann reaction in these patients Söderbergh sums the matter up by saying that the amino acid diathesis, of which alkaptonuria is one manifestation, may by itself produce a positive Wassermann reaction He argues that very possibly the alkaptonuric lacks a ferment in his tissues to break down the homogentisinic acid, which is, after all, a normal product of metabolism. He connects Wassermann's reaction with the quantity and quality of the amino acids present in the blood, and claims priority in this conception, which has since been elaborated (latterly without mention of his name) by Much, of Hamburg Söderbergh quotes experiments to show that the administration of potassium iodide may lessen the excretion of homogentisinic acid by an alkaptonuric patient, the quantity falling from an average of 8 5 to an average of 5 5 grammes per diem This may explain the conversion of a positive into a negative Wassermann reaction by iodide and mercury noted above Discussing the symptomatology of ostitis deformans alkaptonurica he gives very full details of the pathological changes in the bones and joints of the four patients he has examined, he finds comparatively little about the disease in the literature of alkaptonuria. All four exhibited kyphosis and stiffness of the spinal column resembling spondylitis deformans, with circumscribed or diffuse osteophytic thickenings of the pelvic girdle and scapula, the bones generally showed poverty in calcium salts, the results of the deformities rather than of the disease The intervertebral discs were thinned and partially or even completely calcified Söderbergh is unable to fit these bony changes into any of the recognised diseases of the bones The prognosis *quoad vitam* is good, but bad *quoad valetudinem*, treatment by potassium iodide, possibly with mercury, is certainly to be recommended He thinks that Paget's disease of the bones may prove on closer examination to be, like ostitis deformans alkaptonurica, primarily a disease of the intermediary metabolism

THE SUPERSTITION OF FLAT-FOOT

THE current view that most cases of static disability in the feet are due to giving way of the arch of the foot has been traversed by Dr R W Lovett in a recent issue of the *Journal of the American Medical Association* For the term flat foot, he would substitute "foot strain" He, of course, admits that flat foot exists, but would restrict the term to cases in which the ground is touched where the arch should be Such feet may be rigid and resist correction, or when weight is not borne the arch may return to a certain extent But flat feet are not necessarily painful, and often are very serviceable—a point of some importance just now in the examination of recruits In a research extending over several years Dr Lovett examined the condition of 800 nurses' feet on entrance to a large general hospital, and again recorded the condition of those who developed any static disturbance during the three years' training The nurses worked in day and night shifts in badly ventilated wards, and foot trouble was very frequent Five or six with perfectly flat feet had no trouble whatever during the three years On the other hand, one of the first cases that impressed Dr Lovett occurred in a vigorous young woman with a foot so good that it was photographed as a type She had so much discomfort from three months' work that she was incapacitated for two months, and finally had to leave on account of her feet Yet there was no change in the shape of the foot or in its imprint, nor in any of the 800 nurses was a single case of change in the arch of the foot found In every case the nurse stood for examination on a slab of plate glass with a mirror placed underneath at an angle so as to reflect the weight bearing areas which appeared as greenish white patches These areas were sketched in the record and the amount of pronation noted In some of the cases when painful symptoms arose the weight bearing area had shifted slightly inward at the second examination—that is, the foot had rolled over a little over on its inner side without change in the arch, but in many cases there was not even this change It follows that the static troubles which would ordinarily be described as flat foot, "pronated foot, "weak foot," &c., are not due to any particular type of foot Moreover, the pronated foot and the foot with a low arch proved slightly more enduring than the foot with a high arch The inevitable conclusion, which has been borne out by Dr Lovett's private experience, is that the pain and disability are due to muscular strain He suggests

Insurance Act and is of opinion that any medical man accepting and retaining such appointments should not be met professionally by consultants or other medical practitioners

A Meeting of Medical Delegates

A meeting of delegates of the medical profession of Ireland was held at the Royal College of Surgeons on June 15th, Mr R J Johnstone being in the chair Having reconstituted the Irish Medical Committee for another year, the meeting re affirmed the decision that all medical certificates under the Insurance Act should be issued by the medical attendant of the insured person A discussion took place with regard to tuberculosis work under the Insurance Act, and it was pointed out that the policy pursued by the Insurance Commissioners of excluding the medical attendant from any share in the administration of the sanatorium benefit prevented the discovery of early cases of the disease A resolution was passed demanding that medical referees under the Insurance Act should notify the patient's medical attendant of the day and hour of a proposed visit to an insured person Discussion also took place with reference to professional relations with "medical advisers," and it was held that no medical man should enter into consultation or other professional relation with an "adviser"

Royal Medical Benevolent Fund of Ireland

The annual meeting of the Royal Medical Benevolent Fund Society was held on June 16th in the Royal College of Physicians Sir John Moore read the annual report, which stated that the number of applicants during the year had been up to the average, but the aid given was far short of their requirements The receipts had fallen considerably, and it had been necessary to recommend the curtailment of some of the grants The total number of applications considered was 85, of these, 76 were from widows of medical men, six from or on behalf of orphans, and three from medical men themselves The total amount of the grants recommended since last distribution was £1138 The honorary treasurer, Sir Stewart Woodhouse, read the treasurer's report Including a balance of £476 6*s* 8*d* brought forward from the preceding year, the income of the society for the year ended April 30th was £1991 11*s* 3*d*, a decrease of £180 7*s* 1*d* This decrease was doubtless owing to the pressing claims of the war now in progress upon the subscribers On the credit side of the account the disbursements were £1461 3*s* 8*d*—viz., grants, £1347, miscellaneous payments, £114 3*s* 8*d*

The Royal College of Surgeons in Ireland and a Proposed Boycott

The secretary to the Council of the Royal College of Surgeons in Ireland has distributed to the Fellows and Licentiates of that body copies of a correspondence which has recently passed between the Council and one of the Fellows Mr A., a Fellow, asked for an expression of opinion of the Council as to what his attitude and conduct should be in the following circumstances His colleague, Mr B, had accepted a "medical advisership" under the National Insurance Commissioners, thereby violating an agreement by which he had bound himself, as did the great majority of medical men in Ireland, not to accept any such office without the approval of the local medical committee, and then only if the conditions were in accordance with the declared policy of the Irish Medical Association. Consequent on Mr B's accepting this office a meeting of the medical practitioners of the county had been held, and Mr A. stated that he had been warned that unless he consented to boycott Mr B he would himself be subjected to boycott He asked the Council for guidance In reply, the Council states that unless Mr B can prove that he signed the undertaking under a misapprehension as to its scope and meaning, his violation of his written undertaking calls for the severest condemnation As to a proposed boycott of Mr B, the President and Council could not express any approval of such action The letter severely condemns the action of any medical man who interferes in a professional capacity with the patients of other medical men, and by promising that the Council will deal severely with this offence, if proven, the communication will be of considerable assistance to the medical profession

Belfast Water supply

The water in store in the Belfast reservoirs amounts at present to 1957 million gallons, which is 63 million gallons less than the storage on the corresponding date of last year On a similar date in the dry year of 1911 the quantity available was 1811 million gallons It appears that not only has the proposed reservoir in the Silent Valley of the Mourne Mountains not been begun, but that even if it were commenced it would not be completed for seven years, in the meantime people are in dread that, as before, Belfast will be placed on an intermittent supply At a meeting of the Water Board, held on June 17th, the chairman quietly announced that, as soon as the war was over, the Board hoped something would be done The Commissioners' inactivity was sharply condemned by certain members of the Board

The King Edward Memorial Building, Belfast

This memorial building, which will serve as an adjunct to the Royal Victoria Hospital, was opened recently by His Excellency the Lord Lieutenant of Ireland The building owes its inception and erection to Lady Pirrie, who, as Lady Mayoress of Belfast in 1896, was instrumental in raising a sum of £100,000, to which she and Lord Pirrie contributed very handsome sums, and also raised a further sum of £48,000 as an endowment fund Mr J Milne Barbour, D L, said that in anticipation of the great demands which would probably be made in the near future on hospital accommodation for the treatment of sailors and soldiers wounded while fighting for their country, it had been decided to place the new building at the disposal of the hospital authorities at the earliest opportunity Sir John Byers, chairman of the medical staff of the Royal Victoria Hospital, said that when the building was fully furnished the medical staff would be provided with some of the most recent practical adaptations of those sciences that were ancillary to medicine for the diagnosis and treatment of disease, and he hoped that the building would witness discoveries which would advance our knowledge in medicine and surgery He pointed out the important work which would be carried on in the departments of vaccine therapy, electricity, and biochemistry under the direction respectively of Dr T Houston, Dr J C Rankin, and Dr J E MacIlwaine, and concluded by saying that without such institutes as that in which they were assembled those discoveries would never have been made by which our sailors and soldiers had been kept in a healthy and fit state and had been preserved from such diseases as typhoid fever, dysentery, and lockjaw

June 21st.

THE MANUFACTURE OF SALVARSAN PRODUCTS IN ENGLAND AND FRANCE

A COMMUNICATION was made on behalf of the Medical Research Committee to The Lancet of April 10th with regard to the nature of the control which the committee, at the request of the Board of Trade, has been exercising during the present emergency over the French and British preparations of salvarsan which are issued for sale in this country It was then announced that the committee were satisfied that the products tested biologically under their direction were not inferior in safety or in efficacy to the original German preparations It may be remarked here in addition that satisfactory results of clinical trials, as well as the results of the laboratory tests for toxicity, were in the hands of the committee before the issue of these products was authorised The preparations in question have now for some months been available for use by the medical profession in this country, and it appears desirable to the committee that they should seek an opportunity of collecting from those who have had and are now having actual experience of the use of these British and French salvarsan products as complete a record as possible of the results of their practical application

It is well known that many of the incidental results which may follow the administration of salvarsan can at present be only imperfectly explained A certain proportion of unfavourable results, including some fatal results, is known to have followed the use of the original German products While some of these have been explained as being due to imperfect precautions with regard to the purity of the water used in the injection, others have been attributable only to a supposed idiosyncrasy of the patient

In order to appraise the significance of a favourable or of an unfavourable clinical experience found in the use of a particular batch of any given preparation, it is of great importance to have as complete a record as possible of the other cases which may have been treated with the batch in question Records of this kind, when referred to the scientific workers engaged on behalf of the Medical Research Committee in the biological testing of the products, would allow a study of the closeness of the correlation which may exist between the clinical results on the one hand, and their laboratory results on the other Such a comparison between the two kinds of experience would allow a determination of the question whether it is desirable to add to, or to modify in any way, the system of controls which has hitherto been applied, and which has followed the lines laid down by the experience of Ehrlich and his co workers

The committee venture to urge that members of the medical profession would be performing a service of national importance, in the present emergency, by keeping accurate records of cases in which the new preparations are used, and by placing such records at the disposal of the committee for their private information and guidance Particular stress must be laid upon the desirability of recording in every case the name of the preparation used and the serial number applied by the manufacturer to the particular batch employed, together with full details as to dosage, the precautions taken to ensure purity of the water used, and finally, the results of the administration, both as regards therapeutic efficacy and the presence or absence of special incidental symptoms

It is requested that records of this kind may be addressed to the Secretary of the Medical Research Committee, St Stephen's House, Westminster

IRELAND

(From our own Correspondents)

The Irish Medical Association

At the annual meeting of the Irish Medical Association last summer a resolution was carried directing the council to appoint a committee to make suggestions for the reorganisation of the association A committee was appointed and presented a scheme to the council in April last The council adopted the scheme with a few amendments, and articles and by laws to make it effective were drafted The chief change suggested was the reduction of the council from about 80 members to less than 50 by the elimination of most of those elected by the body of members as a whole as distinct from those representing branches It was also proposed to abolish the offices of honorary secretary and honorary treasurer To make the changes law it was necessary that they should be adopted at two special meetings of the association At the first of these meetings the new articles of association had been carried and the greater part of the by laws, when it was discovered that there was not a necessary quorum present for the transaction of business, and the proceedings were rendered useless

The annual meeting of the association was held on June 16th at the Royal College of Surgeons, under the presidency of Mr F W Kidd There was a good attendance of members The annual report of the council stated that the number of members had increased Nine members had been removed from the list for accepting and persisting in retaining the position of "medical adviser" or "certifier" under the Insurance Act The statement of accounts showed a credit balance of £465 2*s* 4*d* The report referring to the work of the reorganisation committee said that the report to the council of the association, after some amendments, had been referred back to have the articles and by laws drafted The secretary informed the meeting of the fiasco of the special general meeting After some discussion the reorganisation committee was reappointed, and the council was directed to summon special general meetings at convenient dates in the autumn to consider the draft articles and by laws Following the adoption of the report of the council there was a desultory discussion with regard to proposed coöperation with the British Medical Association, but no decision was arrived at The following officers were re elected Mr F W Kidd, president, Dr Leonard Kidd, Mr James Keating, Mr J B Story, and Dr J Geraghty, vice presidents, Dr T Donnelly, honorary secretary, and Dr H U Byrne, honorary treasurer

After a debate on the question of appointing a committee to collect evidence and report on Poor law reform, the question was referred to the existing Poor law subcommittee of the Irish Medical Committee

The following resolution was passed unanimously —

> This association protests against the appointment of medical advisers or part-time certifiers under the National

The New Certification System

One of the most interesting of the documents circulated among the representatives of Local Medical and Panel Committees with a view to the conference contained information as to the attitude of the Approved Societies with regard to the certification of chronic cases A letter had been sent to the societies calling attention to the way in which the subject is treated in Memo 211 of the Insurance Commissioners and to the hardship, accentuated by the stress of war conditions needlessly caused by the requirement of weekly certificates To this letter 45 replies had been received, of which 31 intimated that weekly certificates were considered by the societies affected to be unnecessary, or were likely to be declared so Nine societies merely acknowledged the letter or stated that it would receive consideration Five replies were of an unfavourable character, but in some of these cases further correspondence appeared to be likely to obtain the concessions asked for On the whole therefore the societies may fairly be said to take a reasonable view of the matter in which they are not asked to sacrifice any principle of importance affecting either their own interests or the personal interests of their members

The Panel Medico-Political Union

At the recent annual general meeting of the Panel Medico-Political Union, now entering the second year of its existence the result of the elections of officers and council for the coming 12 months was made public. Among those re elected was the chairman, Dr W Coode Adams, the other officers chosen being Vice-Presidents Mr J A Angus, Dr H J Cardale, Dr H. G Cowie and Mr R J Farman, treasurer Dr G R Young, trustees Dr W Coode Adams, Dr G B Batten, and Mr F H Lane In addition to these 30 names of practitioners chosen to be members of the council were announced In his address the President dwelt upon the intention of the Union to exercise political influence on behalf of members of the panels and to obtain the support of members of the House of Commons by exercising such influence on their behalf, or the reverse, in their constituencies Among objects aimed at would be the obtaining of better representation upon Insurance Committees for panel practitioners and also more direct representation for insured persons. The holding back of money due by the action of suspense slips was a grievance to which special and immediate attention would be directed as well as the question of insured persons returning from the war invalided

Coventry Insurance Committee

The Coventry Insurance Committee at a recent meeting considered the question of surcharges made by the Treasury auditor in respect of expenditure incurred through representatives of the committee attending certain conferences connected with insurance matters A resolution in terms recommended by the finance subcommittee was passed protesting against the surcharges, and representing that the expenditure disallowed was reasonable and necessary to the carrying out of the committee s work there being, moreover no statutory delimitation of the expenses which might rightly be incurred It was argued in the course of the discussion that it was of the utmost importance to the committee that it should be in touch with other insurance committees and that this object was attainable only through taking part in the conferences referred to Important criticism of the financial provisions of the Insurance Acts for the treatment of tuberculosis took place at the same meeting It was pointed out that in the provision of treatment institutional and domiciliary, expenditure was being incurred and undertaken at Coventry which could not safely be continued, a medical member of the committee expressing the opinion that the situation arose through no fault of the committee "for at the beginning of the Act people were promised all sorts of benefits which however had been shown to be quite impossible The speaker submitted that the only solution of the difficulty would be the provision of money by the Treasury on a much larger scale Under the Act the amount of consumption and the extent of the curative measures necessary had been very much under estimated. The chairman in making observations to a similar effect argued that the whole basis of the scheme was wrong With reference to suggestions made that the prevention of consumption by sanitary measures would be found more effective than attempts to cure it, he was of the opinion that before this could be done the amendment of several Acts of Parliament besides the Insurance Acts would be required The fact remained, he said that the work of the sanatorium benefit subcommittee had reached such a stage in its development that the subcommittee could not keep on under existing conditions and he wanted the insured public to understand that the Insurance Committee had no desire to limit the rights of any insured person, but that it was bound, having regard to its commitments, to adopt a different attitude

MEDICINE AND THE LAW

Modern Echoes of a Famous Crime the Trial of the Stauntons

NEARLY 40 years ago, in September, 1877, four persons, Louis and Patrick Staunton Elizabeth, wife of Patrick Staunton, and Alice Rhodes her sister were convicted at the Old Bailey for the murder of Harriet wife of Louis Staunton, and were sentenced to death by Mr Justice Hawkins who, according to such public opinion as found immediate expression, had brought to a successful issue the first trial for murder conducted by him. The capital sentences however, were not carried out, a result largely due to the efforts of the medical profession and of THE LANCET The case and its history have recently received prominent notice in the *Cornhill* from the pen of Sir Edward Clarke who defended Patrick Staunton, and who in his résumé of the trial made criticisms of a severe character upon the late Lord Brampton, better known as Mr Justice Hawkins We are not here concerned with the views expressed by one of the most able and eloquent advocates of the last generation upon a judge who, whatever his demerits, had many shining qualities but we did at the time of the "Penge mystery" interest ourselves considerably in the fate of the Stauntons and Alice Rhodes, and in securing for the medical evidence given on their behalf the recognition which the judge had denied to it

These things contributed not a little to saving from the gallows four persons who by whatever acts of cruelty and immorality they might severally have deserved public execration, certainly had not murdered Harriet Staunton by starving her to death, the only way in which they were accused of committing the crime charged against them. Whatever opinions leaders of the Bar may have held of Mr Justice Hawkins during his long career as a judge in civil or in criminal cases of his fairness or unfairness, of his clemency or the reverse he undoubtedly made a very ill advised effort to secure conviction for the capital crime in a case in which the medical evidence was of supreme importance and in which medical evidence of the highest quality was opposed to the conclusion at which he desired the jury to arrive In order to do this he was compelled to belittle the expert evidence called for the defence, and he virtually ignored it He practically omitted from his summing up all appreciation of the testimony of Dr J S Bristowe and Dr J F Payne respectively a most wise physician and a most careful pathologist and alike scrupulously careful observers, and he accordingly obtained a verdict which the medical profession immediately recognised as being contrary to justice The whole of the squalid story of the Staunton case has been admirably compiled by the late Mr J B Atlay [1] Harriet Staunton was treated in different degrees by the four persons named in the indictment with abominable neglect and cruelty but as THE LANCET of Oct 6th, 1877 put it in a leading article commenting upon the trial "It must obviously be impossible to prove murder by starvation without first showing death by starvation." As we then stated, holding an opinion from which we see no reason to depart, the attempt to affirm the primary proposition failed. The post-mortem appearances were not consistent with the hypothesis of death from the cause assigned They afforded irresistible evidence of other factors at work, although it was not, owing to the defective manner in which the body was examined possible to say which of several morbid conditions proved fatal to life

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[1] Trial of the Stauntons Edited by J B Atlay Barrister-at law Wm. Hodge and Co

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND

MACHINERY FOR DISTRIBUTION OF FUNDS IN BELGIUM

WE have now received the detailed report of the session of the Aide et Protection aux Médecins et Pharmaciens Belges Sinistrés on May 6th, which continues the story of the distribution of funds by the Belgian Society A financial statement showed that by the end of April 65,000 francs had been received and a little over 45,000 francs had been spent, great discretion having been obviously exercised in making the grants The kind of case relieved has been fully illustrated already

At this session the cases were mentioned which had already been found deserving of continued monthly relief, in accordance with the principle adopted at the last session, and the brief notes upon the selected objects of special help reveal some truly tragic situations All the grants of money proposed by the eleemosynary subcommittee were unanimously adopted by the committee

We have received through Professor Jacobs a statement of the financial position of the Belgian Society up to June 10th, which shows that the funds are still lasting out, but necessarily the disbursements are rapidly increasing The Aide et Protection aux Médecins et Pharmaciens Sinistres had received by the end of the first week in June 77,000 francs, and had disbursed 60,000 francs, while the extraordinarily modest expenses of administration amounted to less than 500 francs

Since this date a substantial sum of money has been sent by the British Committee to the Belgian Committee, so that Dr V Péchère (president) and his admirable colleagues, M A Delacre, Dr Laruelle (secretaries), and Dr H Coppez (treasurer) will be able to continue with good heart to meet the increased calls upon their resources

THE WEEK'S SUBSCRIPTIONS

The week's subscriptions include the handsome contribution from the New South Wales Branch, B M A , of £500, making with previous donations a total of £728 received from this generous source

	£	s	d
Dumfries and Galloway Division B M A. (per Dr J D Robson Hon Sec)—			
Dr Robertson	0	10	0
Dr H Bryan Densham	5	5	0
Dr A. G Peter	2	2	0
Birmingham Local Committee (per Dr Saundby Hon Sec)—			
Dr A. E Richardson	6	5	0
Aberdeen Division, B M A.—			
Drs Pirie A.H Lister J F Christie Croll M A. Booth F K Smith Alex Low John A Milne Col Mitchell Drs Gordon Levack Geddie Stephen Davidson Smith Slessor J P Mitchell	28	0	0
Dr Mary O Brien	1	1	0
Dr G D H Carpenter	1	0	0
New South Wales Branch B M A.	500	0	0
North of England Branch of Fund (per Dr James Don and Mr A. S Perceval Hon Secs) (fifteenth donation total £728 19s 7d)—			
Dr J J Carruthers	1	1	0
Dr D S Park	1	1	0
Dr F Hunton	1	1	0
Dr W J Carmichael	2	2	0
Mr A Williams	1	1	0
Mr A Mortimer	0	10	6
M P S	0	3	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr H A. Des Vœux, at 14, Buckingham gate, London, S W , and should be made payable to the Belgian Doctors and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd

THE APPEAL FOR SURGICAL INSTRUMENTS

The Master of the Society of Apothecaries begs to acknowledge the receipt of surgical instruments kindly contributed by the following donors since the publication of the last list —

Dr Gordon Brown Chigwell Essex , Barnsley Division of the B M A. second donation per Dr R F Castle

Instruments should be sent to the Apothecaries Hall, Blackfriars, E C

THE NATIONAL INSURANCE ACT

London Panel Committee War Emergencies and Local Coöperation

THE London Panel Committee on June 22nd discussed the formation of local associations of practitioners on the panel It was urged by the General Purposes Committee that such bodies would be of great value in dealing with problems peculiar to localities in removing local grievances and in preserving the interests of practitioners on the panel In each area coöperative arrangements might be made for weekly and periodical holidays , rotas of medical referees might be appointed to advise in difficult or doubtful cases , in districts in which sickness incidence was heavy practitioners might encourage the provision of lectures on health and work for sanitary reforms tending to benefit health Negotiations with hospitals and arrangements for specialist consultations might sometimes be better carried out by a local association The committee passed a resolution expressing the opinion that practitioners on the panel in the various areas of London should be grouped under district panel associations

A statement was submitted showing that the number of practitioners on the panel resident in London was 1550, of whom 457 were registered since 1900, and presumably were eligible for service with the Forces The number of practitioners on the panel at present absent on military duty was 125 The General Purposes Subcommittee had pointed ou that it would appear that only about one-quarter of the eligible practitioners were actually serving with the Forces, and that the difficulty was a fear that on returning practitioners would find their practices much depleted by reason of the transference of insured persons to other lists The Panel Committee passed a series of resolutions expressing the opinions that —

1 The right of an insured person to transfer should be temporarily suspended.

2. That practitioners on the panel should collectively arrange to release an adequate proportion of their number for service with the Forces

3 That in the event of a colleague accepting a commission the practitioners undertaking the treatment of the persons on the list should in normal circumstances permit the colleague to retain 50 per cent of the income from the insurance practice

A detailed scheme embodying these resolutions was also approved

The Local Medical and Panel Committees and the War

At the conference of representatives of Local Medical and Panel Committees convened by the British Medical Association on June 16th the number of motions placed on the agenda with regard to insured persons who may be discharged from the services incapacitated for work showed the serious apprehension felt by medical men on the panels as to their future position and the effect likely to be produced upon it by the war The original motion to consider the questions arising having been assigned to the chairman, those set down by various Local Medical and Panel Committees dealt with various aspects of the case and suggested remedies From Liverpool came the proposal that Parliament should make some grant to practitioners on the panels to compensate them for the serious charge likely to be imposed upon them by the return of many of their ' best lives " as broken and disabled men The Croydon Committee asked for an increased capitation fee in respect of such patients the Nottingham Committee suggesting, as an alternative for a higher rate of remuneration payment for work done, "in view of the fact that circumstances have arisen which were not contemplated when the existing terms were arranged ' The Northumberland Panel Committee by the terms of its motion protested against the direction contained in Memo 210 I C making insured persons returning to civil life free to select their method of obtaining medical treatment as though newly entering upon insurance This it was pointed out would tend to increase the number of unallotted patients The approval of the Insurance Act Committee of the British Medical Association had [illegible] been given to an arrangement for the reinstatem [illegible] insured person to the list of the medical ma [illegible] allotment subject to the right [illegible] his medical attend [illegible] and [illegible] refuse to rea [illegible] s

William McElrea Snodgrass (late Cadet Lance-Corporal, Dublin University Contingent Officers Training Corps) to be Lieutenant (on probation) (dated May 30th)

TERRITORIAL FORCE

Army Medical Service

Major Ernest C Freeman Reserve of Officers from Deputy Assistant Director of Medical Services, to be Assistant Director of Medical Services, East Anglian Division, with the rank of Colonel

Lieutenant-Colonel David L Hamilton, *from* 2nd Home Counties Field Ambulance to be Deputy Assistant Director of Medical Services, Home Counties Division

Royal Army Medical Corps

Captain Charles A. Ballance M V O is seconded whilst holding a temporary commission in the Royal Army Medical Corps

Captain John M Fortescue-Brickdale is seconded for service with the Expeditionary Force

3rd North Midland Field Ambulance Lieutenant Crichton S Lee is restored to the establishment

4th London General Hospital Captain Thomas C English is seconded for service with the Expeditionary Force

1st Northern General Hospital James Ackworth Menzies to be Lieutenant

2nd Northern General Hospital Major James A. Coupland is seconded for service with the Expeditionary Force

4th Northern General Hospital Captain Frederick E Withers is seconded for service with the Expeditionary Force

2nd Southern General Hospital Captain Ernest W H Groves is seconded for service with the Expeditionary Force

Scottish Horse Mounted Brigade Field Ambulance James Alexander Mathers (late Lieutenant, Scottish Horse Yeomanry) to be Captain (temporary)

2nd South Western Mounted Brigade Field Ambulance John Hamilton Cumming to be Lieutenant

2nd East Anglian Field Ambulance Saville James Fielding to be Lieutenant

2nd Northumbrian Field Ambulance Christopher Rogers to be Lieutenant

2nd Eastern General Hospital Ernest Fryer Ballard to be Lieutenant

2nd Home Counties Field Ambulance Benjamin Allen Bull to be Lieutenant

2nd London (City of London) General Hospital Major Charters J Symonds is seconded whilst holding a temporary commission in the Royal Army Medical Corps

3rd Northumbrian Field Ambulance John Gray (late Major 6th Battalion, The Durham Light Infantry) to be Major (temporary)

Welsh Divisional Sanitary Section *Captain Robert* Proudfoot, from Sanitary Service, to be Captain

East Anglian Casualty Clearing Station Major John H Dauber to be Lieutenant-Colonel Lieutenant Frederick W Lewis (late Surgeon-Captain, South African Constabulary) to be temporary Captain.

1st East Anglian Field Ambulance Captain William D Watson, from Attached to Units other than Medical Units, to be Captain (temporary)

3rd Highland Field Ambulance Lieutenant Edwin A. Bell resigns his commission.

3rd East Lancashire Field Ambulance Wilfred Edwin Rothwell to be Lieutenant

2nd West Lancashire Field Ambulance William Francis Young to be Lieutenant

1st Southern General Hospital William Kirkpatrick to be Major whose services will be available on mobilisation

3rd Southern General Hospital Captain Arthur G Kenley, from 1st North Midland Field Ambulance to be Captain whose services will be available on mobilisation

2nd Western General Hospital Frank Chadwick to be Lieutenant

Sanitary Service Captain Alexander C Farquharson, from Attached to Units other than Medical Units, to be Sanitary Officer Northumbrian (Reserve) Division

East Anglian Divisional Sanitary Section Walter Francis Corfield (late Captain 2nd London Sanitary Company) to be Captain

West Lancashire Casualty Clearing Station Cadet Theodore Howard Somervell *from* University of London Contingent Senior Division Officers Training Corps, to be Lieutenant.

Attached to Units other than Medical Units —Major Percival E Barber is seconded for service with the R A.M.C To be Captains Captain Lawder T Whelan, from Sanitary Service, George Raymond (late Captain 8th (Isle of Wight Rifles Princess Beatrice's") Battalion The Hampshire Regiment), and Lieutenant Robert L Routledge

TERRITORIAL FORCE RESERVE.

Royal Army Medical Corps

Colonel John P I Lavrood (late Assistant Director of Medical Services, South Midland Division) to be Colonel.

VITAL STATISTICS

VITAL STATISTICS OF LONDON DURING MAY, 1915

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the 10 diseases specified in the table was equal to an annual rate of 6·4 per 1000 of the population, estimated at 4 516 612 persons in the three preceding months the rates were 7·4 6·6, and 6·3 per 1000 respectively The lowest rates last month were recorded in Hampstead, Stoke Newington Bermondsey, Camberwell, and Lewisham, and the highest rates in Paddington the City of Westminster St Marylebone Stepney, Southwark and Woolwich One case of small pox which belonged to Stepney was notified during the month The prevalence of scarlet fever showed a slight increase as compared with the two preceding months, among the metropolitan boroughs this disease was proportionally most prevalent last month in Hammersmith the City of Westminster, St Marylebone, Finsbury Stepney and Woolwich The Metropolitan Asylums Hospitals contained 2221 scarlet fever patients at the end of last month, against 2959 2514, and 2339 at the end of the three preceding months, the weekly admissions averaged 285 against 324, 278, and 272 in the three preceding months Diphtheria was less prevalent than it had been in any other recent month, the greatest proportional prevalence of this disease was recorded in St Pancras, the City of London Bethnal Green, Stepney, and Poplar The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals which had been 1562, 1362 and 1223 at the end of the three preceding months, had further declined to 1083 at the end of last month, the weekly admissions averaged 128, against 172 142, and 136 in the three preceding months The prevalence of enteric fever showed a marked decline last month, the 40 notified cases of this disease included 6 in Hackney 4 each in St. Pancras, Bethnal Green Lambeth, and Deptford and 3 each in Stepney, Bermondsey and Camberwell The Metropolitan Asylums Hospitals contained 49 enteric fever patients at the end of last month against 64, 46, and 60 at the end of the three preceding months the weekly admissions averaged 6 against 13 8 and 13 in the three preceding months Erysipelas was proportionally most prevalent in Paddington, Shoreditch Bethnal Green Southwark, and Woolwich The 32 cases of puerperal fever notified during the month included 4 each in Kensington and Southwark, 3 in Wandsworth, and 2 each in Chelsea, St Pancras Islington Stepney Lambeth and Camberwell The 87 cases of cerebro-spinal meningitis included 9 in Wandsworth, 8 in Kensington, 7 in Hammersmith, 6 in Shoreditch and 5 each in Stepney, Battersea and Camberwell The 6 cases of poliomyelitis belonged respectively to Hampstead, St. Pancras. Islington Bethnal Green, Wandsworth, and Woolwich

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided, the death rates from all causes are further corrected for variations in the sex and age constitutions of the several boroughs During the four weeks ending May 29th the deaths of 5065 London residents were registered, equal to an annual rate of 14·6 per 1000, in the three preceding months the rates were 20·7 21·2 and 19·6 per 1000 respectively The death rates last month ranged from 10·9 in Woolwich 11·1 in Wandsworth 11·3 in Paddington 11·5 in Lewisham and 11·7 in Hampstead, to 16·5 in Bethnal Green 16·6 in Finsbury, 16·8 in Battersea 18·2 in Shoreditch 18·6 in Chelsea 19·7 in Bermondsey, and 23·1 in the City of London The 5065 deaths from all causes included 537 which were referred to the principal infectious diseases, of these 269 resulted from measles 20 from scarlet fever 41 from diphtheria 137 from whooping-cough, 10 from enteric fever and 60 among children under 2 years of age from diarrhœa and enteritis. The lowest death rates from these diseases in the aggregate were recorded in Kensington, Westminster Hampstead the City of London Stepney, Lambeth, and Camberwell and the highest rates in Chelsea Islington, Shoreditch Bethnal Green, Poplar Bermondsey and Battersea The 269 deaths from measles were 119 in excess of the corrected average number, this disease was proportionally most fatal last month in Chelsea Islington Shoreditch, Bethnal Green, Poplar, Bermondsey, and Battersea The 20 fatal cases of scarlet fever were 4 in excess of the average, and included 3 in Fulham 3 in Islington, and 2 each in Hammersmith and Southwark. The 41 deaths from diphtheria

We do not suggest that the verdict actually arrived at by the jury was unsupported by medical evidence entitled to due consideration Several medical practitioners of standing, two of whom were called as experts, supported the view that starvation caused the death of Harriet Staunton, but the ignored scientific evidence was beyond question better qualified to command attention than that which secured the adverse verdict, and the fact that Dr Bristowe and Dr Payne had not seen the deceased in life, or her body after death, did not materially discount the value of their opinions, as the judge in his brief reference to their evidence suggested

Expert witnesses as a rule rely upon the facts described by others in forming their opinions, and if the observers are qualified by training the expert's opinion rests upon a satisfactory foundation In this instance the value of the medical evidence for the defence might have been said to have gained, rather than to have lost, by its dependence upon that adduced by the Crown Those who gave it accepted the sworn statements of witnesses for the Crown as to what they had seen or had failed to observe, but drew the scientific deductions Perusal of the evidence many years after, indeed, suggests that in his later years the same judge would probably have taken a different course, either devoting more time to criticising and weighing the evidence of Mr Payne and Dr Bristowe even if only to endeavour to demolish it, or recognising its force in preventing the establishment of the case for the Crown 'beyond any reasonable doubt " He must also have been aware that he had shut out upon technical grounds the evidence for the defence of a very highly qualified witness, although he may have assumed that he with the others would be reduced to permanent silence by the jury's verdict

A repetition of that which occurred in 1877, when the four prisoners solemnly condemned to death for Harriet Staunton's alleged murder were reprieved almost immediately, is not likely to occur now It might do so of course, but the progress of science, protecting human life in many ways, has added certainty to the results of medical investigation into causes of death and similar matters, and, with greater sureness that the truth will have been arrived at, weight is given with greater confidence to the best medical evidence by judge and jury alike We need only refer to the trials of the murderers Crippen and Seddon in order to remind ourselves of the public confidence in the establishment of justice by medical evidence in cases where the material facts are incomprehensible so far as the general public is concerned There was a perceptible agitation for reprieve in each of these cases, but it rightly came to nothing

THE SERVICES

ROYAL NAVY MEDICAL SERVICE

THE undermentioned have been granted temporary commissions as Surgeons in His Majesty's Fleet —Dated June 16th William Lovell and Charles Stuart Ogilvy Dated June 17th Edwin John Tongue

ARMY MEDICAL SERVICE

Major Sir Berkeley G A Moynihan, R A M C (T), to be temporary Lieutenant-Colonel (dated June 10th)

ROYAL ARMY MEDICAL CORPS

Captain William McConaghy is seconded for service with the Egyptian Army (dated June 5th)

Temporary Captain Sydney G L Catchlove relinquishes his commission (dated June 11th)

Temporary Lieutenant Thomas M. Watt relinquishes his commission (dated March 1st)

The undermentioned to be temporary Majors —Dated May 27th Alexander Johnstone Dated June 7th George Harry Melville Dunlop and Henry Alexis Thomson

The undermentioned to be temporary Captains —Dated May 1st Arthur George Whitehorne Cole Dated May 22nd Walter Sydney Lazarus-Barlow

The undermentioned non-commissioned officers and men of the Canadian Army Medical Corps to be temporary Lieutenants —Dated May 26th Sergeants Robert Beattie Martin, Harry Roy Smith Paul Michael O'Sullivan, Louis Edwin Williams David Edmund Staunton Wishart and Gerald Allison, Corporals Clifford M Keiller, David Emerson Scott and Stanley Stafford Ball Lance-Corporals Herbert Carl Martin and Thomas Harold Douglas Storms, Privates Thomas Daily Cumberland, Donald Thomas Fraser, Richard Collier Coatsworth, Harry Earl Groff Louis Emile Belcourt, Morley Edward Gorman, Maurice Round Helliwell, Thomas Harold Crews William Ray Hodge, Harold Parrish Hamilton, Frederick Walter Clement, Athol Alexander Moon, Stanley Young Walsh, Arthur McKnight Bell

The undermentioned to be temporary Lieutenants — Dated April 14th Harold Robert Dew, Robert Kenneth Birnie, Jack Morlet, Albert Weigall George Clifford Scantlebury James Garnet Sleeman, William Alfred Leslie Harrison Henderson Albert Wilber Bretherton, Cyril Checchi, Frank William Augustus Ponsford, Walter Cecil Marsden, Thomas Edwin George, Alfred John Trinca, Raymond William Ryan, Nigel Lovat Prichard, William Arthur Bowman, William Alexander Hamilton Birrell, William Rogerson Wilberforce Stephen Newton and George Chadwell Bury Dated April 20th Francis William Stone, Frank Harold Looney, Arthur Ernest Stenning, Michael Harold Sorokiewich, Robert Welton Hogg, Johnston Hughston, Charles Humphrey Lloyd Cecil Gordon McAdam, and Roy Baldwin Minnett Dated May 1st William Moore Skipwith Robinson Dated May 10th John Joseph Middleton Dated May 13th Dominick John Cannon Dated May 20th Samuel Lloyd Corry, Malcolm Macnicol, Percy Templeton, Edgar Roe Lyth, Stephen Galt Trail, Frank Melville Harvey, and Tudor Benson Evans Dated May 21st Ellis Gordon Goldie, James Murray Duff Mitchell, George Peter Taylor, Edmond Ryan, John Charles Michell John Low, Edward Beresford Collings, Albert Edward Blackburn Francis Anderson, John Anderson, James Montgomery Anderson, Edward Scott White, Thomas Trevor Apsimon, Maurice Aloysius Power, Henry Glendinning Davison, John Clark, William O'Brien, Thomas Kirkwood, Allen Edgar Thompson, Augustus Beauchamp Northcote, James Samuel Richard Weir, Robert Charles De Lacey, Henry Richard Hurry, and Claude Robinson Lucas. Dated May 22nd Frederic William Waudby Griffin, Alexander Newton Clemenger, Daniel Charles Evans and Herbert Frank Willington Dated May 24th Israel Allaun, James Lawson Williams, William Henry Warwick, Roy Darley Clayton, Gerald Henry Davy, Frank Ernest Reynolds, and Charles Brehmer Heald Dated May 25th James Cunningham, Lancelot Gordon McCune, Bernard Geoffrey Klein, James Davidson MacKay, Henry Donald Welply, William Taylor Buchan, Ernest Coleman, Robert James Allsopp John Gordon Smith Macpherson, John Proctor Donald McIntyre, David Charles Welsh, Arthur Leslie Walters, William Ledingham Christie, John Lyn Dimond, Dan Arthur Powell, Arthur Edward Clarke, Robert Hugh Drennan, Wilfred Angel Easton, Arthur Noel Houghton, Herbert Playford Sheppard, Raymond Alexander Hannay Atkinson, Allan Massey, William Rice Meredith, Francis Joseph Sadler, Spencer Churchill, and Douglas Allan Dated May 26th Watts Edmondson, Charles Salkeld, Arthur John Clayton John Koble Milne Dickie, Hew William Scott-Wilson, and Arthur Geoffrey Shera Dated May 27th Arthur Edward Lyster, James Lochhead Gregory, Lester Ernest Ashley Emile, William Minty Badenoch, Richard Nunn, Sidney Winslow Woollett, Thomas Hutchinson, Andrew Philip, Nelson West Jenkin, Adam Brown, Arthur James Lewis Hugh James McCurrick, Charles Samuel Woodd, William Edward Nickolls Dunn, Patrick Aloysius Doyle, Kirsop Bainbridge James Vickers George Brown Crawford, David Fettes Barron Norman Sinclair, James Leslie Callaghan and William Hunter Brown Dated May 28th Arthur Hill Laird, Malcolm Manson, Harold Willis Scawin, Robert Scott, Mark O'Brien, Kenneth Fraser, Leslie Gordon Tait, George Kirkwood Allan, James Henderson Yule, John Alexander Mortimer, William Duncan Lawrie, William Sibbald Campbell, Norman Alexander Aylmer Hughes, Douglas Craig Percy Charles Garrett, Leslie Wilson Evans, Reginald Norman Porritt, David Watt Torrance Reginald Inglis Douglas John Barron Scott, and James Finlay Alexander Dated May 29th Thomas Joseph Lydon, Frederick William Campbell, Andrew Louis Krogh and Paul Ransome Browning Dated May 31st William Johnson Symes, Robert Brookes and Michael Abdy Collins Dated June 5th Lieutenant Fraser Baillie Gurd, Canadian Army Medical Corps

Frederick Hall to be temporary honorary Lieutenant whilst serving with the St John Ambulance Brigade Hospital (dated June 10th)

Ralph Marsh de Mowbray to be temporary Lieutenant whilst serving with the British Red Cross Hospital, Netley (dated April 27th)

Arthur Conyears Inman is granted temporarily the honorary rank of Lieutenant (dated June 14th)

SPECIAL RESERVE OF OFFICERS

Royal Army Medical Corps

The undermentioned Lieutenants (on probation) are confirmed in their rank —Frank H Kennedy, Norman B Graham James Lawson, Francis L P G Bennett Geoffrey B Egerton and Patrick A Clements

John Galloway Hendry (late Cadet Lance Corporal, Glasgow University Contingent, Officers Training Corps) to be Lieutenant (on probation) (dated May 8th) were 9 above the average, and included 5 in Stepney, 4 in Lambeth, and 3 each in Hammersmith, Islington, Bethnal Green, and Wandsworth The 137 deaths from whooping-cough were 22 above the corrected average, this disease was proportionally most fatal last month in Hackney Finsbury, Bermondsey, Battersea, Deptford, and Greenwich The 10 fatal cases of enteric fever were one in excess of the corrected average number and included 4 in Hackney and 2 each in Southwark and Camberwell The mortality from diarrhœa and enteritis among children under 2 years of age was proportionally greatest in Paddington, Hammersmith, St Pancras, Islington, Shoreditch, Bethnal Green, and Southwark In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was 48 1 per cent above the average

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HEALTH OF ENGLISH TOWNS

In the 96 English and Welsh towns with populations exceeding 50 000 persons at the last Census, 8092 births and 4297 deaths were registered during the week ended Saturday, June 19th The annual rate of mortality in these towns, which had been 13 7 13 9, and 13 5 per 1000 in the three preceding weeks, further fell in the week under notice to 12·4 per 1000 of their aggregate population, estimated at 18,136,180 persons at the middle of last year During the first 11 weeks of the current quarter the mean annual death rate in these towns averaged 15 7, against 15 8 per 1000 in the metropolis The annual death rate last week ranged from 4 1 in Hornsey 6 2 in Leyton, 6 6 in Ealing, 7·0 in Walthamstow and in Warrington and 7 5 in Willesden, to 18 4 in Barnsley, 19 3 in Blackpool, 21·0 in Middlesbrough, 21 6 in Gillingham, and 21 8 in West Bromwich

The 4297 deaths from all causes were 400 fewer than the number in the previous week, and included 374 which were referred to the principal epidemic diseases against 489 and 449 in the two preceding weeks Of these 374 deaths, 162 resulted from measles, 68 from infantile diarrhœal diseases, 60 from whooping-cough 45 from diphtheria, 29 from scarlet fever and 10 from enteric fever, but not one from small pox. The mean annual death rate from these diseases did not exceed 1 1 per 1000, which is the lowest rate recorded in any week of the current year The deaths attributed to measles which had been 221 239, and 215 in the three preceding weeks, further declined to 162 last week and caused the highest annual death rates of 2 3 in Sheffield 2·9 in Barnsley, 4 4 in Walsall, 4 5 in Middlesbrough and 5 3 in West Bromwich The deaths of infants (under 2 years) referred to diarrhœa and enteritis which had been 64, 75 and 90 in the three preceding weeks, fell to 68 last week, and included 12 in London and 4 each in West Ham Liverpool, Salford and Sheffield The fatal cases of whooping-cough which had declined from 137 to 75 in the four preceding weeks further fell to 60 last week of which 24 occurred in London and 3 each in Birmingham Liverpool St Helens, Leeds, and Sheffield The deaths attributed to diphtheria which had been 31 50 and 33 in the three preceding weeks rose to 45 last week, and included 6 in London 5 in Southampton, and 3 in Leyton The deaths referred to scarlet fever, which had increased from 20 to 29 in the four preceding weeks were again 29 last week, of which 9 were registered in London 4 in Manchester 3 in Salford and 2 each in Edmonton and Liverpool The fatal cases of enteric fever, which had been 11 13, and 7 in the three preceding weeks, rose to 10 last week, and included 2 in London

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital which had been 2252 2267 and 2336 at the end of the three preceding weeks, had further increased to 2373 on Saturday last 330 new cases were admitted during the week, against 257 327 and 330 in the three preceding weeks These hospitals also contained on Saturday last 1048 cases of diphtheria 77 of measles 54 of enteric fever, and 12 of whooping-cough, but not one of small pox The 995 deaths from all causes in London were 108 below the number in the previous week and corresponded to an annual death rate of 11 5 per 1000 The deaths referred to diseases of the respiratory system, which had steadily declined from 469 to 165 in the nine preceding weeks, further fell to 153 in the week under notice and were 10 below the number registered in the corresponding week of last year

Of the 4297 deaths from all causes in the 96 towns 215 resulted from various forms of violence and 342 were the subject of coroners' inquests, while 1250 occurred in public institutions. The causes of 43 or 1·0 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest All the causes of death were duly certified in London and in its 14 suburban districts in Sheffield Leeds Bristol, Hull Newcastle-on Tyne and in 57 other smaller towns Of the 43 uncertified causes 8 were registered in Liverpool, 7 in Gillingham 5 in Birmingham 3 in Sunderland and 2 each in Bootle St Helens, Darlington, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS

In the 16 largest Scotch towns, with an aggregate population estimated at 2 345,500 persons at the middle of this year, 1122 births and 704 deaths were registered during the week ended Saturday, June 19th The annual rate of mortality in these towns, which had been 18 2, 18·9, and 17 9 per 1000 in the three preceding weeks, further declined to 15 7 per 1000 in the week under notice During the first 11 weeks of the current quarter the mean annual death rate in these towns averaged 18 5, against a corresponding rate of 15 7 per 1000 in the large English towns Among the several towns the death rate last week ranged from 7·0 in Clydebank 7 6 in Falkirk and 9 9 in Kilmarnock, to 18 6 in Ayr, 22 5 in Aberdeen, and 29 4 in Perth

The 704 deaths from all causes were 102 fewer than the number in the previous week and included 137 which were referred to the principal epidemic diseases, against numbers increasing from 90 to 148 in the four preceding weeks Of these 137 deaths 89 resulted from measles 19 from whooping-cough, 17 from infantile diarrhœal diseases, 7 from diphtheria, and 5 from scarlet fever, but not one from enteric fever or from small pox. The mean annual death rate from these diseases was equal to 3·0, against 1 1 per 1000 in the large English towns The deaths attributed to measles, which had been 72 85, and 80 in the three preceding weeks, rose to 89 last week, and included 59 in Glasgow, 13 in Aberdeen, and 4 in Leith The deaths referred to whooping cough, which had been 43 40, and 40 in the three perceding weeks, further declined to 19 last week of which 8 occurred in Glasgow 5 in Aberdeen, and 2 in Edinburgh The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 15 10, and 12 in the three preceding weeks, further rose to 17 last week, and included 6 in Glasgow, 4 in Dundee, and 2 in Motherwell The deaths attributed to diphtheria, which had been 10, 5, and 4 in the three preceding weeks, rose to 7 last week of which 3 were registered in Glasgow and 2 in Paisley The fatal cases of scarlet fever, which had been 5 7 and 12 in the three preceding weeks, fell to 5 last week, and included 2 in Glasgow

The deaths referred to diseases of the respiratory system, which had been 141 145 and 126 in the three preceding weeks, further fell to 93 in the week under notice but were 16 in excess of the number registered in the corresponding week of last year The deaths from different forms of violence numbered 21, against 35 and 25 in the two preceding weeks

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HEALTH OF IRISH TOWNS

In the 27 town districts of Ireland, with an aggregate population estimated at 1,212,380 persons at the middle of this year, 571 births and 331 deaths were registered during the week ended Saturday, June 19th The annual rate of mortality in these towns which had been 16 4, 17·0, and 15 4 per 1000 in the three preceding weeks further fell to 14 2 per 1000 in the week under notice During the first 11 weeks of the current quarter the mean annual death rate in these towns averaged 18 8 against corresponding rates of 15 7 and 18 5 per 1000 in the English and Scotch towns respectively The annual death rate last week was equal to 16 4 in Dublin (against 11 5 in London and 17·0 in Glasgow), 13 2 in Belfast 10·2 in Cork, 11 4 in Londonderry 8 1 in Limerick, and 13 3 in Waterford while in the 21 smaller towns the mean rate was 15 2 per 1000

The 331 deaths from all causes were 26 fewer than the number in the previous week, and included 25 which were referred to the principal epidemic diseases against 27 and 21 in the two preceding weeks. Of these 25 deaths, 7 resulted from infantile diarrhœal diseases, 6 each from measles and whooping cough, 4 from scarlet fever, and 2 from diphtheria, but not one from enteric fever or from small pox. The mean annual death rate from these diseases was equal to 1 1 against corresponding death rates of 1 1 and 3·0 per 1000 in the English and Scotch towns respectively The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 4, 12 and 2 in the three preceding weeks rose to 7 last week and comprised 5 in Dublin and 2 in Belfast The deaths referred to measles, which had been 10, 3, and 7 in the three preceding weeks, were 6 last week and included 5 in Belfast and 1 in Ballymena The fatal cases of whooping-cough, which had been 3 5, and 9 in the three preceding weeks, fell to 6 last week, of which 3 occurred in Dublin The 4 deaths attributed to scarlet fever were slightly in excess of the average in the earlier weeks of the quarter, and included 2 in Belfast The 2 fatal cases of diphtheria were registered in Dublin

The deaths referred to diseases of the respiratory system, which had been 63 56, and 64 in the three preceding weeks, fell to 57 in the week under notice Of the 331 deaths from all causes, 103, or 31 per cent, occurred in public institutions and 8 resulted from different forms of violence The causes of 13, or 3·9 per cent of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest, in the 96 English towns the proportion of uncertified causes did not exceed 1·0 per cent

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MAY, 1915

(*Specially compiled for* THE LANCET)

CITIES AND BOROUGHS	Estimated population in the middle of 1914	NOTIFIED CASES OF INFECTIOUS DISEASE.												DEATHS FROM PRINCIPAL INFECTIOUS DISEASES									Deaths from all causes	Death rate per 1000 living †
		Small pox	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever.	Other continued fevers	Puerperal fever	Erysipelas	Cerebro-spinal meningitis.	Poliomyelitis	Total.	Annual rate per 1000 persons living	Small pox	Measles	Scarlet fever	Diphtheria.*	Whooping cough	Enteric fever	Diarrhœa and enteritis (under 2 years)	Total.	Annual rate per 1000 persons living		
LONDON	4,516,612	1	1214	544	1	40	—	32	288	87	6	2213	6·4	—	269	20	41	137	10	60	537	1·5	5065	14·6
West Districts																								
Paddington	142,055	—	47	20	—	—	—	—	17	2	—	86	7·9	—	4	1	1	3	—	3	12	1·1	124	11·3
Kensington	170 817	—	36	15	—	2	—	4	8	8	—	73	5·6	—	7	1	1	1	—	2	12	0·9	186	14·1
Hammersmith	124 750	—	41	14	—	—	—	—	4	7	—	66	6·9	—	3	2	3	—	—	3	11	1·1	146	15·1
Fulham ..	158 849	—	45	16	—	—	—	1	9	3	—	74	6·1	—	13	3	2	7	—	1	26	2·1	156	13·2
Chelsea	63 791	—	14	8	—	—	—	2	4	—	—	28	5·7	—	16	1	—	—	—	—	17	3·5	96	18·6
City of Westminster	152,346	—	71	19	—	—	—	—	5	3	—	98	8·4	—	4	—	1	1	—	2	8	0·7	152	13·7
North Districts																								
St. Marylebone	112,892	—	43	14	—	—	—	—	9	1	—	67	7·7	—	6	—	—	3	—	—	9	1·0	109	12·8
Hampstead	86 731	—	14	7	—	—	—	—	2	2	1	26	3·9	—	1	—	—	1	—	—	2	0·3	74	11·7
St Pancras	212 497	—	53	38	—	4	—	2	13	4	1	115	7·1	—	14	—	1	9	—	5	29	1·8	229	14·0
Islington	324 764	—	94	34	—	—	—	2	8	4	1	143	5·7	—	31	3	3	16	—	7	60	2·4	402	16·7
Stoke Newington	50 454	—	9	2	—	—	—	—	2	2	—	15	3·9	—	2	—	—	1	—	1	4	1·0	54	13·3
Hackney	223,724	—	51	21	—	6	—	—	17	2	—	97	5·7	—	3	—	1	12	4	4	24	1·4	252	14·8
Central Districts																								
Holborn	45 861	—	12	1	—	1	—	—	1	3	—	18	5·1	—	2	—	—	2	1	—	5	1·4	51	14·5
Finsbury	83 212	—	34	6	—	—	—	1	2	1	—	44	6·9	—	3	—	—	7	—	1	11	1·7	107	16·6
City of London	17,129	—	—	6	—	—	—	—	—	—	—	6	4·6	—	1	—	—	—	—	—	1	0·8	29	23·1
East Districts																								
Shoreditch	108 869	—	25	17	—	—	—	1	12	6	—	61	7·3	—	18	1	2	4	—	3	28	3·4	147	18·2
Bethnal Green	127 662	—	35	27	—	4	—	—	17	2	1	86	8·8	—	13	—	3	6	—	3	25	2·6	156	16·5
Stepney	273 265	1	88	68	1	3	—	2	23	5	—	191	9·1	—	10	—	5	2	—	2	19	0·9	317	15·8
Poplar	160,222	—	36	35	—	2	—	1	17	2	—	93	7·6	—	16	1	2	6	1	3	29	2·4	200	16·1
South Districts																								
Southwark	186 941	—	55	28	—	1	—	4	25	—	—	113	7·9	—	12	2	2	3	2	5	26	1·8	227	15·9
Bermondsey	124 213	—	22	8	—	3	—	1	11	1	—	46	4·8	—	15	—	1	12	—	2	30	3·1	188	19·7
Lambeth	296,724	—	65	32	—	4	—	2	16	4	—	123	5·4	—	5	1	4	4	—	3	17	0·7	350	15·1
Battersea	167 338	—	44	15	—	1	—	1	4	5	—	70	5·5	—	23	1	1	10	—	—	35	2·7	213	16·8
Wandsworth	338 998	—	99	29	—	1	—	3	9	9	1	151	5·8	—	17	1	3	6	—	4	31	1·2	288	11·1
Camberwell	262 020	—	63	15	—	3	—	2	13	5	—	101	5·0	—	4	1	1	4	2	1	13	0·6	301	14·8
Deptford	109 182	—	22	10	—	4	—	1	9	1	—	47	5·6	—	8	—	1	8	—	1	18	2·1	138	16·3
Greenwich	96 037	—	22	6	—	—	—	—	9	2	—	39	5·3	—	6	—	1	5	—	—	12	1·6	118	15·7
Lewisham	172,433	—	33	15	—	—	—	1	4	—	—	53	4·0	—	8	—	—	2	—	3	13	1·0	155	11·5
Woolwich	122,836	—	40	18	—	1	—	1	14	3	1	78	8·3	—	4	1	2	2	—	1	10	1·1	100	10·9
Port of London	—	—	1	—	—	—	—	—	4	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup † The death rates are corrected for variations in sex and age constitution of the populations of the several boroughs the population of England and Wales being taken as the standard

themselves to abstain from the use of alcohol, except under medical advice

2. That the committee to be appointed at this meeting be requested to consider the question whether a University rifle club can be formed with advantage and whether any other action can be taken in substitution for such a club, or in addition to it, and, further that the members of the teaching staff of the University and the affiliated colleges pledge themselves to encourage volunteering among the members of the University by such means as may be approved by the committee to be formed

3 Though many special services have already been performed by officers of the University at the invitation of Ministers, it is desirable to make it more definitely understood that such services are available and therefore that the council be asked to approach the Federal and State Governments with the suggestion that the members of the staff of the University would be willing to offer their services, as far as compatible with the continuance of University work, to aid or supplement wherever possible the work of the scientific technical or professional branches of the Government departments during the war on any matters connected with Imperial defence in which their assistance may be useful

4 That this meeting is of opinion that public lectures under the auspices of the University should be given on the subject of the war its causes its importance to Australia and the political and other problems which will arise from it, and that the council be requested to give its support to this course

5 That the administration of the above resolutions be placed in the hands of a representative committee, with power to appoint special committees

Concerning the first resolution I am further instructed to state that, whilst every member of the staffs was informed of the meeting, which was in consequence largely attended, no attempt has been made to force the resolution upon those who were unable to attend

I am, Sir, yours faithfully,
RICHARD J A BERRY,
Honorary Secretary Executive University War Committee
Melbourne May 8th 1915

THE WAR AND THE MEDICAL PERSONNEL

To the Editor of THE LANCET

SIR,—Mr Tennant's statement in Parliament that at present no more surgeons are needed either at home or abroad gives us time to ascertain the best means of supplying the large number which will be required shortly In the *Times* "History of the War," No 41, p 74, the statement is made that after nine months of war there is still a shortage of 2000 surgeons This is about the number whose services, according to Mr Tennant, had been declined If there was a shortage, why were the offers of 1900 applicants rejected? If there was no shortage, why does the writer of history say there was? The question is, has the writer of history knowledge of facts and reliable figures of which Mr Tennant is ignorant? The answer is in the negative For the credit of the profession and of history let it be put on record that there was not a shortage of surgeons after nine months of war, but, even if there were, it was from no lack of offers

With your permission, I propose briefly to review the present and future situation A good deal of solicitude has been expressed, by those not conversant with general practice lest there should be a future shortage of doctors The truth is that through the passing of the Insurance Act, the same population will not support anything like the same number of medical men, and it would probably be a good thing for the profession and for the public, if no students, of either sex, entered at the schools of medicine for the next five years In addition most patients will be financially crippled by the war and doctors will be the first to suffer and the last to be paid In the present situation, it is certain every medical man would offer his services if our wounded wanted him, provided that he had some guarantee that his practice would be safeguarded in his absence The only thing clear from the various schemes advanced in the interest of the absentee is that there will be a good deal of friction or even litigation on his return

Now, Sir, the one authority capable of reducing this friction to a minimum is the General Medical Council The service of the Council would be *pro patria*, and if undertaken would induce quite enough medical men to offer themselves for the succour of our sick and wounded The expense might well be met by a Government grant

If the General Medical Council issued a short scheme equitable to the absentee and to the man who carried on the practice, and at the same time agreed to mediate in case of dispute, there would be an ample supply of military surgeons No other body has the requisite moral force behind it At present certain reserve battalions of Territorials seem to be short of surgeons, but this is work that can be done by civilian doctors in the districts where the troops are stationed

The pay of the Territorial surgeon is a strange anomaly In the past, in many cases, he has given money and much time, with his only reward a good natured derision He now gets less than two thirds the pay of any recently qualified young man who likes to join Kitchener's army Mr Harold Baker stated in the House that there is no hardship, since the bargain was made with open eyes The inference is that the penalty for patriotism is 9*s* a day History will do more justice to the Territorial, for it will say he saved Calais, perhaps England —I am, Sir, yours faithfully,

Formby, June 21st 1915 ARTHUR C WILSON

"MILITARY HONOURS"

To the Editor of THE LANCET

SIR,—With regard to the letter appearing under this title in your issue of June 12th may I suggest to Mr W H. Clayton Greene that perhaps time might have been saved if instead of giving his certificate to the registrar he had first of all written to the coroner stating the circumstances of the man's death, and at the same time intimating his willingness to give a certificate of death should the coroner approve By the same post the War Office could be notified of the death and requested to take the funeral in hand There is a point here, of course, which should not be overlooked, that some coroners prefer all communications to be made through the police or through their own officer Then, again, it was natural that the coroner should want to know of any relative for the purpose of identification. The War Office then having been apprised that a military funeral had to be provided could have forthwith ordered a coffin from the undertaker, and the latter would begin his work at once, probably the day after death It would surely also be the duty of the undertaker to arrange all the details of the funeral, including the services of the clergyman and the time and place, and in this connexion he would probably like to consult with the sister mentioned in Mr Clayton Greene's letter Meanwhile the coroner is considering whether he can allow Mr Clayton Greene to give a certificate of death in the

Correspondence.

"Audi alteram partem

THE POSITION OF THE ARMY CONSULTANTS

To the Editor of THE LANCET

SIR,—Questions in Parliament and correspondence in the papers have called attention to the position of the war consultants, whose appointment gave such universal satisfaction Criticism naturally followed the discovery that those of the Navy had £5000 a year while the Army consultants had only the pay of their rank No doubt there was a difficulty While it would be possible to call the President of the Royal College of Physicians "Colonel," to address the President of the Royal College of Surgeons as "Admiral" would be Gilbertian! Pay, not rank, appears to have been the solution This differential treatment seemed so unfair that it was hoped that the Army consultants would at once have been put on the same footing as their brethren in the Navy, but the tone of the questions in the House suggests a feeling that the pay of their rank is quite sufficient I sincerely hope that this narrow view will not commend itself to Parliament To the call of sacrifice in this crisis all willingly respond, and in the most distant parts of the Empire professional men have given up large remunerative practices to join the forces But it is not fair to entail heavy losses upon a group of men selected for their special abilities The earning life of a consultant is short—only 10 or 15 years of the "cakes and ale" stage In a long expensive apprenticeship he gives to the poor from three to six hours a day of gratuitous service, in which he gains an experience of which the community at large reaps the benefit We have no right to commandeer the brains of such men without a recompense proportionate to their talents and to their obligations Many of them have fixed charges, domestic and educational, from three to four times in excess of the ordinary pay of a lieutenent colonel in the army Some, of course, can afford the sacrifice, but others, though making it willingly, cannot do so without injustice to their families As absence of a year or two puts a consultant out of touch with his *clientèle*, these men have to face not only an immediate but a prospective loss of income

Having seen the practice of several of the naval consultants, I can testify that the country is getting worth for its money, not only in the character of the work, but in the stimulus given to the environment in which it is done

I am, Sir, yours faithfully,
WILLIAM OSLER.

Oxford, June 19th 1915

THE WAVE-LENGTH OF VERY HARD X RAYS

To the Editor of THE LANCET

SIR,—THE LANCET of April 17th contained an article by one of us on the penetrating power of X rays from the Coolidge tube, and the question was raised as to how nearly the X rays may approach in penetrating power that of the hard gamma rays of radium In this connexion it was stated that the very hard X rays emitted from the tube under a spark gap of 30 cm —i e, about 130,000 volts—had a wave length about three times that of the shortest gamma rays from radium that had been measured—viz, 0 71 × 10^{-9} cm It was, however, stated that the observations did not preclude the possibility of still more penetrating X rays being produced, but that if harder X rays were present they did not contribute more than about 1 part in 50 to the effects associated with the heavily screened radiation

At a lecture delivered at the Royal Institution on June 4th, Professor Sir E Rutherford stated that in conjunction with Professor Barnes and Mr H. Richardson he had for some time been engaged in an investigation upon the manner in which the wave length of the X rays generated in the Coolidge tube depended upon the impressed voltage He said that the hardest X rays which they had been able to produce were just about twice the wave length of the hardest gamma rays from radium, the surprising fact being that there was only a small increase in the penetrating power of the rays when the voltage was increased from 125,000 to 145,000, and that no appreciable change resulted with a further increase to 175,000 This result refers to the rays of maximum penetrating power, and was obtained by such heavy screening of the beam of the X rays that its intensity was reduced to about one thousandth part of its initial value

Professor Rutherford drew attention to the importance which these facts have upon certain physical theories, and expressed the opinion that about 2,000,000 volts would probably be required to produce X rays of the same wave length as the hardest gamma rays from radium Considering the authority with which this opinion is invested we may assume that this often discussed question is now settled and that a practical limit has been set to the hardness of X rays which are likely, at any rate in the near future, to be available for clinical purposes It is of immediate interest in this connexion to know the proportion that these rays of very short wave length bear to the whole radiation coming from the tube, from the fact that they were only revealed when very heavy screening was resorted to, it may be inferred that they form a very small percentage of the whole radiation With an improved yield in the amount of radiation from the Coolidge tube, it remains to be seen whether they will be sufficient in quantity for therapeutic purposes It may be stated that an approximately homogeneous beam of very hard X rays of wave length 2 1 × 10^{-9} cm is obtained from the Coolidge tube under a spark gap of 30 cm (points), the rays being screened by 7 mm of aluminium Such radiation has been in use in the electro therapeutic department of the Middlesex Hospital during the last two months

We are, Sir, yours faithfully,
C R C LYSTER,
SIDNEY RUSS

Middlesex Hospital W, June 15th 1915

THE UNIVERSITY OF MELBOURNE PRACTICAL LOYALTY

To the Editor of THE LANCET

SIR,—I am instructed by the Chancellor of the University of Melbourne to state, for the information of your numerous readers, that at a meeting of the teaching staffs of the University and affiliated colleges held on April 21st the following resolutions were passed *nemine contradicente* —

1 That during the continuance of the war the members of the staff of the University and affiliated colleges pledge

now earning a little and son has joined the army. Previous help 11 times, £[illegible]. Voted £9 in 12 instalments.—M.R.C.S. Eng., aged [illegible], who practised at [illegible] and as surgeon to a steamship company which took him abroad, where he contracted sunstroke with very bad effects and is now totally incapable of doing anything. Lives with an aunt who has barely sufficient for her own need. Previous help £10. Voted £10 in two instalments.—Widow, aged 52, of L.R.C.P. & S. Edin., who practised at New Quay. Health very indifferent and has recently had an accident which has incapacitated her from doing any work. Has two sons, sailors, but they are only able to help very slightly. Relieved 12 times, £125. Voted £12 in 12 instalments.—Widow, aged [illegible], of M.R.C.S. Eng. and L.S.A. Lond., who died in 1887 and practised at Heathfield, Surrey. Used to earn a bare living by taking in boarders, but is now suffering from rheumatoid arthritis and has had to give up her home and is now in a home for gentlewomen, but requires money for food. Previous help seven times, £75. Voted £12 in 12 instalments.—Widow, aged 57, of M.R.C.S. Eng., who practised at [illegible] and died in [illegible]. Applicant has indifferent health and daughter is suffering from spinal disease. Only income a little help from friends. Relieved four times, £[illegible]. Voted £5.—M.D. Aberd., aged 62, who practised at Walsall. Suffering from rheumatoid arthritis since [illegible]. Has four children, ages [illegible] to 15 years. Has three small pensions from other charities. Previous help seven times, £[illegible]. Voted £12 in 12 instalments.—Daughter, aged [illegible], of L.F.P.S. Glasg., who practised at Mauchline. Health very bad and unable to undertake any useful work. Only certain income a pension from another charity of £12 per annum. Relieved eight times, £[illegible]. Voted £12 in 12 instalments.—Widow, aged [illegible], of L.R.C.P. & S. Edin., who practised in Jamaica. At husband's death in [illegible] was left with three daughters and totally unprovided for. Health has been very bad and applicant has just been elected an out-patient pensioner of a home for incurables. Lives with married daughter who cannot afford to keep her. Relieved seven times, £[illegible]. Voted £12 in 12 instalments.—Widow, aged [illegible], of M.D. Glasg., who died in [illegible] and practised at Glasgow. Applicant has tried to make a living by taking in boarders, but latterly has not been successful, and sister who helped in the house is now bedridden with paralysis. Relieved once, £12. Voted £12 in 12 instalments.—Widow, aged [illegible], of L.S.A. Lond., who practised at Leicester and died in [illegible]. Applicant was left with four children, whose ages are now 11-21. The two elder daughters are clerks and pay over their wages to their mother, but this is not sufficient to keep the house. The applicant tries to supplement her income by doing a little needlework. Relieved three times, £[illegible]. Voted £12 in 12 instalments.—Daughter, aged [illegible], of M.R.C.S. Eng., who practised at Hackney. Owing to great age the applicant is unable to undertake any work. Three brothers who used to help her have recently died. Only income £33 per annum. Relieved three times, £[illegible]. Voted £15 in 12 instalments.—Widow, aged [illegible], of L.S.A. Lond., who practised at Ipswich. Since the death of her husband in 1901 has endeavoured to make a living by letting apartments, but not very successfully. Children only able to help very little. Relieved 13 times, £[illegible]. Voted £12 in 12 instalments.—Daughter, aged 51, of M.R.C.S. Eng., who practised at Box, Wilts. Applicant is a permanent invalid and unable to work. Lives with sister who earns a little and has a grant from the Fund. Relieved three times, £36. Voted £12 in 12 instalments.—Daughter, aged 47, of M.R.C.S. Eng., who practised in India. Has endeavoured to earn a living by taking in boarders but cannot make ends meet. Has just removed into the country and pays less rent, and hopes in the future to manage without troubling the Fund. Relieved four times, £[illegible]. Voted £12 in 12 instalments.—Widow, aged [illegible], of L.R.C.P. & S. Edin., who practised in South Wales and died in 1905. Left unprovided for at husband's death with two daughters, the eldest of whom is struggling as a teacher of domestic economy and hopes to earn a little soon. Applicant earns a little as a maternity nurse. Relieved nine times, £[illegible]. Voted £5.—Widow, aged [illegible], of M.R.C.S. Eng., who practised at Bow, E., and died in [illegible]. Applicant has one child and being a nurse by profession endeavours to make a living by taking in medical cases in her house in the suburbs, but finds it difficult to make ends meet. Wants assistance towards the education of her son. The case was referred to the Guild, and a certain sum allocated subject to the report being satisfactory.—Widow, aged 60, of M.D. Glasg., who practised at Birkenhead and other places. Left unprovided for at husband's death. Three daughters, ages [illegible] years. The two elder earning a little but the youngest is a confirmed invalid. Applicant suffering from neuritis. Relieved six times, £[illegible]. Voted £5 in 12 instalments.—Daughters, ages [illegible], of M.D. Aberd., who practised in Yorkshire. Both are unable to work owing to illness. Only income £20 each per annum. Relieved twice, £[illegible]. Voted an immediate grant of £1 and referred to the Guild for [illegible].—Daughter, aged 60, of M.D. Edin., who practised in London. Health very indifferent and only income about £[illegible] per annum from needlework. Lives with a sister who is an invalid. Relieved seven times, £[illegible]. Voted £12 in 12 instalments.—Widow, aged 59, of L.R.C.P. & S. Edin., who practised at [illegible], and died in 1913. Lives in own house and takes in boarders when she can get them, but cannot get sufficient to make it pay. Relieved twice, £[illegible]. Voted £12 in 12 instalments.—Daughter, aged [illegible], of M.R.C.S. Eng., who practised in Lancashire. In consequence of ill-health and age unable to work. Only income £30 per annum from another charity and has just been elected to an unfurnished home. Wants help for furnishing. The Liverpool Branch of the Guild are assisting. Relieved four times, £80. Voted £10 at the direction of the Guild at Liverpool.

The claims of the Fund are steadily increasing largely in consequence of the war and though the ordinary subscriptions remain at much the same level, there is a constantly increasing adverse balance. At the last meeting the committee was faced with an overdrawn account of £92, which was increased by the £294 then spent in grants to a total deficit of £386. To meet this the committee has had to draw upon its limited reserves and unless support be rapidly forthcoming its work will have to be curtailed. Subscriptions may be sent to the honorary treasurer Dr. Samuel West, 11, Chandos-street, Cavendish square London, W.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster on June 17th with Sir Francis H. Champneys in the chair. A letter was considered from the town clerk of Southend-on-Sea asking the Board for suggestions as to a method by which the disability experienced by lying-in women in obtaining medical aid in response to requests made by certified midwives under the rules of the Board may be dealt with. The Board directed that the town clerk be informed that the Board has ever since its establishment urged the Privy Council to promote legislation for dealing with the question of the payment of medical practitioners called in at the instance of midwives in accordance with the rules of the Central Midwives Board, as the Board's opinion has been asked they may say that they think that if the guardians could see their way to pay the prescribed fees to *the practitioner duly called in in the first instance* and to recover the fees from the patient where the patient is able to pay it would greatly conduce to the welfare of the poor mothers of the community. A letter was considered from the medical officer of health of Chester asking the Board's opinion as to the propriety of a midwife recommending hand feeding. The Board directed that the medical officer be informed that the question as put is too vague to admit of a definite reply. If such a reply is desired particulars will have to be furnished in a definite case or in definite cases.

The following letter was read from the honorary secretary of the Midwives Institute as to the decision of the High Court in the case of a Midwife *v.* Central Midwives Board:—"The Midwives Institute has noted with great regret the reversal by the High Court of the decision of the Central Midwives Board in the case of a midwife who was struck off the roll. We understand that the charge was one of immorality, and that the reversal of the Board's decision was made in consequence of some technical omission. The Midwives Institute feels that the result of this case is liable to very serious misconstruction by the general public. I have therefore been requested to forward to your Board the following resolution: 'The Midwives Institute respectfully ask the Central Midwives Board to make a pronouncement, which can be reported in the press, that in spite of the High Court's reversal of the Central Midwives Board's decision in a recent case the Board will, as it has heretofore done, continue to support the *moral* as well as the *professional* status of practising midwives.'" The Board decided that the honorary secretary of the Midwives Institute be informed that the decision of the High Court in the case of a Midwife *v.* Central Midwives Board, although reversing the decision of the Central Midwives Board to remove the name of the midwife from the roll, confirms the Board in their position as the authority which determined what is and what is not misconduct in a midwife, and decided that misconduct is not to be limited to misconduct in a professional sense, the Board has held that conduct which, before enrolment would render it impossible to certify that a candidate was "of good moral character" renders her after enrolment, liable to be removed from the roll for misconduct."

DEATH OF A SHEFFIELD MEDICAL MAN.—Mr. Herbert Leonard Hudson, L.R.C.P. Irel., died at his residence in Sheffield on June 11th in his fifty-eighth year. He was born in Calcutta and at an early age came to England with his parents, who settled in Hull. About the year 1887 he began medical practice in Sheffield, where he became popular with all classes. He leaves a widow, a son who is studying medicine at Sheffield University, and a married daughter.

WESTERN COUNTIES INSTITUTION FOR MENTAL DEFECTIVES.—At the annual meeting of the subscribers to the Western Counties Institution, held recently at Starcross, under the presidency of the Earl of Devon, it was stated that during the 50 years the institution had been in existence 1451 children had been admitted. The first annual report showed that 12 children were admitted at an expenditure of £955. Last year 347 cases were treated, the daily average number being 303, and the annual expenditure was £11,077.

THE HERITAGE COLONY.—H.R.H. Princess Louise, Duchess of Argyll, will inspect the military wards named after her at the Heritage Colony for Boys at Chailey on Thursday next, July 1st.

usual way He decides yes, and straight away says so Mr Clayton Greene gives his certificate, all for nothing, on the statutory form the sister, or the nurse who witnessed the death, or the undertaker conveys the same to the registrar of the district or subdistrict Finally, the registrar makes a copy in his register and also makes a duplicate copy for the undertaker, which is handed to the clergyman at the graveside —I am, Sir, yours faithfully,

Weston super-Mare, June 17th, 1915 R A EARLE

"GROWING PAINS" AND RHEUMATISM?

To the Editor of THE LANCET

SIR,—I think Dr M H Williams, in the interesting paper on Rheumatism in Children appearing in your issue of June 19th, rather overstates the case when she advances the opinion that aching of the legs in children is almost always due to rheumatism —prefacing this remark by stating that by rheumatism she means infection by a specific organism, and following it up by saying that the riddle of treatment is unanswerable There is no doubt but that her words contain much truth Dr Williams, however, makes no mention of what in my opinion is (in this locality at any rate) the commonest cause of "growing pains," and that is the absorption of toxins through adenoid vegetations It is quite extraordinarily common in my experience to find children with a tendency to fidgets, a constantly raised temperature up to 99 5–100° F, and a muffling of the first cardiac sound in which the whole state can be completely altered by removal of adenoids I particularly wish to state I do not mean obvious adenoid cases with obstructive signs Careful examination will almost certainly show a few soft and slightly enlarged cervical glands, but with this exception the signs are general and not local Treatment by salicylic acid compounds causes no more than a temporary lowering of temperature, and in the cases I have in mind the tuberculin skin tests are negative—both human and bovine

I have no means of knowing whether the toxin absorbed is that of the specific organism of Poynton and Paine, but if it is, the riddle of treatment can be very readily solved, which is certainly not the experience of most of us with that organism or one closely allied to it

I am, Sir, yours faithfully,

Chiswick W, June 21st 1915 H O BUTLER

THE POSITION OF SURGEONS TO TRANSPORTS

To the Editor of THE LANCET

SIR,—Various companies are advertising for ships' surgeons and offering the sum of £15 to £20 per month as salary to those who act in this capacity One ship was chartered for transport work and the company it belonged to could not procure a surgeon, although they were prepared to offer £500 per annum Eventually the company arranged with a military medical officer to act as ship's surgeon at the rate of £1 per day Personally I have "signed on" at the rate of £15 per month, and so, as I am in distant parts, do not see much chance of a remedy Further, there is, I believe, a war bonus paid by the Admiralty to every member of the crew for war risks, but so far I have been unable to ascertain from this company, a well known line, whether any proportion is to be awarded to the surgeon

Besides the important matter of pay, intending surgeons in the Mercantile Marine and passenger ships ought to investigate accommodation provided for them I berth next to the cook, the barman, and the head waiter in the "slums" of the ship There is plenty of other work for medical men to do now, and the present is a good opportunity of securing better conditions all round for the doctor in the Mercantile Marine

I am, Sir, yours faithfully,

June 23rd, 1915 "M"

PROLONGED ANÆSTHESIA

To the Editor of THE LANCET

SIR,—Which is the longest period over which an anæsthetic has been known to be given for one operation? I had just recently a case of a man, aged 82, operated upon for malignant growth of the pelvic colon, which took exactly four hours, and therefore the anæsthetic lasted just a few minutes over this time The patient stood the anæsthetic very well, did not vomit after it, and six hours after the operation was finished he was able to converse with his friends

The anæsthetic I used throughout the operation was ether, with the exception of a few minutes at the beginning, when chloroform was used No morphia or atropine was used beforehand, and it is extraordinary that he has not been troubled by any catarrh of the lungs or excess of secretion

I am, Sir, yours faithfully,

June 19th, 1915 M B, B S

Medical News.

VICTORIA UNIVERSITY OF MANCHESTER —The following candidates have been approved for the degree of M D —

J S B Stopford (awarded gold medal) and G C Mort

ROYAL MEDICAL BENEVOLENT FUND —At the last meeting of the committee 28 cases received grants amounting to £294, and two applicants were elected to vacant annuities of £20 each. The following is a summary of the cases relieved —

Daughter aged 47 of M.R C.S Eng who practised at Clifton, Bristol Applicant completely incapacitated owing to complications following operation for hernia. At present in a convalescent home Lost use of both legs Prior to illness earned a living by acting as children's nurse Voted £10 in two instalments —Daughter aged 63 of L R C S Glasg who practised at Liverpool For a number of years acted as matron to a private mental home but has not been able to save A younger matron is now required and applicant must try to obtain other work and finds it difficult at her age Voted £12 in 12 instalments and referred to the Guild —Widow aged 34 of L.S.A. Lond who died in January of this year and had acted as locum tenent in various places Left the applicant totally unprovided for with three children ages 12 to 17 years. Hopes to obtain some employment. Voted £10 in two instalments —Widow aged 73 of L S A. Lond who practised at Bermondsey and died in 1887 Until the outbreak of war was able to make a living by taking in boarders at her house on the South Coast. All the August and autumn bookings last year were cancelled and has had to close up the house temporarily Lives in own house which is heavily mortgaged Voted £15 —M R C S Eng aged 58 who had practised in the Midlands and now suffering from total paralysis of the right side and unable to speak or write Only income a pension of £30 per annum and a little from the sale of his practice His wife has to devote all her attention to him and the three children are unable to help financially Voted £2, and referred to the Guild for report —Widow, aged 70 of M.D St. And. who practised in Pall Mall S W but was incapacitated for some years before death in May of this year and was a pensioner of the Fund and received assistance from another charity Applicant left entirely unprovided for Voted £2, and referred to the Guild for report —Daughter aged 66 of M R C S Eng who practised in London Has earned a living as a teacher of languages, but cannot obtain pupils at present Lives with two sisters who try to earn a living by keeping a boarding house but not successfully One of the sisters also receiving a grant from the Fund Voted £12 in 12 instalments and referred to the Guild for report —Widow aged 54 of M R C S Eng who died in 1897 and practised at Stockton-on Tees Left totally unprovided for with two young children to educate and keep Has earned a little by needlework and has acted as caretaker Eyesight now very bad Daughter

Association three schedules or forms to be distributed to medical men, so that the Emergency Committee may be able to ascertain how far the numbers of medical men in any given area have already been reduced, and may thus be in a position to estimate what further depletion would be involved by additional offers of whole time service The Emergency Committee does not propose to deal with offers of part time service at all

The first form, Schedule A, asks for particulars concerning all medical practitioners in the given area who had been accepted for service before June 15th, 1915, and takes cognizance of those who are already engaged in part time service

Schedule B, dealing only with whole time appointments, is addressed to practitioners who before June 15th had applied for a whole time service On this form the practitioner is asked to state whether he is over or under 40 years of age, whether his application was sent in before or after May 15th, and what was his medical work at the time of application—i.e, general practitioner, surgeon or other specialist, medical officer of health, school medical officer, or hospital resident

Schedule C is addressed to practitioners who on June 15th had not applied for service, whole time service alone being considered, but who are ready to do so if suitable arrangements can be made The same information as to age and previous medical experience is required by the form

We hope that the efforts of the Scottish Medical Service Emergency Committee to coördinate and organise medical service for military purposes will prove successful, for they have certainly been, and continue to be, of a very practical sort, and we are sure that the committee will be able to rely on the help of the British Medical Association, whose divisions make convenient centres for local activity The convener lays great stress upon the rapid return to him at the Royal College of Physicians of Edinburgh of the filled up schedules, substantially accurate information being required at once

The Health of Prisoners in Ruhleben

The following letter, dated June 14th, has been received this week from a member of our staff who is interned at Ruhleben —

> A fellow prisoner received to-day in a letter a cutting from an English newspaper, undated, reporting an interview with some of the men released from here, on having reached the age limit, on June 6th The interview is said to have taken place during a stay in Rotterdam on the home journey After various remarks about the prisoners' camps and the food the released man is credited with the statement that "50 cases of small pox have occurred in the camps" As the fact of the internment is of itself a sufficient cause of anxiety to relatives at home, I think it is wrong to spread an unfounded statement of this kind Let those who are lucky enough to be released stick to the truth, it is absolutely superfluous to embellish it by drawing on the imagination I can assure you that not a single case of small pox has occurred in the camps, the suggestion has not even circulated as a camp rumour During the past weeks some cases of German measles have occurred, the sufferers were at once isolated and underwent treatment in the lazaretto, at the same time we were supplied with a solution of lysoform with which to disinfect our compartments clothing, and bedding During the past fortnight all the compartments in the stables which form our prison have been whitewashed, while a large number of men are being cleared out of the lofts and transferred to new wooden barracks On the whole, in my opinion, the general health of the camp is very good, and we keep up our spirits by forms of athletic sport and varied entertainments I am glad to say that I am in the best of health, and am busy the greater part of the day on behalf of my fellow prisoners

We saw the communication to which our correspondent alludes, and can well believe that it added to the anxiety of those who had relatives interned as prisoners at Ruhleben It happens to be very unlikely that an outbreak should have occurred and remain unknown to our correspondent

Royal Army Medical Corps and Combatant Medical Men

Medical men at present serving as combatant officers or in the ranks may now be permitted to be transferred to the Royal Army Medical Corps on application made through their commanding officers

Mr Charters Symonds, consulting surgeon to Guy s Hospital, has been appointed a consulting surgeon to H M 's Forces in Malta, with the temporary rank of Colonel, A M S

The Red Cross Society and the Order of St John —A meeting was held at the Mansion House on June 16th in support of the Lord Mayor's special appeal on behalf of the funds of the Red Cross Society and the Order of St John, the Lord Mayor being in the chair The Lord Mayor spoke warmly of the work done during the past ten months, and highly commended the devoted services of the surgeons, nurses, orderlies, and voluntary aid detachments The immediate problem was how to collect the large amounts still necessary for the carrying on of the work During the last few weeks Sir Edward Clarke, Sir Benjamin Franklin, and Sir Frederick Treves had been canvassing City houses for subscriptions with excellent results The Marquis of Lansdowne, who has succeeded the late Lord Rothschild (a name, as he pointed out not likely to be forgotten in the City of London) as chairman of the council of the Red Cross Society, in proposing a resolution expressing sympathy with, and pledging support for, the Lord Mayor's appeal, approved the wisdom of the course adopted by the Red Cross Society and the Order of St John in setting up a joint committee, which now meets regularly and conducts with perfect harmony the joint work of the two societies, thus effecting a great economy in both finances and effort They found themselves called on to make a far greater effort than any that could have been expected, one which must be commensurate with the dimensions of a war waged with intensity, by unexampled numbers, and by methods abhorrent to all ideas of civilisation and humanity Describing the society's work, Lord Lansdowne pointed out that they had to take care, not only of soldiers, but of sailors, and to come to the help of other countries stricken not only with injuries but with disease Stores had been sent to East Africa, the Cameroons, Rhodesia, and China—in fact, all over the world They had established great base hospitals at home and abroad, including the hospital for Indian soldiers in the New Forest, also some 900 auxiliary home hospitals and convalescent homes in private residences He paid a strong tribute to the surgeons and nurses, many of whom were helping at great personal sacrifice, and emphasised the good relations maintained throughout with the Royal Army Medical Corps, largely due to the recognition of the fact that the society's operations must be kept subsidiary to those of the army, to which they were proud to serve as auxiliaries They were endeavouring also to mitigate the lot of those unhappy ones who had been deprived of sight, and to aid in tracing the missing and wounded He acknowledged the substantial financial aid which, in addition to the splendid services of their sons, had been rendered by the great dominions, Canada in Flanders, and Australia and New Zealand in Gallipoli Australia alone had sent £100 000, besides shipments in kind. He specially mentioned the munificent gift of Mr W W Astor of £20,000—the second of that amount Mr Arthur Stanley, M P, in seconding the motion, cited two instances to show how admirably the work was done One evening an order was received at 6 P M. for 20,000 articles, all of which

THE VICTORIA CROSS

The Victoria Cross has been awarded to Captain F A C Scrimger, Canadian Army Medical Service, Medical Officer, 14th Battalion, Royal Montreal Regiment, for directing, on April 25th, near Ypres, under heavy fire, the removal of the wounded and himself carrying a severely wounded officer out of a stable to a place of greater safety, and remaining with him under fire till help could be obtained During the very heavy fighting between April 22nd and 25th Captain Scrimger displayed continuously day and night the greatest devotion to duty among the wounded at the front

COMPENSATIONS AND PENSIONS FOR MILITARY MEDICAL OFFICERS

We stated last week, in response to many inquiries, that the compensation for injury and pensions for widows and children and other compassionate allowances during the present war were the same for Special Reserve, Territorial, and temporarily commissioned officers as for permanent officers of the Royal Army Medical Corps We now put them before our readers in tabular form —

Pensions and Gratuities to Wounded Officers (under the rank of Colonel) of the Regular Army, the Special Reserve of Officers, and the Territorial Force, and to Officers holding only Temporary Commissions for the Purposes of the Present War

—	Wounds and injuries received in action or on flying duty		Wounds and injuries received on duty otherwise than in action or on flying duty	
Rank of officer (i e permanent rank unless the officer holds only temporary rank)	1 Gratuity for very severe" injury to be followed by pension (col 2) if effects are permanent	2 Pension for 'very severe and permanent injury following gratuity (col 1)	3 Gratuity for 'severe and and permanent injury (no pension)	4 Pension for very serious and permanent injury (no gratuity)
Lieutenant-Colonel	* From £112 10s to £450	† From £150 to £300 a year	* From £112 10s to £450	† From £120 to £250 a year
Major	From £75 to £300	From £100 to £200 a year	From £75 to £300	From £80 to £150 a year
Captain	From £52 10s to £250	From £50 to £100 a year	From £62 10s to £250	From £40 to £75 a year
Lieutenant	From £35 to £140	From £35 to £70 a year	From £35 to £140	From £30 to £50 a year
Second Lieutenant	From £25 to £100	From £35 to £70 a year	From £25 to £100	From £30 to £50 a year

* The amount of gratuity depends upon the period for which the officer is disabled by his wound or injury for the performance of military duty

† The rate of pension is governed by the degree of severity of the wound or injury

Artificial appliances are supplied at the public expense to officers who have lost a limb, an eye &c, through wounds or injuries received *in action or on flying duty*

Pensions on Cessation of Service to Officers (as above) Disabled by Wounds, Injuries, or Disease Received or Contracted on War Service

Officers medically certified to be disabled either wholly or partially for earning a livelihood on the cessation of their service through wounds, injuries, or disease received or contracted on war service may be granted pensions varying from 3s a day to £200 a year according to circumstances Such pension is additional to any wound pension or gratuity for which an officer may be eligible (Officers of the Regular Army may be eligible for higher rates under the provisions of the Pay Warrant)

Applications for wound pensions &c, should be addressed to the Secretary, War Office, Whitehall, S W

Pensions to the Families of Officers (under the Rank of Colonel) of the Regular Army, the Special Reserve of Officers and the Territorial Force, and to the Families of Officers holding only Temporary Commissions for the Purposes of the Present War

Widows and children.	*Class A* Families of officers killed in action or dying of wounds received in action within seven years after having been wounded				*Class B* Families of officers dying from disease caused by fatigue privation or exposure incident to active operations in the field or from wounds or injuries sustained on duty (not in action) within seven years after removal from duty for the disease or injury	
Rank of officer (i e, permanent rank unless the officer holds *only* temporary rank)	Pension to widow (during widowhood)	Compassionate allowance for each child (sons till 18 unmarried daughters till 21)	Gratuity in addition to pension &c		Pension to widow (during widowhood)	Compassionate allowance for each child (sons till 18 unmarried daughters till 21) (No gratuity is payable in *these cases*)
	Yearly	Yearly	Widow	Each child	Yearly	Yearly
	£	£	£	£ s d	£	£ s d
Lieut Col	180	24	450	150 0 0	153	20 0 0
Major	140	21	300	100 0 0	105	17 10 0
Captain	100	18	250	83 6 8	75	15 0 0
Lieut	80	15	140	46 13 4	60	12 10 0
2nd Lieut	80	15	100	33 6 8	60	12 10 0

Twice the above rates of compassionate allowance may be granted to motherless children If an officer (Class A) leaves a *daughter only* (unmarried and under 21) she may be granted, in lieu of the above rates a special allowance varying from £40 to £90 a year according to rank These awards are in addition to the gratuity

If an officer (Class A) leaves neither a widow nor legitimate child, his mother, if a widow without other pension or adequate provision, may be granted a special pension varying from £40 to £90 a year according to rank provided that she had been mainly dependent on the officer

If an officer (Class A) leaves neither widow, legitimate child, parent, nor brother a similar pension may be granted to his sister, or sisters jointly, if unmarried, subject to the above proviso

All applications for the grant of pensions, as above, should be addressed to the Secretary, War Office, Whitehall, S W

THE SCOTTISH MEDICAL SERVICE EMERGENCY COMMITTEE

This strongly constituted committee comprises The President of the Royal College of Physicians of Edinburgh, the President of the Royal College of Surgeons of Edinburgh, the President of the Royal Faculty of Physicians and Surgeons of Glasgow, the Dean of the Faculty of Medicine, University of Edinburgh, the Dean of the Faculty of Medicine, University of Glasgow, the Dean of the Faculty of Medicine, University of Aberdeen, the Dean of the Faculty of Medicine, University of St Andrews, Dr John Adams (Glasgow) Dr G C Anderson (Methil), Dr J R Currie (Edinburgh), Dr John Gordon (Aberdeen), Dr J R Hamilton (Hawick), Dr John C M'Vail (Edinburgh), Dr John Playfair (Edinburgh) and Dr John Stevens (Edinburgh) Dr Norman Walker, the treasurer of the Royal College of Physicians of Edinburgh, is acting as convener, and Mr T H Graham as secretary

Dr Norman Walker has issued through the secretaries of the divisions of the British Medical

HOUSE OF COMMONS

THURSDAY, JUNE 17TH

Exchange of British and German Medical Officers

Mr PARTINGTON asked the Under Secretary for Foreign Affairs whether an agreement had been reached regarding the exchange of British and German military medical officers.—Lord ROBERT CECIL wrote in reply The answer is in the affirmative, and it is hoped that the agreement will shortly be made effective Some delay has been caused owing to the necessity for the military authorities to determine exactly the members of the British and German military medical personnel who are entitled to be exchanged

Navy Medical Appointments

Commander BELLAIRS asked the Secretary to the Admiralty whether the Board could see their way to increasing the remuneration given to the members of the medical profession who were appointed as naval surgeon and agent in different districts, having regard to the alterations of conditions which the war had caused since the terms were framed.—Mr MACNAMARA answered No reason is seen for increasing the emoluments of these posts which can always be satisfactorily filled upon the present terms, which, with a few exceptions, being based on fees for services rendered, are elastic enough to ensure that additional services during the war are recognised by additional remuneration

Antityphoid Inoculation

Replying to Mr CHANCELLOR in regard to the question of antityphoid inoculation in the army, Mr TENNANT (Under Secretary for War) said that the circular of the Research Defence Society had War Office sanction and authority and no reason was seen for withdrawing such authority

Royal Army Medical Corps (Territorial Force)

Mr EVELYN CECIL asked the Under Secretary for War whether officers or men of the Royal Army Medical Corps, Territorial Force, who had signed A F E 624 A were liable to be transferred to combatant units, and, if so, whether it was the intention of the War Office to transfer officers and men originally enlisted in the Royal Army Medical Corps to the artillery or infantry without their further express consent —Mr TENNANT answered Yes sir, but the signing of the form is not compulsory, and if it is signed the consent of the officer or man will have been obtained. That is the purpose of the form

Respirators for Service in the Dardanelles Operations

Mr G GREENWOOD asked the Under Secretary for War whether all possible steps had been taken to provide the troops in the Gallipoli Peninsula with respirators and all other appliances to enable them successfully to resist attempts to poison them by means of noxious gases —Mr TENNANT replied Yes, sir

Infantile Mortality and Legislation

Sir GEORGE TOULMIN asked the Prime Minister when the Bill amending the Notification of Births Act foreshadowed by the President of the Local Government Board, would be introduced —Mr ASQUITH replied I regret that I can as yet give no date when this Bill will be proceeded with

Mr ANDERSON asked the President of the Local Government Board whether the increase in the rate in infantile mortality was partly or largely due to the shortage of doctors and nurses the increased industrial employment of working women, and the absence of suitable agencies and centres for child welfare, whether he would arrange in addition to the promised legislation to utilise the services of some proportion of the 80,000 women who had enrolled themselves for national work, with a view to establishing centres for the care of infants and so mitigating an evil which the country could not afford at any time, least of all at present —Mr LONG answered I am advised that the recent increase in mortality amongst young children has been mainly due to measles and its sequelæ I am hoping to introduce a Bill very shortly to facilitate the establishment of centres for the care of mothers and infants

Mr KING asked the President of the Local Government Board how many children under the age of 1 year, of or over the age of 1 year and under 2 years of or over the age of 2 years and under the age of 3 years respectively died in England and Wales during the six months immediately preceding April 1st 1915 and what were the numbers of such children so dying during the corresponding periods 1913–14, 1912–13, and 1911–12.—Mr LONG wrote in reply The number of deaths of children under the age of 1 year in England and Wales during the six months immediately preceding April 1st 1915 was 50,209 During the corresponding periods of 1913–14 1912–13, and 1911–12 the numbers were 49 029, 47,357 and 48,944 respectively The number of deaths of children between 1 and 2 and between 2 and 3 years old cannot yet be given for the six months immediately preceding April 1st, 1915.

Mr KING asked the Secretary for Scotland how many children under the age of 1 year, of or over the age of 1 year and under the age of 2 years, of or over the age of 2 years and under the age of 3 years, respectively, died in Scotland during the six months immediately preceding April 1st 1915, and what were the numbers of such children so dying during the corresponding periods 1913–14, 1912–13, and 1911–12 —Mr MCKINNON WOOD (in a written answer) replied The numbers of deaths of children aged 1 and 2 years are not available in portions of years The following are the numbers of deaths of children of less than one year old in periods named —

Oct 1st, 1911, to March 31st, 1912			..	7234
,,	1912	,,	1913	7509
,,	1913,	,,	1914	7228
,,	1914,	,,	1915	8276

Mr KING asked the Chief Secretary to the Lord Lieutenant of Ireland how many children under the age of 1 year, of or over the age of 1 year and under the age of 2 years of or over the age of 2 years and under the age of 3 years, respectively, died in Ireland during the six months immediately preceding April 1st, 1915, and what were the numbers of such children so dying during the corresponding periods 1913–14, 1912–13, and 1911–12 —Mr BIRRELL wrote in reply The following table sets out for Ireland the numbers of deaths of infants under 1 year of age, at 1 and under 2 and at 2 and under 3 registered (1) during the six months ended March 31st 1912 1913 and 1914, and (2) during the quarter ended Dec 31st, 1914 The unrevised figures of deaths of infants under 1 year of age registered during the quarter ended March 31st, 1915, are also shown, but the corresponding figures for infants between 1 and 3 years are not available

Period.	Number of deaths registered at ages of—		
	Under 1 year	1 and under 2 years.	2 and under 3 years.
Six months ended March 31st, 1912	4 996	1,276	606
" " " 1913	4 835	1,301	651
" " " 1914	4 612	1,214	600
Three months ended Dec. 31st 1914	2,046	457	289
" " March 31st, 1915	2,829	—	—

Belgians in Lunatic Asylums

Mr LEIF JONES asked the President of the Local Government Board whether there was any public fund available to pay for the maintenance of Belgian refugees who had had to be sent to county lunatic asylums in this country so that the local rates might not be burdened with this national charge —Mr LONG answered The Local Government Board has the authority of the Treasury to pay for the treatment of refugees in lunatic asylums, and in a certain number of cases have already agreed to make payments of this character

Mr LEIF JONES Will payments which have already been made by the local authority be refunded by the Local Government Board?—Mr Long Certainly

Treatment of Mental Strain in Soldiers

In the course of the debate in Committee of Supply on the Home Office vote Mr RENDALL called attention to the institutions in which soldiers suffering from mental strain were being treated He said that it was a calamity that men returning from the front with their mental balance temporarily deranged should be placed under the control of the War Office The War Office was getting hold of various asylums which he should have thought were under the control of the Home Office The men were put into these so-called hospitals which were really asylums, and under the control of medical men who had been attached to these asylums The soldiers in these cases ought to be under the treatment and control of first-rate general practitioners and not under the control of the Lunacy Acts Some new proposal ought to be formulated by the Home Office for dealing with these soldiers

Mr BRACE (Under Secretary for the Home Department) said A question which has been raised in this debate is that of the men who have lost their reason in consequence of the hardships of this war and the Government were criticised because the War Office has been selected as the authority for looking after these afflicted people It is thought both by the Home Office and by the War Office that that is the better arrangement If the soldiers who lost their reason in consequence of the hardships of the war were put in the ordinary asylums of the country it would, in the judgment of those who have a right to speak on this matter be one of those experiences for which the soldiers after their recovery would not thank the nation The army authorities have were purchased, packed, and despatched and on their way by 10 A M next morning One Sunday morning the War Office informed them that a hospital was urgently required in Calais which for valid reasons the R A M C were not in a position to supply At 5 30 that evening a special train left Victoria carrying with it the full personnel, 120 beds, a large amount of stores, and motors and ambulances Sir Robert Hudson showed how unnecessary expense in working was avoided, and Sir Arthur Lawley how comforts were provided near the firing line which the Royal Army Medical Corps could not be expected to provide, and how thousands of lives had been saved by the facilities for rapid transport afforded by their motors Mr Herbert Gibbs Sir Dyce Duckworth, and Sir Edward Clarke also spoke The resolution was carried Donations varying from £20 000 to £50, and amounting to £87,455, were announced

ROYAL NAVAL HOSPITAL, HASLAR—A new wing is being built to the Royal Naval Hospital at Haslar out of the sum of £50,000 raised at the beginning of the war by the women of Canada and placed at the disposal of the Imperial Government The operations in the Dardanelles have taxed the hospital's capacity to the utmost, so that the 250 additional beds which the new wing will accommodate will be of the greatest immediate utility The new building of three floors will be isolated from the main one and will be entirely self contained It is expected to be completed by the end of the year

WOUNDED ALLIES RELIEF COMMITTEE—The committee, in conjunction with the British Registrar General, has compiled an official register of Belgian soldiers who have been in hospital in England and of those interned in Holland and imprisoned in Germany By this means many thousands of soldiers have been brought in touch with their families, and the register has solved some difficult cases of identity The committee is eager to assist private persons, hospitals, or other institutions in need of information about Belgian soldiers or their families All applications should be addressed to the committee's offices at Sardinia House, Kingsway W C

The committee's typhus hospital units, which left England on June 3rd for Montenegro, are to be stationed at Podgoritza and Nikshich Each unit consists of 100 beds, with full equipment for both surgical and fever work

VACANCIES FOR MEDICAL OFFICERS—We are asked to state that there are vacancies for five medical officers prepared to serve abroad in the 2nd and 3rd Line Welsh Border Mounted Brigade Field Ambulance Pay and allowances as in the Regular Army, together with outfit and camp kit grants Full particulars can be obtained on application to the Officer Commanding, 2nd Line Welsh Border Mounted Brigade F A., Lambton Park Camp, co Durham

A NEW HOSPITAL FOR WOUNDED OFFICERS—On June 18th General Sir O'Moore Creagh opened the new Prince of Wales's Hospital for Wounded Officers at Staines The hospital is the gift of the Maharaja Jam Sahib of Nawanagar (whom most people will more readily recognise under the well known name of "Ranji," the Indian cricketer) It is established in his residence at Staines, "Jamnagar," and the cost of maintenance is undertaken by himself in conjunction with the Maharaja of Kashmir and the Maharaja of Patiala

FLEET-SURGEON LOUIS GREIG—Mr Kenneth Campbell F R C S, writes to us to call attention to the fact that Fleet-Surgeon Louis Greig, the famous Scottish International half back, who took part in the Antwerp expedition being an athlete could without difficulty have escaped into Holland with the others, but being also a surgeon his sense of duty impelled him to remain with the wounded He is now a prisoner of war at Halle and Mr Campbell writes in the hope that as Fleet-Surgeon Greig is so well known some person of influence may exert himself on his behalf It will be noted in our Parliamentary columns that in answer to a question in the House of Commons on June 17th, Lord Robert Cecil stated that an agreement had been come to by the respective countries permitting the exchange of German and British military medical officers, and that it would become operative as soon as the status of the medical personnel could be definitely settled

PRESENTATION OF A MOTOR AMBULANCE—On June 18th a motor ambulance, fitted up with improvements suggested by Colonel H J Mackay, assistant director of medical services, Wessex division, was presented by the medical men of the administrative county of Devon to the Devonshire Regiment There were over 80 subscribers, and the ambulance, after being tested by the Royal Army Medical Corps at Woodbury Camp, Devon, will be available for service "at the front"

CORNISH MEDICAL MEN AND MILITARY SERVICE—At a meeting held recently at St Austell, Cornwall to consider the appeal for an increased number of medical men for the Royal Army Medical Corps, it was resolved to call upon all medical men who were of eligible age to offer their services, and a committee was appointed to organise a scheme for carrying on the practices of those who volunteer for service Some discussion took place in reference to the granting of medical prescription books to the dependents of soldiers and sailors who are serving, and it was decided to urge the local relief committee to exercise more care in their distribution, so as to prevent abuse of gratuitous medical services

FREE PHYSICAL TRAINING FOR THE REJECTED—Persons of military age who, being desirous of enlisting, have presented themselves and been rejected on the ground of deficient physical development, can now obtain, if they so desire, a month's course of physical training gratis at the Central Y M C A. in the Tottenham Court-road, where owing to increased facilities 1000 applicants a month can be dealt with

A FUND is being raised by a committee, of which the honorary treasurer is Sir Laurence Gomme to establish and maintain a fleet of motor ambulances in Italy

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Medicines and Immature Spirit

IN the course of the consideration of the Finance Bill in committee of the House of Commons on June 16th Mr GLYN-JONES raised the question of the authority that was to be entrusted with the function of determining in what cases the additional duty on immature spirit was to be remitted because it was used in medicinal preparations He suggested that this function should be discharged by an advisory body "representing medicine, pharmacy, and the Commissioners of Customs and Excise" The CHANCELLOR of the EXCHEQUER took objection to appointing a statutory body, but he promised to set up 'a properly qualified medical body to advise the Commissioners of Customs and Excise what preparations may properly be described as medical preparations" This body, of course, will not owe its existence to statutory authority

Duty free Spirits for Hospital Tinctures

The CHANCELLOR of the EXCHEQUER has given notice of a new clause, which he will move to insert in the Finance (No 2) Bill, giving power to authorise the use of duty free spirits in hospitals in the preparation of tinctures The proposed new clause is in the following terms — (1) Section eight of the Finance Act, 1902 (which gives power to authorise the use of spirits without payment of duty in arts and manufactures), shall apply to the preparation in a public hospital of tinctures and other articles to be used for medical purposes in the hospital as it applies to arts or manufactures in which the use of spirits is required (2) If the treasurer or other responsible officer of a public hospital shows to the satisfaction of the Commissioners of Customs and Excise, that any tinctures or other articles which contain spirits or in the preparation or manufacture of which spirits were used have within the preceding six months been used for medical purposes in the hospital, he shall be entitled to obtain from the Commissioners repayment of any duty paid in respect of the spirits contained in or used in the preparation or manufacture of the said tinctures or other articles If any person for the purpose of obtaining any repayment under the foregoing provision, knowingly makes any false statement or false representation he shall be liable on summary conviction, to imprisonment, with or without hard labour for a term not exceeding six months (3) For the purpose of the foregoing provision the expression 'public hospital' means a hospital supported by any public authority or wholly or partly out of any public or charitable funds or by voluntary subscriptions"

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)
When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor

Bedfordshire County Council.—Temporary School Medical Officer Salary £500 per annum

Birkenhead Borough Hospital.—House Surgeon Salary £300 per annum with board and laundry

Birmingham General Dispensary.—Resident Medical Officer unmarried. Salary £250 per annum with apartments attendance &c.

Birmingham and Midland Eye Hospital.—Junior House Surgeon Salary £100 per annum with residence board &c

Bolton Infirmary and Dispensary.—Senior House Surgeon Salary £250 per annum with apartments board and attendance

Bristol, Cossham Memorial Hospital, Kingswood.—House Surgeon. Salary £150 per annum with board residence and laundry

Bristol General Hospital.—House Physician for six months. Salary at rate of £150 per annum with board residence &c.

Bristol Royal Infirmary.—Assistant to Ear Throat and Nose Department.

Bury Infirmary.—Senior and Junior House Surgeons Salary £175 and £150 per annum respectively with board residence and washing

Cape Hospital Board.—Assistant Medical Officer unmarried for Somerset Hospital Cape Town or other Hospitals in the Peninsula. Salary £200 per annum with rations and quarters

Carlisle Non Provident Dispensary.—Resident Medical Officer Salary £200 per annum with apartments (no board)

Carshalton Surrey Queen Mary's Hospital for Children.—Locum Tenens Assistant Medical Officer Salary £5 5s. per week with usual residential allowances

Chester County Asylum.—Third Assistant Medical Officer unmarried. Salary £200 per annum with board lodging and washing

Cirencester, Glos 1st South Midland Mounted Brigade Field Ambulance.—Two Medical Officers to complete 2nd Line (Territorial)

City of London Hospital for Diseases of the Chest Victoria Park E.—Tuberculosis Officer Salary at rate of £[illegible] per annum with lunch and dinner

County of London.—Lecturers in First Aid Home [illegible] Health and Infant Care Salary £1 1s a lecture.

Coventry and Warwickshire Hospital.—T[illegible] House Surgeon Salary 6 guineas per week, with board and residence

Croydon Mental Hospital, Upper Warlingham Surrey.—Second Assistant Medical Officer Salary £[illegible] per annum with board lodging and laundry

Folkestone, Royal Victoria Hospital.—House Surgeon. Salary as agreed, with board residence and laundry

Great Missenden Bucks, 3 2nd South Midland Mounted Brigade Field Ambulance.—Transport Medical Officer

Guildford Royal Surrey County Hospital.—House Surgeon Salary £150 per annum, with board residence and laundry

Hants County Asylum.—Locum Tenens. Salary 5 guineas per week with apartments board, washing and attendance.

Hospital for Consumption and Diseases of the Chest Brompton.—House Physician for six months. Salary 30 guineas Also Assistant Resident Medical Officer Salary £100 per annum with board and residence

Kent Education Committee.—Temporary School Dentist. Salary £250 per annum.

Leamington Spa, Warneford Leamington and South Warwickshire General Hospital.—Second Resident Medical Officer Salary £200 per annum with board, residence and laundry

Leeds Education Committee.—School Dental Officer Salary £250 to £300 per annum

Liverpool County Asylum, Rainhill.—Temporary Assistant Medical Officer Salary £6 6s per week, with apartments, board attendance, and washing

Manchester, County Asylum Prestwich.—Assistant Medical Officer unmarried Salary £250 per annum, with board, apartments, attendance and washing

Manchester Northern Hospital for Women and Children Park place Cheetham Hill road.—House Surgeon. Salary £120 per annum with apartments and board

Margate, Royal Sea Bathing Hospital for Surgical Tuberculosis.—Resident Surgeon. Salary at rate of £150 per annum, with board residence and laundry

National Hospital for Diseases of the Heart Westmoreland street, W.—Resident Medical Officer for six months. Salary at rate of £30 per annum with board residence, and washing

Newcastle-on-Tyne, Stannington Asylum.—Locum Tenens Salary 6 guineas per week with board &c.

Northumberland County Council.—Temporary Clinical Tuberculosis Medical Officer Salary £500 per annum.

Nottingham General Hospital.—Senior House Physician and Assistant House Physician. Salary at rate of £300 and £250 per annum respectively with board residence and laundry

Paisley Parochial Hospital, Lunatic Wards and Poorhouse, Craw road.—Resident House Surgeon. Salary £250 per annum with board and apartments.

Plymouth South Devon and East Cornwall Hospital.—House Surgeon and House Physician. Salary as arranged with board, residence and washing

Pontypool, Urban District of Abersychan.—Medical Officer of Health Salary £[illegible] per annum.

Putney Hospital (Chester Bequest) Putney Common S W.—Resident Medical Officer Salary £150 per annum, with residence, board, and laundry

St Mark's Hospital for Cancer Fistula, and other Diseases of the Rectum, City road E.C.—House Surgeon Salary £100 per annum with board, lodging and washing

St Mary's Hospital for Women and Children Plaistow E.—Assistant Resident Medical Officer Salary at rate of £90 per annum with board, residence and laundry

St Marylebone Infirmary Rackham street Notting Hill W.—First Temporary Resident Assistant Medical Officer unmarried Salary at rate of £225 per annum with apartments rations and washing

Salisbury General Infirmary.—House Surgeon and Assistant House Surgeon unmarried. Salary £150 and £100 per annum respectively with apartments board lodging and washing

Scarborough Hospital and Dispensary.—Senior and Junior House Surgeons Salary £100 and £80 per annum respectively, with board residence &c.

Sheffield Royal Infirmary.—House Surgeon and Assistant House Physician Salary £100 per annum with board and residence

Sheffield Wharncliffe War Hospital Middlewood road.—Resident Medical Officers

South London Hospital for Women 88-90 Newington-causeway S E.—*Female Anæsthetist.*

Stockport Infirmary.—Senior House Surgeon Salary £200 per annum with board washing and residence

Sunderland Royal Infirmary.—Resident Medical Officer Salary £150 per annum with board residence and laundry

Swansea General and Eye Hospital.—House Physician Salary £200 per annum with board apartments, and washing

Tunbridge Wells General Hospital.—House Surgeon unmarried Salary £200 per annum with board residence &c.

Ventnor Royal National Hospital for Consumption and Diseases of the Chest Isle of Wight.—Assistant Resident Medical Officer

Walsall and District Hospital.—Assistant House Surgeon and Anæsthetist Salary £150 per annum with board residence and laundry

Warrington County Borough.—Temporary Assistant Medical Officer of Health Salary £350 per annum

Warrington Infirmary and Dispensary.—Senior and Junior House Surgeons Salary £150 and £120 per annum respectively with board apartments and laundry

West Bromwich and District Hospital.—House Surgeon and Assistant House Surgeon unmarried Salary £150 and £120 per annum respectively with residence board and laundry

West Ham and Eastern General Hospital.—Resident Medical Officer Salary £160 per annum Also House Physicians and House Surgeons Salary £120 and £100 per annum respectively with board, residence and washing

Wigan Royal Albert Edward Infirmary and Dispensary.—Junior House Surgeon. Salary £150 per annum with board, apartments and washing

Windsor, King Edward VII Hospital.—House Surgeon. Salary £100 per annum with board apartments, and washing

Births, Marriages, and Deaths.

BIRTHS

Bullock.—On June 14th at Bigwood road Hampstead Garden Suburb, Elsa Gye wife of W E. Bullock M.D R.A.M C of a son

Seymour.—On June 20th, at College Gates, Worcester the wife of Harold F Seymour M.D of a daughter

Symes-Thompson.—On June 16th at Gloucester-place W the wife of H E. Symes Thompson M.D of a son.

Watson.—On June 20th at Lancaster-place N W the wife of Major D P Watson R.A.M.C of a daughter

MARRIAGES

Allan—Woods.—On June 19th at Christ Church Southgate London N John Allan M.D Edin., D.P.H. to Gertrude Buckston Agnes, youngest daughter of Josiah Woods, of London.

Ash—Pryce Jones.—On June 16th at St Mary Magdalene Bersted Bognor Walter Martin Ash, M.B B S Lond., Surgeon R.N., to Gladys youngest daughter of Mr and Mrs S R. Pryce Jones of "Newcourt," Bognor

Bowden—Neville.—On June 17th at St. John's Church Bethnal Green, Lieutenant Ellis Campbell Bowden R.A.M C., to Dorothy second daughter of Mr and Mrs. J Neville of Shoreham and late of "Leaside," Beckenham.

Bulstrode—Woolmer White.—On June 14th at Salle Church Christopher Victor Bulstrode, M.A., M.D Cantab. Temporary Captain R.A.M C., to Marguerite, elder daughter of Mr and Mrs. Woolmer White, of Salle Norfolk and Southleigh, Hants.

Chapman—Wallroth.—On June 17th, very quietly at Sunbury-on-Thames, Donald Poyntz Chapman, Staff Surgeon R.N., to Florence Emily third daughter of Mr and Mrs Frederick A. Wallroth, of Sunbury Lodge

Evans—Rutherford.—On June 10th, at Dunkeld Cathedral by the Rev A. Howell, M.A. assisted by the Rev W Brownlie B.D., A. Edward Evans M.B son of the late Edward Evans C.E. and of Mrs. Evans 3, Rotherwick Court Golders Green to Jessie Dorothy second daughter of the Rev T R Rutherford M.A., Minister of Dunkeld.

Fox—Allen.—On June 16th at Spanish place Church Manchester-square London, W Reginald A. Fox L.D S Eng D.D S Penn Lieutenant, 2[illegible]th South Lancs. Regiment to Winnie only child of the late Squire Winfield Allen, D.D S of Queen-street Edinburgh and Mrs Squire Allen of Edinburgh.

DEATHS

Mactier.—On June 1[illegible]th, at Kinnessburn St. Andrews, William Fullarton Mactier M.D., late Bengal Army in his [illegible] year

Mouillot.—On June 2[illegible]th, at Eton House Harrogate François Albert de Thierry Mouillot the dearly beloved husband of Mary Mouillot in his 56th year Funeral Wednesday June 23rd

Wright.—On June 20th at Alexandria, Lieutenant Eric Alfred Wright R.A.M.C. of septic poisoning contracted in attending the wounded, aged 3[illegible] years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths much greater latitude in regard to this matter, for they can send the men to hospitals, and when cured they will come out without any of the stigma which might attach to them if they had been confined in any of the asylums of the land On the whole, the weight of argument is distinctly in favour of allowing the War Department to deal with these unhappy cases, and we ask honourable Members to agree with us that that is the best way of dealing with them

MONDAY, JUNE 21ST

Medical Students and War Service

Sir PHILIP MAGNUS asked the Under Secretary for War whether, having regard to the fact that many of the younger university medical students of military age had been reproached for not having joined the forces of the Crown, he would state whether it was considered preferable that such students in their first or second year should accept some military position or should continue their medical studies with a view to qualification —Mr TENNANT replied I am not aware of the reproaches to which the honourable Member refers. It is clear that if students in their first or second year join the combatant ranks in very large numbers there will probably be for some years after the war a serious scarcity of doctors Any expression, therefore, of official opinion which might seem to place on them the obligation of taking up immediate military duty would hardly be in the interests either of the army or of the community as a whole

The Health of the Expeditionary Forces

Mr KING asked the Under Secretary for War whether he would give some information or figures to show the prevalence of sickness in the armies at home and on active service during the war, and particularly state whether the health of the forces compared favourably with health conditions in previous wars —Mr TENNANT answered I will give information, not figures As far as important preventable diseases are concerned, the health of the Expeditionary Forces compares not only favourably with the health conditions of any previous campaign, but nothing approaching it has ever been known in the past

TUESDAY, JUNE 22ND

Milk and Dairies Act Postponement Bill

Mr HAYES FISHER moved the second reading of the Milk and Dairies Postponement Act He said that last year two useful measures, the Milk and Dairies Act and the Milk and Dairies (Scotland) Act had been passed for the purpose of improving the milk supplies of the country The present Bill proposed to postpone the date on which these measures should come into operation until one year after the termination of the war, but it was provided that they might be brought into operation earlier by Orders of the Local Government Board, if that course proved feasible The Acts in question were designed to prevent the sale of tuberculous milk, or milk exposed to contamination or dirt, or adulterated milk. More stringent regulations were imposed on the milk industry, and also more detailed and systematic inspection was required. That made for more expense Furthermore, it was extremely difficult at present to add to the number of veterinary surgeons It would be necessary under the Bill also to enlarge the staffs of the local authorities, but these staffs were very much depleted More supervision on the part of the medical officers of health would also be required, but they were otherwise engaged at present If the two Acts were not postponed it would seriously embarrass the local authorities

Mr RENDALL regarded the postponement of the two measures as deplorable

Mr DENNISS also regretted the necessity for postponement, as the question of milk supply had a most important bearing on the question of infant mortality He thought that medical men could have been obtained to deal with tuberculous milk and questions of sanitation

Sir GEORGE TOULMIN recognised that there was no alternative to the postponement of the operation of the Acts owing to the administrative difficulties involved in putting them into force He hoped that the Local Government Board would make up for the postponement later on, by the strict enforcement of the provisions when they did come into operation

The Bill was read a second time

BOOKS, ETC , RECEIVED

ÉCOLE DE MÉDICINE TROPICALE, Junqueira, Lisbon
Arquivos de Higiene e Patologia Exóticas. Vol V

FARRELL, C P 117 East Twenty first-street, New York.
An Ethical Problem or Sidelights upon Scientific Experimentation on Man and Animals By Albert Leffingwell M.D

FROWDE, HENRY AND HODDER AND STOUGHTON London
X Rays and How to Produce and Interpret Them By Harold Mowat M D Edin. Temporary Lieutenant R A M C Price 8s 6d net.

GOVERNMENT PRINTING OFFICE Washington
Index Catalogue of the Library of the Surgeon General s Office U S Army Second series Vol XIX -U to Uzielli Price $2.00

GREEN W AND SON Edinburgh and London
Simple Methods of Radiographic Localisation By Thomas Rankine Price 1s net

KNAPP DREWETT AND SONS Victoria street, Westminster
Symbiogenesis The Universal Law of Progressive Evolution By H Reinheimer Price 10s 6d net

LEWIS, H K London
Materia Medica and Pharmacy for Medical Students with an Appendix on Incompatibility By Reginald R Bennett B Sc. Lond. F I C Third edition Price 4s 6d net
Amœbiasis and the Dysenteries By Llewellyn Powell Phillips M.A. M D Cantab F R C P Lond. F R C S Eng Professor of Medicine in the Egyptian Government School of Medicine Cairo Price 6s 6d net.

LIPPINCOTT J B COMPANY Philadelphia
Diabetes Mellitus Designed for the Use of Practitioners of Medicine By Nellis B Foster M D
Nursing and Care of the Nervous and the Insane, by Charles K. Mills M D Third edition revised. By N S Yawger M D Price 5s net

LONGMANS GREEN AND Co , London, New York, and Bombay
Elements of Optics for the Use of Schools and Colleges By George W Parker M A. Price 2s 6d
Clinical Anatomy of the Gastro-Intestinal Tract By T Wingate Todd M B Ch B , F R C S Eng Price 6s net

PUTNAM S G P SONS, London and New York
John Shaw Billings A Memoir by Fielding H Garrison M.D Price 10s 6d. net

SIMPKIN, MARSHALL, HAMILTON KENT AND CO LIMITED
The Cure of Self Consciousness. By James Alexander Price 3s 6d net.

Appointments.

Successful applicants for vacancies Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, such information for gratuitous publication.*

ADAMS ALFRED M B B Ch Oxon M.R C S has been appointed Acting Deputy Medical Officer for the Second District by the Liskeard (Cornwall) Board of Guardians

BAIRD W J M B Ch B Edin has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Earls Barton District of the county of Northampton

BALLANTYNE ARTHUR J M D Glasg has been appointed Honorary Consulting Ophthalmic Surgeon to the Glasgow Royal Maternity and Women s Hospital

BARKES W M.D Durh has been appointed Medical Officer of Health by the Houghton le-Spring Urban District Council and Certifying Surgeon under the Factory and Workshop Acts for the Houghton le-Spring District of the county of Durham

BARRY W J M M.D Durh & Brux. F R.C.P Edin has been appointed Honorary Consulting Physician to the Royal Hamadryad Seamen s Hospital

CHAMBERLAIN EDWARD BEATTY M.R.C S L.S A. has been appointed Acting Deputy Medical Officer for the Third District by the Liskeard (Cornwall) Board of Guardians

COOMBE RUSSELL, F R C S Eng has been appointed Consulting Surgeon to the Axminster Cottage Hospital.

DONALD JOHN M D C M. Glasg D P H. Camb has been reappointed Medical Officer for the Sixth District by the Liskeard (Cornwall) Board of Guardians.

FORTY DANIEL HERBERT M R C S L R C P Lond. has been appointed Acting Medical Officer for the Charfield District by the Thornbury (Gloucestershire) Board of Guardians

HILLYER W W has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Aberavon District of the county of Glamorgan

LAIRD D C M B C M Glasg has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Milngavie District of the county of Dumbarton.

LANGRAN, WILLIAM L.R C P & S L.M. Edin., L.A.H Dub has been appointed Medical Officer to the Axminster Cottage Hospital

MAY R J L R C P & S Irel has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Swords District of the county of Dublin

MENCE WILLIAM CHARLES L.R C P Lond M R C S has been appointed Medical Officer to the Axminster Cottage Hospital

ORMSBY G H L.S.A. L.M S S.A. Lond , has been appointed Medical Officer of Health to the Standish Urban District Council

PADBURY GEORGE JOHN M B Lond L R C P Lond. M R.C S has been appointed Medical Officer to the Axminster (Devon) Cottage Hospital

RIORDAN W L.R C S Irel L.K.Q C.P Irel has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Dripsey District of the county of Cork.

SEAL, PHILIP HENRY M B B S Lond., M R C S L.R C P Lond. has been appointed Medical Officer to the Children s Home by the South Molton (Devon) Board of Guardians

SELFE J L.R.C.P Lond., M R C S D P H has been appointed Medical Officer of Health for Scarborough

SEPHTON R B L R C P & S Edin., L R.F P S Glasg has been appointed Temporary Medical Officer of Health to the Warrington Rural District Council.

STIRK PERCY HERBERT M R C.S L.R.C P D P H Lond. has been appointed Acting Deputy Medical Officer of Health for the St Thomas (Exeter) Rural District Council.

TRESIDDER WILLIAM ELLIOT M B B S Lond L R C P Lond M R C S has been appointed Medical Officer to the Scattered Homes for Children by the St Germans (Cornwall) Board of Guardians

Medical Diary for the ensuing Week.

SOCIETIES

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W

MEETINGS OF SECTIONS

Monday, June 28th.

ODONTOLOGY (Hon. Secretaries—F Coleman F R Smyth): at 8 P.M.

Paper

Mr Ernest Sturridge: The Discovery of Entamœba Buccalis in Pyorrhœa Pus and Treatment by Emetin Hydrochloride.

Discussion

The Effects of Cleft Palate Operations on the Dental Arch (opened by Mr H Blakeway) Speakers:—Sir W Arbuthnot Lane Mr Warwick James and others.

Casual Communication

Mr George Thomson A Method of Crowning Incisor Teeth

SURGERY—The Members of this Section are specially invited to attend the meeting of the Section of Odontology (See above.)

Thursday July 1st.

OBSTETRICS AND GYNÆCOLOGY (Hon. Secretaries—C Hubert Roberts Cuthbert Lockyer) at 8 P.M

Specimens

Mr J D Malcolm: (1) Papilliferous Carcinoma of the Ovary associated with Adenomyoma of the Uterus (2) Fibromyoma Free from Attachments in a Pelvic Abscess.

Short Communication

Dr E A. Barton The Condition of the Larynx and Trachea in the Stillborn Infant and its Bearing on Artificial Respiration

Papers

Mr T G Stevens Adenomyoma of the Recto-vaginal Septum

Dr W S A. Griffith: Determining Causes of the Fœtal Lie *in utero*

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON Pall Mall East.

TUESDAY —5 P.M. Croonian Lectures:—Surgeon General Sir David Bruce C.B Trypanosomes causing Disease in Man and Domestic Animals in Central Africa. (Lecture IV)

POST-GRADUATE COLLEGE, West London Hospital Hammersmith road, W

MONDAY —10 A.M. Dr Simson: Diseases of Women. 2 P.M. Medical and Surgical Clinics. X Rays. Mr D Armour: Operations Dr Pritchard: Bacterial Therapy Department. Mr B Harman and Mr Gibb Diseases of the Eye.

TUESDAY —2 P.M. Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Davis Diseases of the Throat, Nose and Ear Dr Pernet: Diseases of the Skin.

WEDNESDAY —10 A.M., Dr Saunders Diseases of Children. Dr Davis Operations of the Throat, Nose, and Ear 2 P.M. Medical and Surgical Clinics. X Rays. Mr Pardoe Operations. Dr Simson: Diseases of Women. Mr Gibb: Diseases of the Eye.

THURSDAY —9 A.M., Dr Bernstein: Bacterial Therapy Department. 2 P.M. Medical and Surgical Clinics. X Rays. Mr D Armour: Operations. Mr B Harman: Diseases of the Eye.

FRIDAY —10 A.M. Dr Simson: Gynæcological Operations. 2 P.M. Medical and Surgical Clinics. X Rays. Mr Baldwin: Operations. Dr Davis: Diseases of the Throat Nose and Ear Dr Pernet: Diseases of the Skin.

SATURDAY —10 A.M., Dr Saunders Diseases of Children. Dr Davis: Operations of the Throat, Nose, and Ear Mr B Harman: Eye Operations. 2 P.M., Medical and Surgical Clinics X Rays. Mr Pardoe Operations.

NORTH EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital Tottenham N

MONDAY —Clinics:—10.30 A.M., Surgical Out patients (Mr E. Gillespie) 2.30 P.M Medical Out-patients (Dr T R. Whipham); Gynæcological Out-patients (Dr Banister) 3 P.M. Medical In patients (Dr R. M. Leslie)

TUESDAY —2.30 P.M. Surgical Operations (Mr Carson) Clinics:—Medical Out patients (Dr A. G Auld) Surgical Out patients (Mr Howell Evans) Nose, Throat, and Ear Out patients (Mr H D Gillies) Radiography (Dr Metcalfe) 3.30 P.M., Medical In patients (Dr A. J Whiting)

WEDNESDAY —Clinics —2.30 P.M. Throat Operations (Mr Gillies) Children Out patients (Dr T R. Whipham) Eye Out patients (Mr R. P Brooks) Skin Out-patients. 5.30 P.M., Eye Operations (Mr R. P Brooks) 4.30 P.M. Clinical Demonstration:—Dr T R. C Whipham: Selected Cases of Children's Disease.

THURSDAY —2.30 P.M., Gynæcological Operations (Dr A. E. Giles) Clinics:—Medical Out patients (Dr A. J Whiting) Surgical Out patients (Mr Carson) Radiography (Dr Metcalfe) 3 P.M. Medical In patients (Dr R. M. Leslie)

FRIDAY —2.30 P.M. Surgical Operations (Mr Howell Evans) Clinics:—Medical Out-patients (Dr A. G Auld) Surgical Out-patients (Mr E. Gillespie) Eye Out patients (Mr R. P Brooks)

THE THROAT HOSPITAL, Golden-square W

MONDAY —5.15 P.M., Special Demonstration of Selected Cases.

THURSDAY —5.15 P.M. Clinical Lecture.

For further particulars of the above Lectures &c., see Advertisement Pages.

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MANAGER'S NOTICES.

THE INDEX TO THE LANCET

The Index and Title-page to Vol. I. of 1915, which is completed with the issue of to-day will be given in the next number of The Lancet

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Notes, Short Comments, and Answers to Correspondents.

BEETLES AND RED ANTS AS CHOLERA CARRIERS

THE danger of the transmission of disease by the domestic fly has been frequently demonstrated and is now generally acknowledged But there are other domestic pests whose habits have not been so carefully studied The black beetle, for instance, conveys the cholera bacillus at least in tropical climates A recent issue of the *Philippine Journal of Science* contains an account of experiments made with the *Periplaneta americana* (Linn), which infests private dwellings at Manila This insect feeds on all kinds of organic matter, including fæces, and if precautions are not taken will crawl over food intended for human consumption Some of these beetles were captured and fed on human dejecta containing cholera bacilli Six hours later the fæces of the beetles were examined and found to contain cholera bacilli In course of time the number diminished, though in one case bacilli were found 79 hours after the test meal It would seem that the cholera bacilli do not multiply within the insect, but it is evident that if the fæces of the beetle are deposited on a damp surface the bacilli may live for a long time One experiment showed that their vitality persisted for an entire day on a lettuce leaf and for 46 hours on an oyster When experiments were made with guinea pigs it was evident that the cholera germ had lost none of its virulence after sojourning for a while within the beetle The red ant, also (*Monomorium latinode*, Mayr), is an omnivorous insect with a distinct liking for human dejecta, but the volume of its fæces is so small that experiments are difficult Nevertheless, cholera bacilli have been detected in the bodies of red ants eight hours after they had been fed on cholera dejecta

THE LEEWARD ISLANDS

A REPORT on the Blue book of this colony for the year 1913-14 has been received at the Colonial Office from the Governor, Sir H Hesketh Bell, K.C M G It states that the population at the last Census was 127 193, distributed amongst the islands as follows Antigua, 31,394, Barbuda, 871, St Kitts, 26,283, Nevis, 12,945, Anguilla, 4075, Dominica, 33,863, Montserrat, 12,196, Redonda, 4, Virgin Islands, 5562 During the year 3827 patients were admitted into the hospitals of the colony, and there were amongst them 354 deaths In the central lunatic asylum in Antigua there were at the beginning of the year 129 inmates (70 males and 59 females), 53 were admitted during the year, 27 were discharged as cured, and 27 died. There are two leper asylums—one at Rat Island in Antigua and the other at Fort Charles in St Kitts As to the latter no statistics are given, but in Antigua there were 33 lepers at the beginning of the year, 8 were admitted during the year, and 1 died There is no record in Antigua of any attendant at the asylum having contracted leprosy The Alexandra Cottage Home for Incurables Dominica, which is supported partly by voluntary contributions, maintained on an average 10 paupers The dilapidated and insanitary collection of huts known as Hyndman's Village has been removed, and the site has been transformed into an open, clean, and well-drained space free from the possibility of mosquito infection A model village is being laid out at Clare Hall The erection and occupancy of seven cottages, provided with ample yard accommodation and each having a neat enclosed garden in front, serve as valuable object-lessons to such villages as appear to be contented with their squalid and overcrowded huts Until 1913 the residents in St John's, Antigua, were annually subject to the inconvenience of having their water services restricted, if not actually locked off, for periods of from four to six weeks during the dry months of the year The erection of a large dam across the Body Pond stream has now obviated this inconvenience, and secures for the city an ample water supply throughout the year Much improvement has been effected in the Cunningham Hospital, St Kitts, and one result is that the general public are now taking much more interest in the institution than was formerly the case. Both in St Kitts and in Nevis the treatment of yaws by means of salvarsan in special wards continues to be vigorously prosecuted with excellent results The visit of Dr R T St John Brooks, the bacteriologist sent out to report on the sanitary state of the ports of the colony with special reference to the dangers of plague, has done much to stimulate interest in sanitary questions and will result, doubtless in improving existing conditions Some time, however, must necessarily elapse before effect can be given to all Dr Brooks's recommendations

THE ROYAL EARLSWOOD INSTITUTION

ONE of the distressing accompaniments of the war is the inevitable falling off in financial support that it must entail to many valuable philanthropic and charitable institutions This is particularly to be regretted in the case of such of them as aim at caring for those who under no circumstances are capable of caring for themselves A very serious sufferer is the Royal Earlswood Institution for Mental Defectives, which, in consequence of the war, has decided to forgo its annual festival dinner this year—a course which must deprive it of some £2000 of the funds needed for the support of its 500 defective inmates Such a drop in the income would be serious at any time, but is doubly so when there is such a rise in the cost of the necessaries of life It is sincerely to be hoped that the appeal which has been put forth by the board for an extra effort to meet this deficiency will not fall on deaf ears, and that subscriptions and donations made payable to the secretary, Mr Harry Howard, will be forthcoming to help to maintain the institution in its much needed activity

P L M TOURIST MOTOR CARS

THE Paris, Lyons, and Mediterranean Railway motor-cars, which made their first appearance three or four years ago, are announced to run daily (when not otherwise stated) this summer, between July 1st and Sept 15th, as follows —*Route des Alpes* Briançon and Grenoble, viâ the Lautaret Pass, Grenoble and Aix les Bains, through the three passes of La Chartreuse and the Chalet (P L M Restaurant, altitude 6950 feet), Aix les Bains and Annecy, Annecy—Le Fayet—St Gervais les-Bains and Evian *Dauphiné* Grenoble and St Pierre-de Chartreuse (out viâ La Placette home viâ Le Sappey), Grenoble and Villars-de-Lans, viâ the Grands Goulets, Montdauphin—Guillestre and Abriès (horse cars) *Savoie* Moutiers—Salins and Pralognan, Bourg St Maurice and Petit St Bernard, Bourg St Maurice and Val d'Isère *Jura* Genève and St Claude viâ La Faucille *Auvergne* (June 1st to Oct 31st) St Flour and Chaudesaigues, (June 15th to Sept 15th) Issoire and Saint-Nectaire (twice daily) A detailed time table may be obtained on application to the offices of the company, 179, Piccadilly London, W

Wanderer —The selection of Osler's Practice and Pembrey's Pathology should meet the requirements admirably We would suggest the addition of Essex Wynter's Minor Medicine (1914, second edition, D Appleton and Co London), or Leonard Williams's Minor Maladies and their Treatment (Baillière, Tindall, and Cox) For surgery we suggest Lejars' Urgent Surgery, translated by Dickie (1909, Simpkin, Marshall, and Co price 57*s* 6*d* net the two volumes) An exceedingly useful book is the Newer Physiology in Surgical and General Practice, by A. Rendle Short (1914, third edition John Wright and Sons, Limited, Bristol price 5*s* net) For hygiene and sanitation, an admirable little book by Lieutenant-Colonel A. M Davies, R A M C, is entitled A Handbook of Hygiene (1913, fourth edition Charles Griffin and Co, Limited, London, price 10*s* 6*d* net), also Hygiene and Public Health by Parkes and Kenwood (fourth edition, H K Lewis, London, price 12*s* 6*d* net)

E F has omitted to enclose his name and address

COMMUNICATIONS not noticed in our present issue will receive attention in our next

METEOROLOGICAL READINGS

(Taken daily at 9.30 a m by Steward's Instruments.)

THE LANCET Office, June 23rd, 1915.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radio in Vacuo	Maximum Temp Shade	Min. Temp.	Wet Bulb.	Dry Bulb	Remarks.
June 17	30·156	N E	..	110	70	51	50	53	Cloudy
18	30·206	N E	..	114	64	49	49	55	Cloudy
19	30 164	N E		116	63	45	47	53	Cloudy
20	30·160	N E		117	70	49	53	57	Fine
21	29·934	E		103	73	49	56	60	Fine
22	30·010	E		112	71	50	54	60	Fine
23	29·944	E.		80	61	51	53	58	Cloudy

The following magazines, journals &c., have been received —Cleveland Medical Journal Saint Paul Medical Journal Albany Medical Annals Dominion Medical Monthly American Medicine Medical Review of Reviews Indian Journal of Medical Research Calcutta Medical Journal, Canadian Practitioner and Review Interstate Medical Journal American Journal of Roentgenology American *Journal of Surgery* Journal of Nervous and Mental Disease, American Journal of Obstetrics British Dental Journal British Journal of Dental Science National Medical Journal, Journal d Urologie Brain &c.

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